Environmental Assessment

Very High Frequency Omni-Directional Radio Range Tactical Air Navigation Aid Project

Little Rock Port Authority
Little Rock, Arkansas

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Acronyms and Abbreviations

AFB	Air Force Base
DEQ	Department of Environmental Quality
AHPP	Arkansas Historic Preservation Program
TACA	Air Force Tactical Air Navigation
ANSI	American National Standards Institute
ARPA	Archaeological Resources Protection Act
Leq	Average noise level
dBA	A-weighted sound level measured in decibels
BMP	Best Management Practice
CO	Carbon monoxide
CAA	Clean Air Act
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CFR	Code of Federal Regulations
DoD	Department of Defense
ESA	Endangered Species Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
tribal	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FIRM	Flood Insurance Rate Maps
GIS	Geographic Information System
GPS	Global Positioning System
wH	Kilowatt-hours
LIT	Little Rock
LRAFB	Little Rock Air Force Base
LPRA	Little Rock Port Authority
Pb	Lead
msl	Mean sea level
MOA	Military Operational Areas
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NRCS	Natural Resources Conservation Service
NO2	Nitrogen oxide
O3	Ozone
PM10	Particulate matter less than 10 microns in aerodynamic matter
PM25	Particulate matter less than 25 microns in aerodynamic matter
RCRA	Resource Conservation and Recovery Act
ROW	Right-of way
spp.	Species
ft2	Square feet

SO2	Sulfur dioxide
TACAN	Tactical Air Navigation Aid
U.S.	United States
USAF	United States Air Force
USDOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VHF	Very high frequency
VOC	Volatile organic compounds
VORTAC	Very High Frequency Omni-Directional Radio Range Tactical Air Navigation Aid

Chapter 1: Purpose and Need for the Proposed Action

1.1 Background Information

An existing Very High Frequency Omni-Directional Radio Range Tactical Air Navigation Aid (VORTAC) is located in Pulaski County, near Little Rock, Arkansas (see Figure 1). The existing VORTAC was established in 1946 and is located on approximately 52.6 acres on land owned by the Federal Aviation Administration (FAA) and surrounded by Little Rock Port Authority (LRPA) development property. The VORTAC is a conventional VOR (CVOR) and is a part of the Minimum Operating Network (MON). The MON provides a conventional navigational backup system coverage to the contiguous United States in the event of the loss of Global Positioning System (GPS) signal to aircraft. The FAA Central Service Area Flight Procedures Team indicated that this VORTAC supports flight procedures to approximately fifty-five airports including the Little Rock Air Force Base (LRAFB).

The Clinton National Airport (LIT), located in Little Rock, Arkansas, averaged 2.2 million commercial flight passengers in 2019. There are dozens of daily departures with nonstop service to 14 destinations. Currently, the airport is being serviced by six commercial carriers. Various private and commercial service aircraft also use the airport. The current LIT VORTAC is a radio aid to navigation that provides in-flight heading and bearing information via Very High Frequency (VHF) transmission. The FAA is retaining this limited network of VORs to provide basic conventional radio navigation services for aircraft not having GPS equipment or for use as a backup navigation system to aircraft in case the GPS system were to become unavailable. The FAA Central Service Area Flight Procedures Team indicated that removal and relocation of the LIT VORTAC will require amendment of terminal and enroute Instrument Flight Procedures, impacting approximately 55 airports in the region including LIT.

The Tactical Air Navigation Aid (TACAN) part of the VORTAC is collocated at the site and provides Ultra-High Frequency (UHF) navigation support for military aircraft in the surrounding airspace. LRAFB directly utilizes this facility, and it is needed to support their operations within the airspace. The low altitude conventional airway structure provided by the LIT VORTAC assists in routing aircraft around Special Use Airspace in central Arkansas including the Shirley Military Operating Area (MOA) complex north of Little Rock and Restricted Areas 2403A and 2403B near the LRAFB. This structure would have to be amended or replaced if the LIT VORTAC is replaced and or relocated.

The FAA received a formal request from the LRPA to initiate the process of removing the VORTAC from the FAA owned land that is surrounded by land that the port has identified as a prime location for multiple large industries or a supersite. The definition of a “super site” varies but is generally considered a site with more than 500 contiguous developable acres with readily accessible infrastructure such as major roads, rail, and port facilities, as well as necessary utilities to support a large industrial development. There are currently no planned developments for this site.

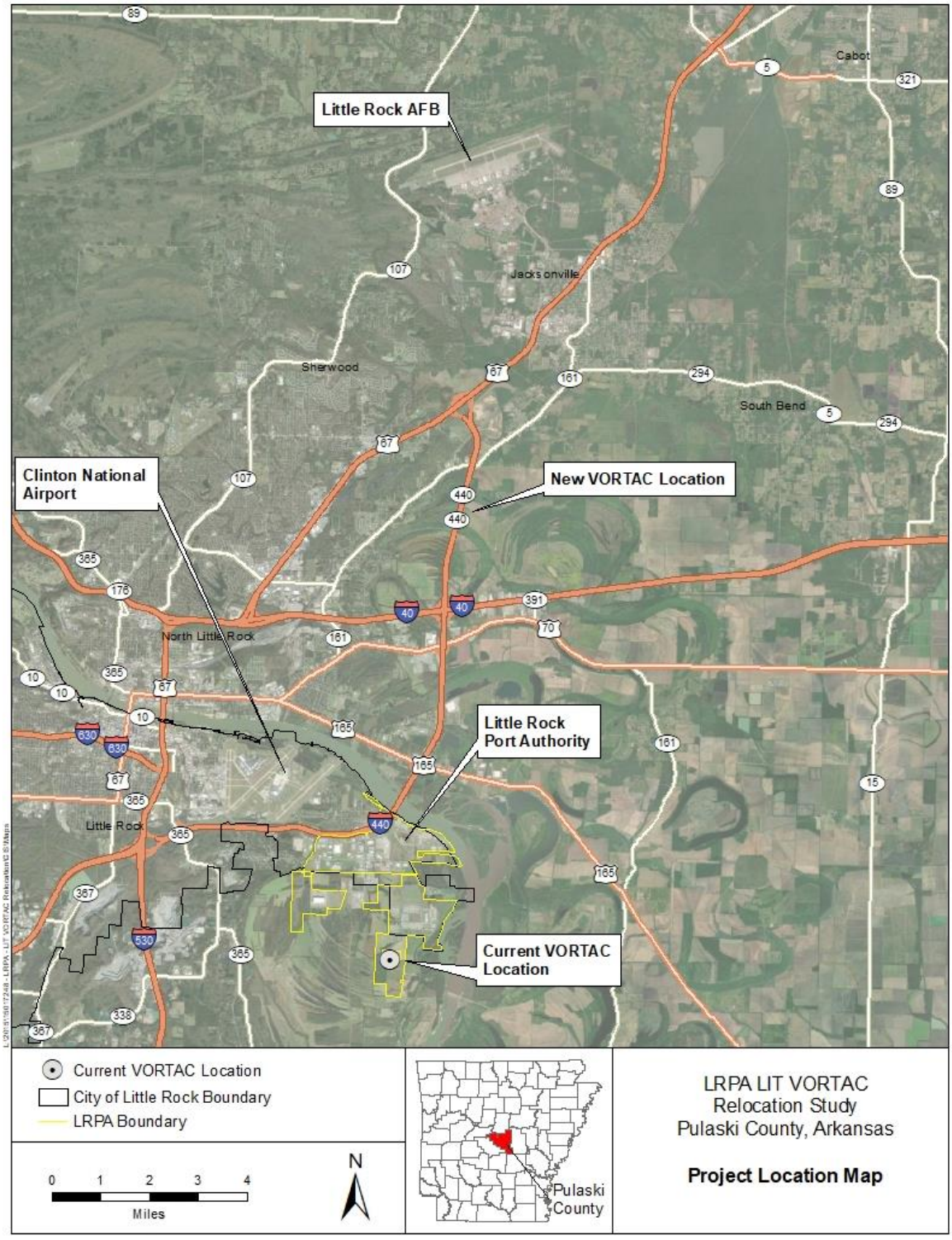

Figure 1. General Project Location Map

1.2 Need for the Proposed Action

The LRPA plans to redevelop the current VORTAC site as well as the adjacent properties. This proposed redevelopment by LRPA would be incompatible with the current VORTAC location due to FAA operating requirements.

1.3 Purpose of the Proposed Action

The purpose of the proposed action is to remove the existing VORTAC facility, relocate it to a site that is operationally compatible with FAA siting criteria and construct a new VORTAC facility. The LRPA has formally requested assistance from the FAA to initiate the planning process to remove and relocate the existing VOR.

1.4 Scope of the Environmental Review

The National Environmental Policy Act (NEPA) of 1969, as amended, requires federal agencies to consider environmental consequences in the decision-making process. This Draft Environmental Assessment (DEA) will analyze the potential environmental impacts that could result from implementation of the Proposed Action, No Action, or any reasonable alternatives, taking into consideration possible cumulative impacts from other actions in the area. Finally, the DEA will identify mitigation measures to prevent or minimize environmental impacts, if required.

1.5 Applicable Regulatory Requirements

This EA has been conducted in accordance with the following legal authorities:
Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR Parts 1500-1508.
National Environmental Policy Act, 42 U.S.C. §§ 4321-4370f.
Section 106 of National Historic Preservation Act 1966, 36 CFR Part 800.
Executive Order 11988, *Floodplain Management* (May 24, 1977).
Executive Order 11990, *Protection of Wetlands* (May 24, 1977).
Executive Order 13175, *Consultation and Coordination With Indian Tribal Governments*, (Nov. 6, 2000).
FAA Order 6820.10, *VOR, VOR/Distance Measuring Equipment and VORTAC Siting Criteria.*
FAA Order 1050.1F, Environmental Impacts: Policies and Procedures (July 16, 2015).
FAA Order 1050.1F Desk Reference (Feb. 2020).
FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions (April 28, 2006).

Chapter 2: Descriptions of the Proposed Action and Alternatives

2.1 Requirements for Reasonable Alternatives

NEPA and its implementing regulations require that impacts to both the natural and social environment are fully considered resulting from a Proposed Action and any reasonable alternatives. Only alternatives that would the defined need for the Proposed Action and be operationally feasible require detailed analysis in this DEA.

The selection of a suitable location for construction of a VORTAC facility is primarily a function of performance, cost, and feasibility. The primary performance goal for this facility is to provide, at the very least, the same level of service provided by the existing VORTAC. The VORTAC relocation site must also satisfy the navigational requirements of the Military Operational Areas in place for the LRAFB and support their operations within the surrounding airspace.

Cost and feasibility of site construction and maintenance should be commensurate with the level of benefits received. The LRPA worked with the FAA to identify the search area for potential construction sites that would avoid future industrial or commercial area expansion, avoid existing obstructions that would affect VOR performance, and minimize construction costs.

2.1.1 Condensed VOR Siting Criteria

In August and November 2018 FAA Engineering Services (Fort Worth, TX) and Garver (Consultant) performed site surveys to evaluate potential locations for the relocation of VORTAC facility. The following VORTAC siting criteria listed below were used to evaluate each site. All criteria must be met in order for the VORTAC site to be operationally feasible.

A. Within 200 feet, no farm-type wire fences four feet or more in height.
B. Within 500 feet, no chain type fence six feet or more in height.
C. “A” and “B” restrictions may be relaxed for fences essentially radial to the antenna.
D. Power and control lines should be installed underground for a minimum of 600 feet from the antenna.
E. Overhead power and control lines should be essentially radial to the antenna for a minimum distance of 1,200 feet.
F. No other lines or supporting structures should subtend a vertical angle of more than 1.5 degrees above the site.
G. Single trees of moderate height (up to 30 feet) may be tolerated beyond 500 feet. No trees should be closer than 500 feet.
H. No group of trees within 1,000 feet of the site.
I. No trees should subtend a vertical angle of more than 2.0 degrees above the site.
J. No fence or lines should extend more than 0.5 degrees above the antenna.
K. On airports, all buildings should be considered as if they were power and telephone lines.

L. There shall be no structures within 1,000 feet of the antenna

M. All structures that are partly or entirely metallic shall subtend vertical angles of less than 1.2 degrees

N. Wooden structures with negligible metallic content may be tolerated below 2.5 degrees

2.2 Alternatives Considered

No Action Alternative

The No Action Alternative would maintain the existing conditions at the current VORTAC site. The proposed relocation of the existing LIT VORTAC would not occur and a new VORTAC would not be constructed under the No Action Alternative. The No Action Alternative would not meet the purpose and need of the project; however, it is carried forward for analysis to provide a comparison of baseline conditions as required by the CEQ regulations.

Action Alternatives

The FAA, Sponsor, and Consultant met in May 2018 to review site requirements and project timeline. A joint effort was performed by the FAA, Sponsor, and Consultant to locate potential sites that could meet the FAA siting criteria in section 2.2.1 and that were potentially available for purchase. A total of seven sites were formally reviewed and considered for this project: three site alternatives located within 5 miles of the existing VORTAC, two within 8 miles, and two within 10 miles. Formal reviews included the FAA and Consultant teams meeting on-site and the FAA Engineering Group performing siting criteria survey work at each location. The seven location alternatives are briefly discussed below, and the full FAA Engineering Group reports are located in Appendix A.

2.2.1 Thomas Site – Asher Road

The Thomas Site was a rice farming lot in Pulaski County located an Asher Road. The FAA survey evaluation revealed that tree lines to the North, East, and South did not meet the 2.1.1 item I design criteria and the high voltage lines to the East and South did not meet the 2.1.1 items F, J, and M design criteria. These thick tree lines were off the proposed property boundary and thus could not be cut down; and relocating the high voltage transmission line would be impractical due to their significant tower sizes and costs. These issues would produce objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements, and the FAA rejected this site from further consideration.

2.2.2 Ginhouse Lake Site – Craig Road

The Ginhouse Lake Site was a farming lot in Pulaski County located on Craig Road. The FAA survey evaluation revealed that the tree lines to the East, South, and West did not meet the 2.2.1 item I design criteria; the normal overhead power lines to the South did not meet the 2.2.1 items E and J design criteria; and an existing rotating irrigation pivot on the adjoining field did not meet the 2.2.1 item J design criteria. These tree lines were off the proposed property boundary and thus could not be cut down. The overhead power line would require placing the line entirely underground. The irrigation pivot was on an adjoining property and could cause objectionable signal issues at certain orientations to the proposed VOR. These issues would produce

objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements. The FAA indicated that the listed issues would negatively impact the VOR signal, thus this site was removed from consideration.

2.2.3 Fulkerson Site – Colonel Maynard Road

The Fulkerson site was a farming lot in Pulaski County located on Colonel Maynard Road. The FAA survey evaluation revealed that high voltage transmission lines to the West and overhead power and telephone lines to the East did not meet the 2.2.1 items E, F, J, M and N design criteria, and that tree lines to the West do not meet the 2.2.1 items H and I design criteria. These tree lines were off the proposed property boundary and thus could not be cut down and relocating the high voltage transmission line would be impractical due to their significant tower sizes and costs. These issues would produce objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements, and the FAA rejected this site from further consideration.

2.2.4 Salmon Property – Stonelinks Golf Course

The Salmon Property site was a lot in Pulaski County, formerly part of the Stonelinks Golf Course. The FAA survey evaluation revealed that high voltage transmission lines to the South and overhead power lines adjacent to the site did not meet the 2.2.1 items D, E, F, J, L, M, and N design criteria, and that tree lines to the West, North, and South did not meet the 2.2.1 items H, N, and I design criteria. Several of the tree lines were off the proposed property boundary, and thus could not be cut down, and relocating the high voltage transmission line would be impractical due to their significant tower sizes and costs. These issues would produce objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements, and the FAA rejected this site from further consideration.

2.2.5 Theo Road Site

The Theo Road site was a farming lot located in Pulaski County located on Theo Road. The FAA survey evaluation revealed that high voltage transmission lines on the Northwest, West, and Southwest to the site did not meet the 2.2.1 item J design criteria, that tree lines on the Northwest, North, and Northeast to the site did not meet the 2.2.1 items H and I design criteria, and that storage silos to the Northwest of the site did not meet the 2.2.1 items J and M of the design criteria. These tree lines were off the proposed property boundary and thus could not be cut down, the storage silos were also off the proposed property and thus could not be removed and relocating the high voltage transmission line would be impractical due to their significant tower sizes and costs. These issues would produce objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements, and the FAA rejected this site from further consideration.

2.2.6 Tulip Property – Adjacent highway 70, 1 Mile East of Galloway, AR

The Tulip Property site was a farming lot located in Pulaski County, adjacent to Highway 70, approximately 1 mile east of Galloway, Arkansas. The FAA survey evaluation revealed that a water tower and concrete silo did not meet the 2.2.1 item M design criteria, that multiple other silos, billboards, and cell towers surrounded the site which were just outside the item 2.2.1 M design criteria, and that tree lines on the North and South to the site did not meet the 2.2.1 item I design criteria. These tree lines were off the proposed property and thus could not be cut down,

and the water tower, silos, billboards, and cell tower were also off the proposed property and thus could not be relocated. These issues would produce objectionable effects to the VOR signal; therefore, this site did not meet the design criteria requirements. The FAA indicated that the listed issues would negatively impact the VOR signal, thus this site was removed from consideration.

2.2.7 Davidson Property – Adjacent Highway 440, North of I-40

The Davidson Property site was a cattle farming lot located in Pulaski County, adjacent to Highway 440, North of I-40, at the end of Harris Road. The FAA survey evaluation revealed a grain silo Southeast of the site, but it was well clear of the 2.2.1 item M design criteria; an irrigation pivot system East of the site, which was well clear of the 2.2.1 item M design criteria but was inside the 2.2.1 item L design criteria structure clearance requirement; and a small group of trees North and Northwest of the site that slightly penetrated the 2.2.1 item I design criteria. The FAA engineering team indicated that this was a prime location for consideration as the irrigation pivot and small group of trees were not anticipated to impact the performance of the VOR signal.

2.3 Identification of the Preferred Alternative

With the exclusion of the Davidson Property, all the sites had major issues that would interfere with the VOR operation with respect to the siting criteria. During the site visits, most of the sites were not preferred by the FAA team due to the penetration of high voltage electrical transmission towers/lines and/or the penetration of a tree line that extended around the property and would negatively impact the performance of the VOR. These tree lines were off the proposed property and thus could not be cut or removed. The Davidson Property had minor penetration of a few small groups of trees, but they were found to have no impact on the operation of the VOR. The Davidson Site best meets the siting criteria required by the FAA and did not require relocation of electrical lines near the site. The site is approximately 10 miles from the existing VOR and six miles from the LIT Airport. There are no known industrial projects currently planned near the proposed site.

Based on the recommendation of the Davidson Site as the Preferred Alternative, a modeling analysis was requested to ascertain how a VOR would perform in this location to verify Site applicability. The Modeling Analysis was conducted by Ohio University Avionics Engineering Center and a final report submitted on June 27, 2019 (see **Appendix B**). Ohio University utilized the Ohio University Navigation and Landing Performance Prediction Model (OUNPPM) to confirm that the relocated VOR will perform as desired. The OUNPPM is a validated mathematical model based on the physical optics theory for electromagnetic scattering. This model is currently used worldwide to predict the effect of structures on Instrument Landing System (ILS) and the VOR performance.

The results of the Modeling Analysis indicated that a Doppler VOR system located at the proposed Davidson property would provide performance well within the FAA Order 8200.1D tolerance limits. Based on the results of the analyses, the Davidson property was advanced as the most operationally viable site for the new VORTAC facility and underwent detailed evaluations of potential impacts to the environmental resources covered the following chapters of this document.

2.4 Detailed Description of the Preferred Alternative

The Preferred Alternative includes the removal of the original VORTAC equipment and the demolition of the existing building at the current site and the installation of new VORTAC equipment and facilities at the Davidson Site. The study area, which is the area of direct impacts, for the current and proposed VORTAC sites is shown in **Figures 2 and 3**. The current VORTAC will remain in place until the new VORTAC is fully operational. There is not a set schedule for the demolition of the existing VORTAC Building.

Improvements to the Davidson Site include the construction of a new 5,400 linear foot, 12-foot-wide gravel access driveway, new fencing, utilities, and site pad improvements. The site improvement plans are shown in **Figures 4 and 5**. Construction activities include approximately 6,800 tons of aggregate base course, 750 cubic yards of embankment and 250 cubic yards of excavation combined for both the gravel pad and access road. A 4-foot wire fence with gate will be installed around the perimeter of the VORTAC a minimum distance of 250 feet from the center of the VORTAC to control access. The maximum height for any antenna on site will be 52 feet above ground level.

Additionally, overhead electric, underground electric, and underground communication utility lines will be provided along the length of the new 5,400-foot access driveway to supply the VORTAC. Underground electric will be used within 2,400 feet of the VORTAC. While the FAA will acquire approximately 110 acres (Figure 4, property boundary shown in green) to secure the site only 5.70 acres will be cleared for construction activities with approximately 3.81 acres being allowed to naturally regenerate with native species.

Harris Road, which connects to I-40 would provide access to the VORTAC by means of the access road that would only be used by VORTAC operations. Detailed site layout plans are provided in **Appendix C**.

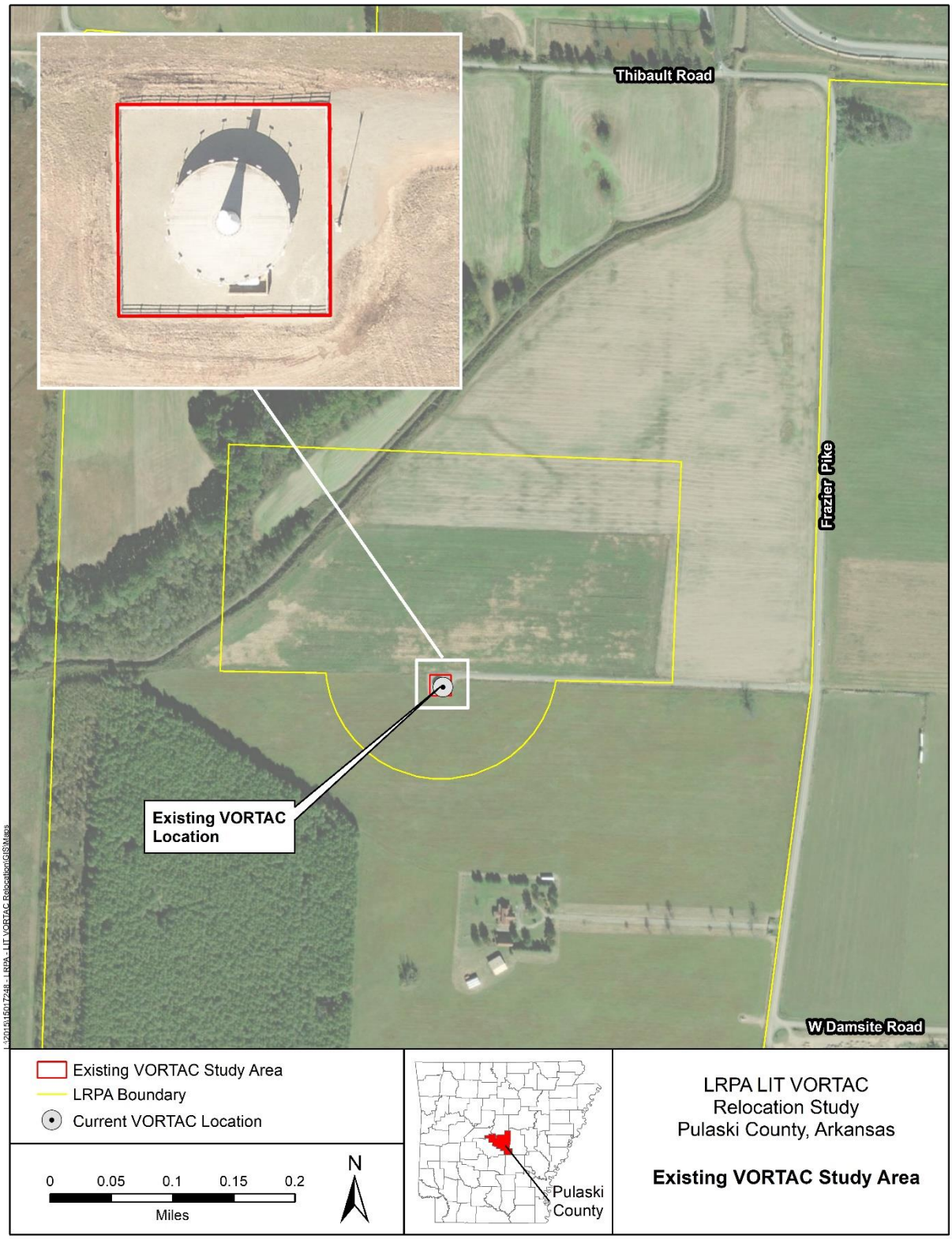

Figure 2. Existing VORTAC Site Location and Study Area Map

Figure 3. Proposed VORTAC Site Location and Study Area Map

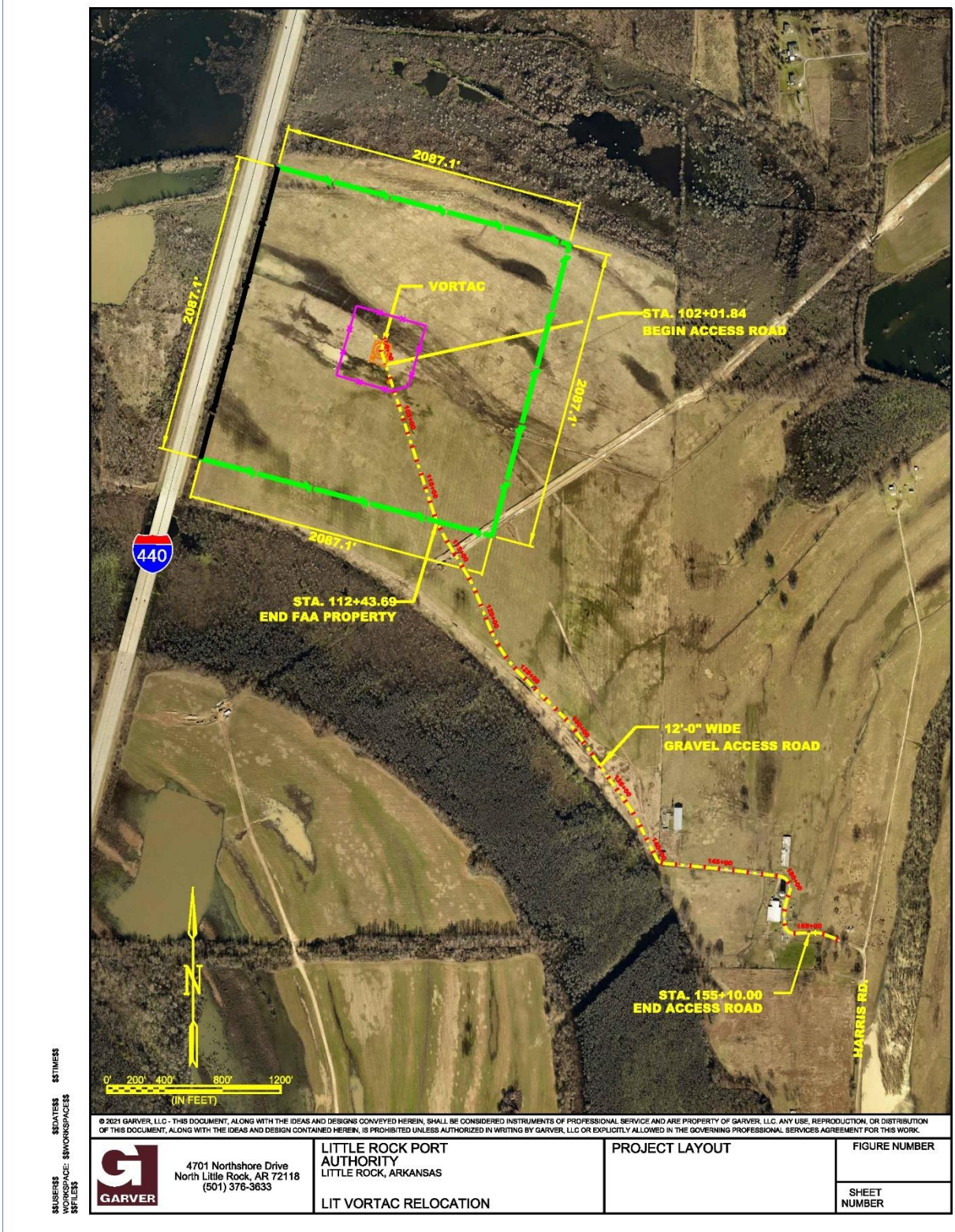

Figure 4. Project Layout

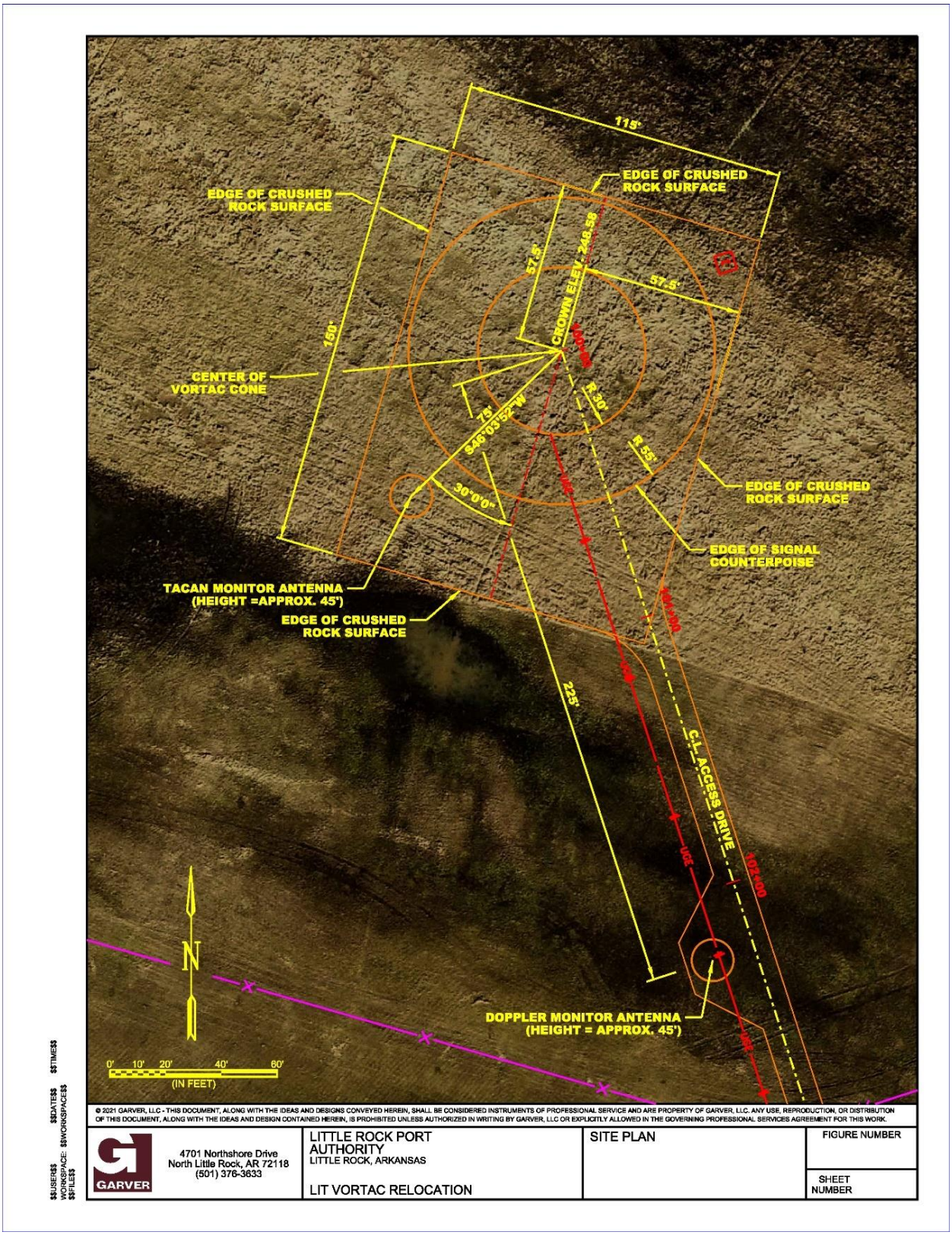

Figure 5. Project Site Plan

Chapter 3: Affected Environment

3.1 Introduction

This chapter describes the existing natural and social environmental resources that could be affected by the Preferred Alternative. Chapter 4 will discuss how these resources might be affected with respect to both direct and indirect impacts.

The only action that would occur at the current VORTAC site is the removal of the building and the site pad. Direct impacts will be limited to the site pad. The land surrounding the VORTAC building will not be directly affected.

Discussions below are primarily for the proposed new VORTAC site (Davidson site) except as noted where the current VORTAC site is also discussed in more detail for certain resources.

3.2 Climate

The Council on Environmental Quality (CEQ) issued final guidance on greenhouse gas considerations in NEPA decisions titled, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (2016 Final Guidance) in August of 2016. The stated goal of the guidance was to make the federal agencies' consideration of climate change impacts in NEPA documents as consistent as possible. A 2019 update to the guidance was made; however, it has since been rescinded. In accordance with Executive Order (E.O.) 13990.

Environmental Protection Agency data indicates that the aviation industry contributes 4.1% of the world's green-house gas (GHG) emissions. The Council on Environmental Quality (CEQ) developed guidance on reporting GHG emissions and NEPA guidance. However, FAA has not identified significance thresholds. Carbon dioxide (CO^2) accounts for 80% of all U.S. anthropogenic greenhouse gas emissions (EPA, 2021). CO^2 is naturally present in the atmosphere, but is also emitted by human activities, including fossil fuel combustion and industrial processes.

Davidson Site

The proposed new VORTAC site will have a diesel-powered generator that will be used only for emergency power. Temporary minor emissions will occur from heavy equipment during construction activities. No other sources of emissions will be located at the proposed VORTAC site.

Current VORTAC Site

The current VORTAC site currently has a diesel-powered generator that is used only for emergency power. Temporary minor emissions will occur from heavy equipment during the demolition of the existing building. No other emissions will occur at the site.

3.3 Land Use

Section 1506.2(b) of the CEQ Regulations requires that NEPA documents discuss any inconsistency with approved state and/or local plan(s) and law(s) (whether or not federally

sanctioned). The FAA actions may affect land use compatibility (e.g., disruption of communities, relocation, induced socioeconomic impacts, land uses protected under Section 4(f) of the U.S. Department of Transportation [DOT] Act). The impacts on land use, if any, should be analyzed and described under the appropriate impact category.

Although there are economic development opportunities for the land surround the current VORTAC, neither the current nor the proposed VORTAC sites lie within an incorporated city with zoning designations.

Davidson Site

The land use surrounding the proposed VORTAC site is undeveloped land dominated by agricultural fields with scattered forested and wetland areas. Interstate 440 lies approximately one-quarter mile to the west. The access road to the proposed site will pass within a few hundred yards of the closest home which is approximately three-quarter of a mile from the VORTAC building site. There are no known planned developments or changes in land use in the vicinity of the proposed VORTAC site.

Current VORTAC Site

The land use surrounding the existing VORTAC site is predominantly agricultural fields and undeveloped forested land. There are 3-4 homes within ½ mile of the VORTAC. Most of the surrounding property is owned by the City of Little Rock or the LRPA and those lands have been identified for industrial development although there is not any current planned development.

3.4 Visual Effects

The FAA 1050.1F Desk Reference (v2) defines two types of visual effects that should be considered in the context of this project, these are *visual resources* and *visual character*. Another visual effect is light emissions which are created, as the name implies, by light emission sources and since there are none associated with this project this effect will not be considered further.

Visual resources include buildings, sites, traditional cultural properties, and other natural or manmade landscape features that are visually important or have unique characteristics. Visual resources may include structures or objects that obscure or block other landscape features. In addition, visual resources can include the cohesive collection of various individual visual resources that can be viewed at once or in concert from the area surrounding the project site.

Visual character refers to the overall visual makeup of the existing environment where the project would be located. For example, areas in close proximity to densely populated areas generally have a visual character that could be defined as urban, whereas less developed areas could have a visual character defined by the surrounding landscape features, such as open grass fields, forests, mountains, or deserts, etc.

Davidson Site

The visual resources and the visual character for the project area is the rural agricultural landscape. The proposed VORTAC will be located in a pasture approximately one quarter mile from Interstate 440 and three-quarter miles from Harris Road. The view of the building site from these roadways is currently rural pastures, farmlands, and scattered forested areas. There is one

residence located approximately three-quarter miles from the proposed VORTAC building that will have a view of the new building. The maintenance vehicles traveling to and from the VORTAC will be visible to the residents of the home.

Current VORTAC Site

The visual resources and the visual character for the project area is the rural agricultural landscape. The current VORTAC building is eligible for listing on the National Register of Historic Places (NRHP) and therefore considered a visual resource. However, mitigation has been concurred in by the LRPA, the FAA, and the SHPO. An NRHP part 106 memorandum of agreement (MOA) has been entered into and a website will be provided to document the historical significance of the site (Appendix D). The current VORTAC will be demolished once the new VORTAC is operational.

The current VORTAC is located in the middle of an agricultural field and depending on crop type and time of year, the building and antenna are visible to one nearby home (approximately 1/4 miles away) and to the closest road (Frazier Pike) which is lightly traveled local road located approximately one-third miles from the VORTAC building.

3.5 Section 4(f) and 6(f) Resources

The Land and Water Conservation Fund Act (LWCF Act) of 1965 established a funding source assisting states and federal agencies to meet present and future outdoor recreation demands and needs. Section 6(f)(3), as codified in 36 CFR 59.3, is the cornerstone of federal efforts to ensure that the federal investments in LWCF assistance are being maintained for public outdoor recreation use.

Section 4(f) established under the Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) protects significant public parks, recreation areas, wildlife/waterfowl refuges, and public and private historic sites.

Davidson Site

There are no 4(f) or 6(f) resources at the Davidson site.

Current VORTAC Site

There are no 6(f) resources at the current VORTAC site. The current VORTAC building, not the entire property, is eligible for listing on the NRHP (See Section 3.10 for more details) and therefore Section 4(f) is applicable to this project. Compliance with 4(f) requirements typically is evaluated during the NEPA decision-making phase, concurrent with other environmental and cultural resource studies. In this EA, the 4(f) evaluation is summarized in Section 4.4 of this document and a complete Section 4(f) evaluation is contained in Appendix E.

3.6 Coastal Resources and Wild and Scenic Rivers

Coastal resources include all natural resources occurring within coastal waters and their adjacent shorelands. The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542;16 U.S.C. 1271 et seq) to preserve certain rivers with outstanding natural,

cultural, and recreational values in a free-flowing condition for the enjoyment of the present and future generations.

The current VORTAC and the Davidson site are not located in or near any coastal protected zone or near any designated wild and scenic river.

3.7 Biological Resources (including fish, wildlife, and plants)

3.7.1 Vegetation

The EPA Level IV Ecoregions describe the regional ecosystem where the existing and proposed VORTAC locations are as the Arkansas/Ouachita River Holocene Meander Belts. This region is characterized by flat to nearly flat floodplain containing the meander belts of the present and past courses of the lower Arkansas River. Ecosystem features include point bars, natural levees, abandoned channels, and oxbow lakes. Observed topography and features in or adjacent to the project area included flat agricultural land with swales, oxbows, and river meander scars.

Davidson Site

Vegetation in the study area is significantly disturbed by agriculture (e.g. planting, mowing, and cattle grazing). Most of the vegetation consists of monoculture fields of Bermudagrass (*Cynodon dactylon*) and switchgrass (*Panicum virgatum*), except for in wet areas dominated by smartweed (*Persicaria* spp.), rush (*Juncus* spp.), and flat sedge (*Cyperus* spp.). The adjacent oxbow just outside of the study area boundary included vegetation such as rush, duckweed (*Lemna* spp.), bald cypress (*Taxodium distichum*), and water tupelo (*Nyssa aquatica*).

Current VORTAC Site

The study area is limited to the VORTAC pad site and does not contain any vegetation. The vegetation surrounding the VORTAC on all sides is agricultural fields with rotating crops.

3.7.2 Wildlife

Davidson Site

Wildlife species found within habitats identified on the current VORTAC Site and the Davidson Property typically include generalist and omnivore species which often occupy the riparian and agricultural areas. These species include, but are not limited to, raccoon (*Procyon lotor*), rabbit (*Sylvilagus* spp.), opossum (*Didelphis virginiana*), skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), several small rodent species, various songbirds, wading birds, shorebirds, reptiles, amphibians, white-tailed deer (*Odocoileus virginianus*), squirrel (*Sciurus* spp.), and various waterfowl.

An on-site survey was conducted at the Davidson site on November 19, 2019 by Garver. No wildlife was observed, but Whitetail deer tracks were noted.

Current VORTAC Site

An on-site survey was not required at the current VORTAC site because the impacts are limited to the existing concrete pad and building.

3.7.3 Threatened and Endangered Species

The Endangered Species Act of 1973 (16 USC 1531-1543; 87 Stat. 884) (ESA) prohibits the taking of listed, threatened, and endangered species unless specifically authorized by a permit from the U. S. Fish and Wildlife Service (USFWS). “Taking” is defined in 16 USC § 1532(19) as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR § 17.3).

The USFWS Information for Planning and Consultation (IPaC) on-line tool indicates that there are no critical habitats located on the Davidson site or the existing VORTAC site (see **Appendix D** for the IPaC Reports). The official USFWS species list indicates that there are three threatened, endangered or candidate species that may occur within the study area for the Proposed and existing VORTAC sites, consisting of:

Common Name	Scientific Name	Status
Piping Plover	*Charadrius melodus*	Threatened
Rattlesnake-master Borer Moth	*Papaipema eryngii*	Candidate
Running Buffalo Clover	*Trifolium stoloniferum*	Endangered

A qualified Biologist performed a site visit at the Davidson site on November 19, 2019 and did not find any habitat for the Piping Plover, Rattlesnake-master Borer Moth, or the Running Buffalo Clover. The Preferred Alternative is unlikely to affect any listed species at the site. The USFWS has indicated during previous coordination in Central Arkansas that Running Buffalo Clover is considered extirpated in Arkansas. The Arkansas Game and Fish Commission (AGFC) and the Arkansas National Heritage Commission (ANHC) were contacted regarding the planned improvements. ANHC stated they identified no specific concerns regarding the planned improvements. Because the direct impact at the current VORTAC site will be limited to the VORTAC building a biological survey was not required at this site.

3.8 Farmlands

The Farmland Protection Policy Act (FPPA) regulates federal actions with the potential to convert farmlands to non-agricultural uses. The FPPA is intended to minimize the impact that federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses.

Davidson Site
The Davidson Property, which is much larger than the actual study area, is currently zoned as AV – Vacant Agricultural (175 acres or 83%) and AI – Improved Agricultural (35 acres or 17%). Coordination with the USDA to complete Form AD-1006, per 7 CFR 658.5, resulted in a score of 163. That is less than the maximum score of 260 and therefore mitigation is not required for farmland impacts.

Current VORTAC Site

The study area for the current site includes only the site pad and building. There are no farmlands impacted at the current VORTAC site.

3.9 Hazardous Materials, Solid Waste, and Pollution Prevention

Federal actions require consideration of hazardous material, solid waste, and pollution prevention impacts in NEPA documentation. Principal laws regulating the handling and disposal of hazardous materials, substances, and wastes that apply to FAA under guidance in Order 1050.1F include the Resource Conservation and Recovery Act (RCRA), as amended by the Federal Facilities Compliance Act of 1992; CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund); the Community Environmental Response Facilitation Act of 1992; the Pollution Prevention Act of 1990; and the Toxic Substances Control Act of 1976 (TSCA), as amended.

Davidson Site

A Phase I Environmental Site Assessment was performed according to ASTM International Standard E 1527-13 at the Davidson Property in June 2019. The document can be found in **Appendix F**. The Phase I conducted in June 2019 identified two natural gas pipelines in the north and center of the Davidson site (outside of the current study area) running from east-to-west and northeast-to-southwest. In June 2006, the Arkansas Department of Environmental Quality (ADEQ) opened a case on an adjoining property concerning illegal dumping. Materials that were noted to have been dumped include: oil containers, live ammunition, 5-gallon containers of hydraulic fluid, scrap metal, and household waste (see report for full list). In 2007, the site was revisited and was partially cleaned up by the landowner. More recent coordination with ADEQ for this study (2019) did not reveal any open case associated with the Davidson property. The previous dumping site is south of the project location and would not be impacted by the Preferred Alternative.

An approximate 300-gallon diesel above ground storage tank used for the irrigation pivot was noted on site during the 2019 site visit. There was no evidence of current or past leaks. This tank is no longer in use and will be removed prior to the development of the site.

Results of the assessment revealed no evidence of recognized environmental conditions in connection with the property that would warrant recommended further detailed investigation or study of recognized environmental contaminants.

The FAA will revisit the site and conduct Phase II soil sampling and testing prior to construction.

Current VORTAC Site

Based on the age of the facility the site could contain asbestos materials and lead based paint. There is a known diesel storage tank located inside the building and possibly other hazardous liquids such as lubricants and hydraulic fluids. Further investigation prior to the demolition of the building will be required as discussed in Chapter 4.

3.10 Historical, Architectural, Archeological, and Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, requires federal agencies to consider the effects of their actions on cultural resources. Cultural resources include elements of the built environment (buildings, structures, or objects) or evidence of past human activity (archaeological sites). Cultural resource sites listed on or eligible for listing in the NNRHP are defined as historic properties.

Davidson Site

A review of the Arkansas Historic Preservation Program (AHPP) records for previous investigations and significant archaeological, architectural, or historic resources was conducted within and in the vicinity of the study area for cultural resources, which is defined as any portion of the Preferred Alternative resulting in direct impacts such as ground disturbance. Five previous cultural resources investigations, including one Phase II significance testing, were completed within one mile but not within the study area. The AHPP records review indicated the presence of one documented archaeological site, 3PU0252, just outside of the study area. According to AHPP records, site 3PU0252 had an undetermined NRHP eligibility status.

At the request of the State Historical Preservation Officer (SHPO), a Phase I cultural resources survey was completed for the Davidson site in November 2019. Twenty shovel test locations and 14 delineation shovel tests were excavated. Two shovel tests along the current access road were positive for cultural materials. Both positive shovel tests were located within an existing pipeline corridor and thus in a disturbed context. They do not constitute an archaeological site based on the lack of context and the number of artifacts observed. It was recommended that the project area does not meet the criteria for eligibility for listing in the NRHP per 36 CFR § 800.4(d)(1).

Written correspondence from SHPO dated February 14, 2020 (see Appendix D) states that based on provided information and results of the cultural resources investigation, SHPO concurred with the finding.

Current VORTAC Site

An Architectural Resource Survey (ARS) was completed for the current VORTAC site in April 2020. The results of that report recommended the Little Rock VORTAC building eligible for listing in the NRHP as per the integrity aspects and criteria found in 36 CFR § 60.4 under Criterion A for its strong association with the advent of civilian aircraft navigation system in Arkansas. The SHPO concurred with this recommendation and that correspondence can be found in Appendix D.

Criterion A: Properties that are associated with events that have made a significant contribution to the broad patters of our history.

3.11 Natural Resources and Energy Supply

A review of natural resources and energy supply was completed to compare the existing and proposed usage of these resources for the Proposed Action. These resources include water, asphalt, aggregate, wood, electricity, natural gas, and fuel.

Davidson Site

Currently, Harris Road only has a single-phase overhead utility power service line serving existing homes and farm facilities in the area. Three-Phase power in not immediately available at the Davidson Property but is in close proximity. Coordination with the power utility provider, Entergy, concluded that it can be brought to the site for a reasonable cost.

Harris Road only has a limited single-pair telecommunication service line serving existing homes in the area. Coordination with the communication utility provider, AT&T, concluded that a new 25-pair telecommunication service line can be brought to the site for a reasonable cost. AT&T will be able to place their new service line within the same utility easement as Entergy.

Thus, existing, and new utility easements along Harris Road will be updated as necessary for upgrading these power and communication utilities to support both existing users and the new VORTAC facility.

Current VORTAC Site

The current VORTAC site is supplied with overhead three-phase power and also is provided with a back-up diesel fueled generator for emergency power.

3.12 Noise and Noise-Compatible Land Use

The FAA considers the day-night level (DNL) below 65 decibel (dB) noise contour as acceptable for residential areas. The FAA also provides federal compatible land use guidelines for several land uses as a function of DNL values. FAA Order 5050.4B defines a noise sensitive area as “an area where noise interferes with the area’s typical activities or its uses”. Noise sensitive areas typically include residential homes, educational institutions, health care facilities, religious structures and sites, parks, recreational areas, areas with wilderness characteristics, wildlife refuges, and cultural and historical sites. As a result, concerns about unwanted noise or noise pollution can impact the environment and people. Noise becomes unwanted when it either interferes with normal activities such as sleeping and conversation or disrupts or diminishes one’s quality of life.

A noise screening analysis is a conservative approach for FAA to determine if further noise analysis is warranted in circumstances where air traffic operations change. The Preferred Alternative results in increased air traffic operations associated with six revised Instrument Flight Procedure (IFP) routes affecting three airports. As a result, FAA’s noise screening tools identified in FAA Order 1050.1F and *MITRE Guidance for Noise Screening of Air Traffic Actions* (2013) were used to evaluate the changes in air traffic procedures associated with the Preferred Alternative.

The proposed relocation site is situated on rural agricultural land adjacent to I-440 with only one home located approximately three-quarter miles from the VORTAC building site. The predominant noise on the site and the nearby home is from the adjacent interstate facility. Temporary and minor daytime noise from heavy equipment during construction activities is anticipated.

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

FAA Order 1050.1F, describes the socioeconomic impacts associated with relocation or other community disruption, transportation, planned development, and employment. This evaluation also includes effects on Environmental Justice (EJ) and children's health and safety. As directed by EO 12898, the demographic profile of the surrounding area is considered with regards to EJ concerns.

Executive Order 12898 (Environmental Justice on Minority Populations and Low-Income Populations) requires that federal programs identify and address, as appropriate, disproportionately high and adverse impacts to minority and low-income populations as part of the NEPA compliance process.

Pulaski County is the largest urban area in Arkansas and serves as the primary retail trade center for a predominantly rural state. According to U.S. Census Bureau data estimates for 2015-2019, the population of Pulaski County is approximately 391,911. The state capital of Arkansas is Little Rock in Pulaski County and has a population of approximately 197,318, according to U.S. Census estimates. Surrounding land use in and around the study areas for both the current VORTAC and the Proposed VORTAC is predominately agricultural. There are four homes within one-half mile of the current VORTAC and one home approximately three-quarter miles from the Proposed VORTAC. The nearest residential community to the Davidson site is approximately one mile to the west and is within Census Tract 38. The existing VORTAC lies within Census Tract 40.07. There are no daycares or schools within at least one mile of either site. The David D Terry Dam Site West Recreation Area is located approximately one mile from the current VORTAC site. This small USACE operated park offers boating and camping opportunities along the Arkansas River.

As shown below in **Table 1**, the population of Census Tract 38 is approximately 32% White, 62% Black or African American, and 0.8% Hispanic. In Census Tract 38, the Black or African American population and the percent of individuals below the poverty line are higher than county or statewide averages. The percentage of children under the age of 18 is 18.2% for Census Tract 38.

Table 1: Demographic Data (U.S. Census Bureau, Tables DP05 and S1701, 2015-2019 American Community Survey 5-Year Estimates for 2019).

Geography	Population	Percent of Population Under 18 Years of Age	Percent of Individuals Below the Poverty Level	Race Data (%)		
				White	Black or African American	Hispanic or Latino (of any race)
Arkansas	2,999,370	23.5	17.0	72.4	15.2	7.5
Pulaski County	392,967	23.3	16.8	52.3	36.7	6.2
Little Rock	197,958	23.4	16.6	45.1	42.0	7.4
Census Tract 38	4,035	18.2	29.9	32.0	62.1	0.8
Census Tract 40.07	2,819	21.9	28.8	21.7	71.8	6.1

3.14 Water Resources

3.14.1 Wetlands

Executive Order 11990, Protection of Wetlands (May 24, 1977) requires federal agencies to protect wetlands and to perform wetlands assessments for new proposed construction projects in wetland areas. No wetlands exist at the existing VORTAC site or within its vicinity.

Discussions below are specifically for the Davidson property since there are no direct or indirect impacts to following water resources expected at the current VORTAC site.

Water resources Soils at the Davidson property are comprised of Perry clay, 0 to 1 percent slopes, to the north and Rilla silt loam, 0 to 1 percent slopes, to the south. Rilla silt loam is considered well drained and exhibits a 5 percent hydric component. The soil, although considered well drained by the National Resources Conservation Service (NRCS), exhibited a restrictive layer of clay loam which acts as an aquitard. Pooling in this part of the property is likely a result of this characteristic and the land being built up or amended. Perry clay soils are poorly drained and have a 90 percent hydric rating. Both soil series are listed on the NRCS Hydric Soils List.

A wetland delineation was conducted at the Davidson site on November 19, 2019. The area of detailed field investigation only included portions of the Davidson site that might possibly be impacted by the proposed activities. The wetland boundaries outside the proposed impact area were determined through a combination of digital data review and field confirmation. A report detailing the findings of the wetland investigation is provided in **Appendix G.** This report will be

submitted to the USACE for concurrence at the time of submittal of the Section 404 Permit application. Based upon the report, there are 10 potentially jurisdictional wetlands (totaling 10.25 acres) at the Davidson site that were investigated and delineated. No streams, ponds, or other aquatic features were present (see **Figure 6**).

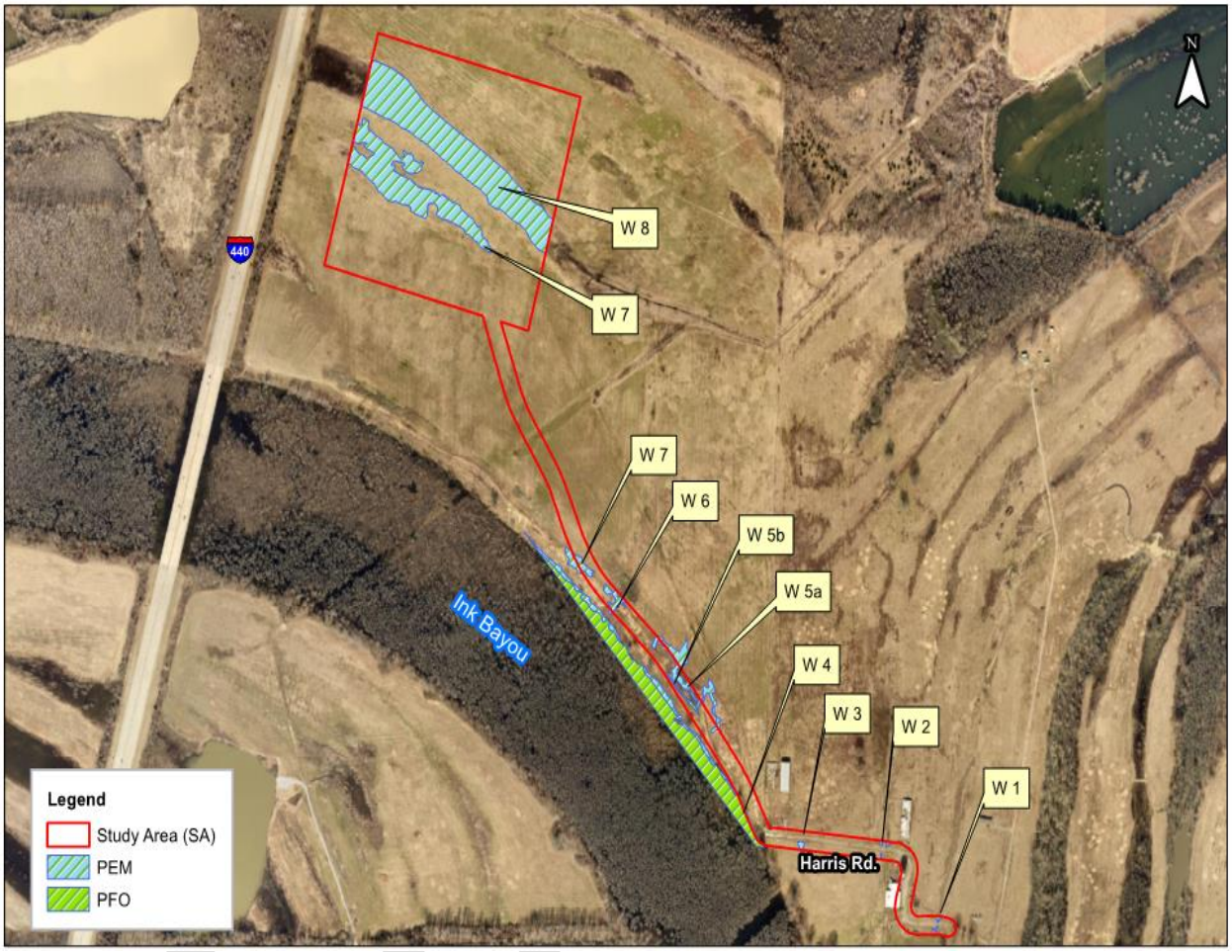

Figure 6. Wetlands Map

3.14.2 Floodplains

Executive Order 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support or development within the 100-year floodplain whenever there is a practicable alternative.

According to FEMA floodplain map 05119C0370G as shown in **Figure 7,** only a very small area of the 100-year floodplain (Zone A) is located on the northeast east corner of the Davidson site outside of the area of direct impacts. Most of the Davidson site is within the 500-year floodplain (Zone X). The existing VORTAC site lies within Zone X.

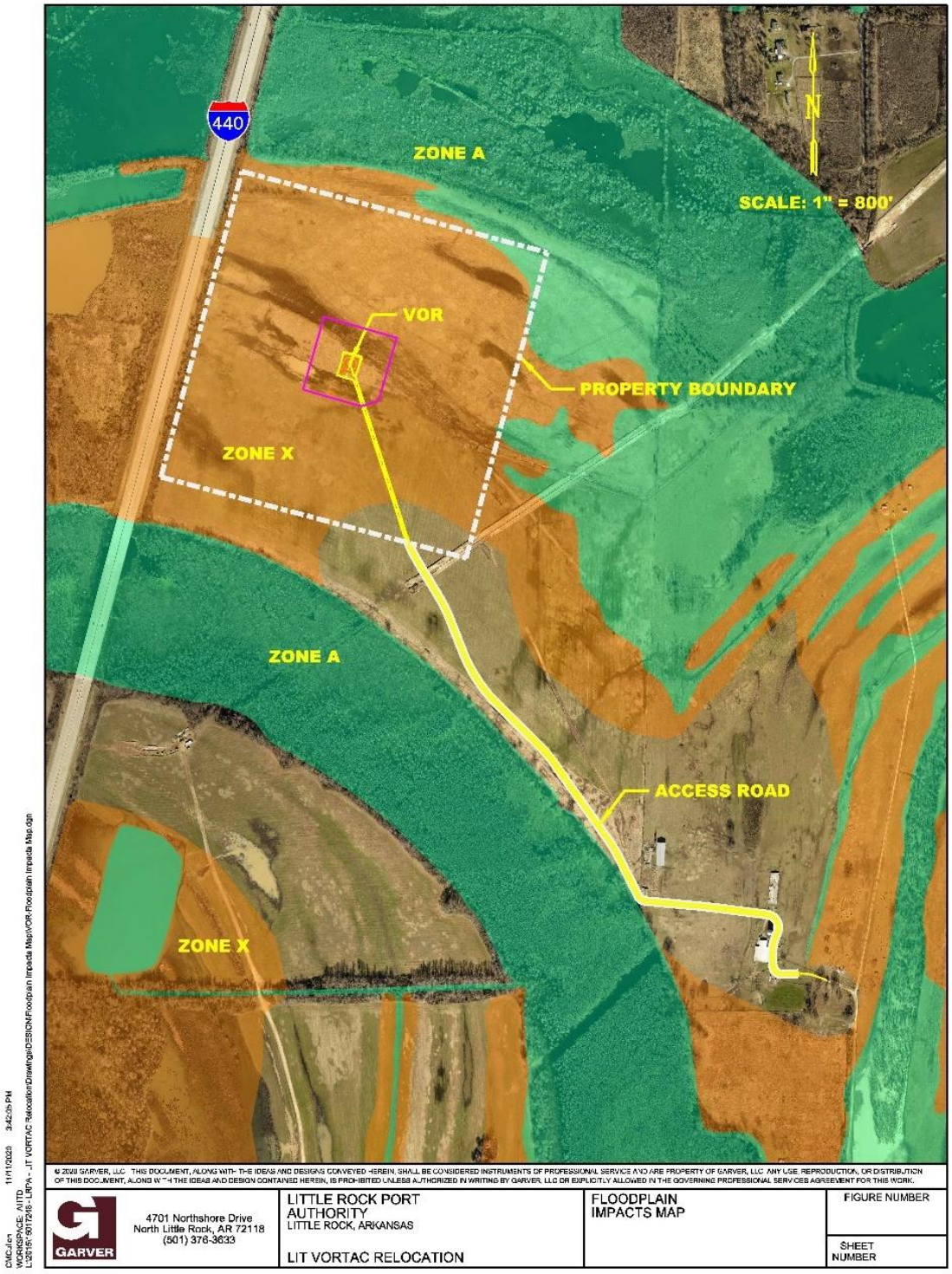

Figure 7. Floodplain Map

3.14.3 Surface Waters

The Davidson site is located within the Arkansas River – Lower River Basin which is part of the Arkansas River Valley ecoregion. No perennial surface waters are located on the Davidson site. The nearest surface water to the VORTAC site is Ink Bayou, which is south and adjacent to the property and is not impaired according to the Department of Environmental Quality (DEQ) 2018 303d list. There are no Arkansas designated Extraordinary Resource Streams near the Davidson site.

Currently, rain falling on the Davidson site is intercepted by vegetation and ultimately drains to Ink Bayou. Soil on the property is hydric and water may drain slowly. The site is within Hill Township, which is not permitted by a Municipal Separate Storm Sewer System.

3.14.4 Groundwater

The Davidson site is underlain by the alluvium deposits of the Mississippi Embayment. Alluvium is loose, unconsolidated (not cemented together into a solid rock) soil or sediment that has been eroded, reshaped by water in some form, and redeposited in a non-marine setting. Alluvium is typically made up of a variety of materials, including fine particles of silt and clay and larger particles of sand and gravel. When this loose alluvial material is deposited or cemented into a lithological unit, or lithified, it is called an alluvial deposit.

The Davidson site is located within the Ouachita Physiographic Province above two aquifer systems, a Surficial Aquifer and the Cane River Aquifer. The Surficial Aquifer System is considered unconfined and contains one major aquifer and three minor alluvial aquifers. These aquifers consist of gravel and sand and are known to yield high volume of water. Recharge is derived from alluvial deposits.

The Cane River Aquifer is a confining aquifer that consists of mixed clastic rocks lithology and available water quality and yield. The Cane River formation consists of a sequence of clays and shales that include minor amounts of marls, silts, and marine sand. Some sand beds within the Cane River attain a thickness of 40-50 feet, while others report 200-750 thickness. Yields of the Cane River wells are variable and have been reported to range from 120-330, and 920 gallons per minute. The principal source of recharge for the aquifer is from infiltration of precipitation through exposures of the outcrop.

Chapter 4: Environmental Consequences

4.1 Climate

4.1.1 Preferred Alternative

Any change in flight patterns caused by the relocation of the VORTAC is not expected to create additional flight time and therefore no increase in fuel emissions is anticipated. There will be minor emissions created by the large trucks used to transport the new equipment to the Davidson site. Additionally short-term minor emissions created by the construction of the new VORTAC site are expected. The demolition of the current VORTAC will create short-term minor additional emissions through the use of heavy equipment.

The new VORTAC site will have a diesel-powered generator for emergency use only. This will replace the older generator at the current site and therefore does not increase the likelihood of minor temporary emissions caused during power outages. The new generator will be more energy efficient and generates less emissions when in use.

Therefore, the Preferred Alternative would have minimal and temporary impact on greenhouse gas emissions and the climate.

4.1.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on the climate except the occasional operations of the emergency generator.

4.2 Land Use

4.2.1 Preferred Alternative

Davidson Site

The land surrounding the proposed VORTAC site would likely not see any changes other than the access road and the VORTAC site pad which would be converted from the current undeveloped pasture to a roadway and VORTAC facilities. The restrictions on airspace surrounding the VORTAC will discourage any major developments that have the need for multi-story buildings. The relocation of the facility is not anticipated to induce any other type of development impacting current land use in the area. Additionally, the project will not increase enplanements or stimulate any additional aviation improvements at any affected airport.

Current VORTAC Site

The current VORTAC site would be abandoned and the airspace restrictions curtailing development in the area would be removed. Consequently, the land use in the immediate area surrounding the VORTAC (approximately 1,200 acres by LRPA estimation), would be offered for development. Although no reasonably foreseeable projects are known, the land use within in this approximately 1,200 acres is anticipated to change at some point from agriculture and undeveloped lands to industrial developments. This is consistent with the past and current LRPA and City of Little Rock economic development plans.

Therefore, the Preferred Alternative would have minor impacts on the Davidson site, and minor impacts to future land use in the immediate vicinity of the current VORTAC location.

4.2.2 No Action Alternative

Under the No Action Alternative, the current VORTAC would remain in place and land use surrounding the VORTAC would continue to have a negative impact on economic development for the LRPA and City of Little Rock. Additionally, the Davidson site property would not be converted from pastureland to FAA use.

4.3 Visual Effects

4.3.1 Preferred Alternative

Davidson Site

The new VORTAC building to be located in the pasture will be visible from both I-440, Harris Road, and one residential property. The residential property sold the land for the VORTAC and are fully aware of any impacts to their viewshed. The impacts to the viewshed from I-440 and Harris Road will be very minor and is not expected to impact the general visual character from these roadways. There will be approximately 2 trips to the VORTAC per month and therefore this is not expected to create only minor visual impacts to the residents of the closest home.

Current VORTAC Site

The current VORTAC will be removed and therefore the visual character of the area as viewed from both the closest home and Frazier Pike Road will be consistent with the surrounding visual landscape.

Therefore, the Preferred Alternative would have minor impacts on visual resources and visual character.

4.3.2 No Action Alternative

Under the No Action Alternative, the existing visual character would remain the same and therefore there would not be any visual impacts.

4.4 Section 4(f) and 6(f) Resources

4.4.1 Preferred Alternative

Davidson Site

There are no Section 4(f) or 6(f) impacts at the Davidson site.

Current VORTAC Site

There are no Section 6(f) resources at the Current VORTAC site.

Because of the eligibility for listing on the NRHP (see Section 3.10), the current VORTAC site is subject to Section 4(f) regulations. Section 4(f), as amended and codified in 49 U.S.C. §303 of the USDOT Act of 1966, covers all evaluations of transportation projects requiring the use of Section 4(f) properties. The law states that the Secretary of Transportation may approve a transportation project that will use a Section 4(f) property only if there is no prudent and feasible

alternative to using that land, and only if the program or project includes all possible planning to minimize harm to the resource. Because the Preferred Alternative proposes to remove the VORTAC building, the FAA concluded that there would be an adverse effect to the resource and the SHPO concurred in that finding. Therefore, because the project would involve the use of a Section 4(f) property and the FAA cannot make a *de minimis* impact determination, the FAA prepared a Section 4(f) evaluation. The following is a summary of that evaluation, the full 4(f) evaluation is provided in Appendix E.

The current VORTAC site with the eligible structure is owned by the FAA. The Preferred Alternative includes a transfer ownership of the land and structure from FAA to the LRPA once the new VORTAC is fully functioning and the current VORTAC is decommissioned.

The Section 4(f) evaluation process involves an analysis of avoidance alternatives (any reasonable alternative to the use of Section 4(f) property) and an assessment of least harm. The following sections describe the avoidance alternatives considered, minimization of harm, and the resulting conclusion statement.

4.4.2 Alternative Analysis

This section describes the provides details on the alternatives considered including potential impacts.

The alternatives identified in this section include the Proposed Action and those that avoid the use of all Section 4(f) properties. These alternatives, which are listed in **Table 2**, were evaluated to determine if they would meet feasible and prudent guidelines.

- Feasibility refers to whether or not the alternative can be built as a matter of sound engineering judgement.
- An alternative would not be considered prudent if it:
    - Compromises the project to a degree that it is unreasonable if it does not meet the purpose and need for the project.
    - Results in unacceptable safety or operational problems.
    - After reasonable mitigation is considered, severe social, economic, or environmental impacts; or severe impacts to environmental resources protected under other Federal Statutes.
    - Results in additional construction, maintenance, or operational costs of extraordinary magnitude.
    - Causes other unique problems or unusual factors; or
    - Involves multiple factors as outlined above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Alternative 1 – Leave the VORTAC building in place after decommissioning and property transfer.

This alternative consists of removing sensitive materials from the interior and exterior of the site including the antennas. The access to the building would be closed with fencing to address

potential security concerns created by this alternative. The site lies approximately three-tenths of a mile from the closest public roadway (Frazier Road) and access to the VORTAC building would not be provided due to security concerns.

The FAA would convey the property to the LRPA. As a historic site, the building would need to be maintained in perpetuity and not allowed to deteriorate. The LRPA would be responsible to ensure that the site is not neglected and for the cost of maintenance and security of the facility in perpetuity.

This alternative is not considered prudent and feasible for the following reasons:

1. This Alternative would be prohibitive and inconsistent with the mission of the LRPA to develop the site. The VORTAC building would be located in the middle of lands that the LRPA plan to develop for industrial use due to the prime location with nearby railroad, highway, and port facilities. Preserving the VORTAC building in place would impact the ability to develop the property surrounding the VORTAC building and therefor have a negative economic impact by limiting development.

2. The VORTAC building was determined eligible for listing under Criterion A because of its association with events that have made a significant contribution to the broad patterns of history. It was not eligible under ***Criterion C*** which would indicate that the building itself is significant for its architecture or design. Consequently, preserving the VORTAC building in place does not contribute to historic context. The documentation of the site and its history is the most important historical resource the prudent solution to preserving the history and contribution of the VORTAC to Arkansas's aviation history.

> **Criterion C:** Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Therefore, Alternative 1 would not meet the purpose and need of the project.

Alternative 2 – No Action Alternative

Selection of the No Action Alternative would avoid impacts to this resource by continuing to utilize the current VORTAC site for aviation and not requiring it to be demolished and not relocating the VORTAC to another site. Siting criteria associated with the performance of the VORTAC restricts most development within the vicinity due to potential clear zone violations, this is the primary need for the request to relocate the VORTAC.

The No Action Alternative is not considered feasible because clear zone violations would limit surrounding development and not prudent because it would severely limit the economic opportunities important to the LRPA, the City of Little Rock, and Pulaski County.

Therefore, Alternative 2 would not meet the purpose and need of the project.

Proposed Action – This Alternative requires the removal of the VORTAC building.

The Proposed Action is the Preferred Alternative identified through the Environmental Assessment process. The Preferred Alternative includes the removal of the original VORTAC equipment and the demolition of the existing VORTAC building at the current site and the installation of new VORTAC equipment and facilities at the Davidson Site. The current and proposed VORTAC sites are shown in **Figure 1**. The current VORTAC will remain in place until the new VORTAC is fully operational.

The Proposed Action has an adverse effect on the historic resource but does meet the purpose and need for the project. A Memorandum of Agreement (MOA) has been developed with a work plan to document the building and its full history and contribution to aviation in Arkansas to mitigate the adverse effect (See Appendix D).

Table 2 – Section 4(f) Alternatives Analysis Summary

Section 4(f) Alternatives Considered			
Criteria	**Alternative 1**	**No-Action Alternative**	**Proposed Action**
Alternative constructed with sound engineering practice?	Yes	No	Yes
Satisfies purpose and need?	No	No	Yes
Results in impacts of extraordinary magnitude?	No	No	Yes
Prudent and feasible?	No – Does not meet the Purpose and Need	No – Does not meet the Purpose and Need	Yes

4.4.3 Mitigation

As previously described, several alternatives were evaluated that considered avoidance and minimization of effects for the current VORTAC building. Complete avoidance would not achieve the purpose and need for the project; therefore, mitigation measures for impacts to the VORTAC building have been developed during the Section 106 consultation process and included in the MOA prepared for this project. Proposed mitigation as outlined in the MOA is included below. The approved MOA will be transmitted to FAA to be executed prior to the Section 4(f) being approved, and all the signatories except FAA have signed. The following is the mitigation measures as described in the referenced MOA:

An Architectural Resources Survey, paid for by LRPA, shall be conducted at the Little Rock VORTAC building that includes both physical descriptions and photographs, and a history of the structure including the structure's significance to the City of Little Rock and aviation. The report will be submitted to SHPO to mitigate the adverse effects on the historic property. Additionally, a webpage will be maintained by the LRPA with the written history of the VORTAC building and description of the structure's significance.

4.4.4 Consultation and Coordination

FAA has led coordination with SHPO and LRPA and is the lead federal agency responsible for decision making regarding Section 4(f) designation and uses. The FAA is providing the Department of Interior (DOI) opportunity to review. The Draft 4(f) will be made available to the public during the public involvement process associated with the EA.

FAA notified federally recognized Tribes of the project. The Choctaw Nation of Oklahoma was the only Tribe to respond and requested a copy of the cultural resource report, the federal determination of effect, and topographic maps of the project area. No further comments have been received from the Choctaw Nation.

4.4.5 Conclusion

After careful and thorough consideration, the FAA determined that there are no feasible and prudent alternatives to the use of Section 4(f) resources. As described above, other alternatives considered would fail to meet the purpose and need for the project.

Alternative 1 would be prohibitive and inconsistent with the mission of the LRPA to develop the site. The protected VORTAC building could impact the ability to develop the property surrounding the VORTAC building and therefor have a negative economic impact by limiting development as well as create financial and administrative hardships on the LRPA for maintenance and security of the historic site.

The No-Action Alternative would be prohibitive and inconsistent with the mission of the LRPA to develop the site. Leaving the current VORTAC operating in the same location would prevent the LRPA from developing the lands surrounding the current VORTAC site. The economic opportunities important to the LRPA, the City of Little Rock, and Pulaski County would not be possible in this prime intermodal location and have a negative economic impact on the region.

The proposed action was found to have an adverse effect under Section 106 on the Little Rock VORTAC building due to the direct effects of removing the property from Federal ownership and the removal/demolition of the building, therefore using a historic site under Section 4(f).

Based on the information evaluated in this document, it has been determined that there are no feasible and prudent alternatives to the use of the VORTAC building. A Section 106 MOA has been developed, where FAA, SHPO, and LRPA have consulted regarding mitigation measures to the historic site. The MOA has been executed and signed. All possible planning to minimize harm are being incorporated into the project in accordance with Section 4(f) requirements.

4.5 Coastal Zone and Wild and Scenic Rivers

There are no coastal resources or wild and scenic rivers in the vicinity of the Preferred Alternative.

Therefore, the Preferred Alternative would have no impacts on Coastal Zone or Wild and Scenic River resources.

4.6 Biological Resources

4.6.1 Vegetation

4.6.1.1 Preferred Alternative

The Davidson site is significantly disturbed by long term agriculture practices. The area around the site pad is mostly Bermuda grass apart from the wet areas as described in the wetland section in Chapter 3. The footprint of the access road ROW and VORTAC facility location, approximately 2.05 acres has been cleared of vegetation for better access and additional design studies. All areas except the future site of the new VORTAC facility and the 12-foot-wide access road, a total of +/- 0.76 acres, would be allowed to naturally regenerate with native species.

Therefore, the Preferred Alternative would have minor impacts on the vegetation of the site.

4.6.1.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on vegetation.

4.6.2 Wildlife

4.6.2.1 Preferred Alternative

Some temporary displacement of wildlife could result during construction related activities but the overall impacts to wildlife should be minor. The remote location of the VORTAC facility ensures numerous areas of refugia are available for wildlife displaced during the construction process. Whiles some noise is anticipated during the construction this will be short term and only during daylight hours. No noise would be generated by the operation of the VORTAC; therefore, no long-term noise impacts are expected. Future traffic (2 vehicles per month expected) on the access road would be limited and restricted solely to personnel authorized access to the VORTAC, resulting in minimal wildlife impacts. Disturbance on the site is relatively small in size, short-term in duration, and located adjacent to large portions of undeveloped land.

Therefore, the Preferred Alternative would have minor impacts on wildlife.

4.6.2.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no impacts on wildlife.

4.6.3 Threatened and Endangered Species

4.6.3.1 Preferred Alternative

After review of the Preferred Alternative the Arkansas Natural Heritage Commission (ANHC) stated they identified no specific concerns regarding the planned improvements. The correspondence with this agency is provided in Appendix D**.** No additional listed species or species of concern were observed during site assessment surveys or found on historical records within the VORTAC relocation site. Temporary disturbance of listed species or species of concern might result from the activities and noise associated with the construction period. Because this disturbance would be short-term in duration and located adjacent to large portions of undeveloped land that act as refugia, the proposed impact to these species would be minor.

Therefore, the Preferred Alternative would have minor impacts on state listed species and federally listed threatened and endangered species.

4.6.3.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on threatened and endangered species.

4.7 Hazardous Materials, Solid Waste and Pollution Prevention

4.7.1 Preferred Alternative

Davidson Site

There are two gas pipelines in the north and center parts of the Davidson site running from east-to-west and northeast-to-southwest. These pipelines are within the larger property acquisition but are not within the study area and would not be impacted by the Preferred Alternative.

Hazardous waste products that could be used and generated during the construction of the VORTAC facility include materials for equipment operation such as fuel and hydraulic fluid for machinery and paint products and glue for construction. Although the completed VORTAC does not generate any hazardous waste products, some of these materials could potentially be used during maintenance and repairs of the facility.

A generator with 500-gallon diesel underground storage tank will be located on site for emergency power needs. This tank will be provided with leak detection sensors for remote monitoring as well as spill containment associated with a 7-gallon diesel tank located inside the facility.

All contractors are required to use and store hazardous materials with the guidelines established in AFI 32-7086. Hazardous materials used and hazardous waste generated as a result of the VORTAC construction, maintenance, and repair is anticipated to be negligible. There will be a spill response manual maintained at the facility that outlines the necessary response to any spill including who to call and what actions to take.

Current VORTAC Site

A Phase I Environmental Site Assessment (ESA) following the appropriate ASTM guidelines will be completed for the current VORTAC site prior to the demolition and removal of the building. The Phase I Environmental Site assessment will evaluate all possible environmental hazardous and recommend appropriate actions prior to removal of materials or demolition of the building.

Therefore, the Preferred Alternative is anticipated to have only minor impacts relative to hazardous materials and waste. This conclusion may change depending on the findings of the Phase I ESA.

4.7.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and the existing VORTAC would not be demolished. Therefore, no effect would be made on hazardous materials and waste.

4.8 Historical, Architectural, Archeological, and Cultural Resources

The SHPO provided FAA with a list of potentially interested Tribes. All of the Tribes were sent a letter describing the proposed project and a project location map. To date the only Tribe requesting additional information is the Choctaw Tribe of Oklahoma (Coordination letters are provided in Appendix D).

4.8.1 Preferred Alternative

Davidson Site

Correspondence from SHPO confirmed that there are no historic properties eligible for listing in the NRHP affected at the Davidson Property.

In the event of an inadvertent discovery of human remains and/or burial site during the subsequent development or modification of the Study Area, the project owner should follow the protocols outlined in Act 753 of 1991, as amended (Arkansas Grave protection Act) and other applicable state and federal laws.

Current VORTAC Site

The existing VORTAC facility was determined eligible for listing in the NRHP pursuant to Section 106 of the National Historic Preservation Act of 1986. A MOA has been developed between FAA, SHPO, and LRPA and it includes a mitigation plan to allow the existing site to be demolished once the new VORTAC is fully operational (see Appendix D for MOA). This MOA documents the existing facilities' important attributes in both photographs and written history as a permanent public record of the site.

Therefore, the Preferred Alternative is anticipated to have only minor impacts to historic and archeological resources.

4.8.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and the existing VORTAC would not be demolished. Therefore, no effect would be made on cultural resources.

4.9 Natural Resources and Energy Supply

4.9.1 Preferred Alternative

Davidson Site

Currently, only single-phase power service present to serve existing homes and farm facilities in the area. Three-Phase power is not immediately available at the Davidson Property. Coordination with the utility provider, Entergy, concluded that it can be brought to the site for a reasonable cost.

AT&T has a limited telecommunication service serving existing homes along Harris Road. Coordination with AT&T concluded that a new telecommunication service can be brought to the site for a reasonable cost.

Existing and new utility easements along Harris Road will be updated as necessary for upgrading the power and communications to support existing users and the Davidson Property.

Materials required for the improvements to the Davidson site include common readily accessible building materials such as gravel, concrete, and lumber. Gasoline and diesel fuels will be needed to operate machinery and equipment only during the construction of the project. some minor diesel fuel will be required for operating the backup power generator during emergencies.

Current VORTAC Site

Gasoline and diesel fuels will be needed to operate machinery and equipment only during the demolition of the current VORTAC building. The three-phase power provided to the current VORTAC will be removed once the new VORTAC is operational.

Construction of the VORTAC access road and pad site at the Davidson site and demolition of the existing VORTAC would not use natural resources or energy sources that are in short supply in the area and would not result in the depletion of any such resources.

Therefore, the Preferred Alternative is anticipated to have only minor impacts to natural resources and energy.

4.9.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and the existing VORTAC would not be demolished. Therefore, no effect would be made on natural resources or energy supply.

4.10 Noise and Noise-Compatible Land Use

4.10.1 Preferred Alternative

Based on guidance provided in FAA Orders 1050.1F, Desk Reference, 5050.4B, and the MITRE screening tool, the following methodology for compliance with aviation noise-specific regulations was used. FAA Order 1050.1F Desk Reference indicates the use of noise screening tools are appropriate when actions may involve multiple airports. As a result, the MITRE screening tool was utilized for the Proposed Action and documents a series of in-sequence screening tests to determine potential aviation related noise effects. This methodology provides conservative results and allows users to focus on areas where there is increased potential for impacts. The MITRE screening Operations Test (OPS Test) is the first test in sequence provided in the MITRE

screening methodology. This test indicates that 700 annual jet operations and 90,000 annual propeller operations are considered the first thresholds for determination of passing the OPS test.

A total of 40 proposed IFP changes were evaluated for potential effects related to the Proposed Action and can be found in Appendix H. Based on this initial evaluation, only six of the IFP changes required further noise screening evaluation because they included flight pattern and/or altitude changes. The remaining 34 procedure changes identified in Appendix H did not warrant further noise screening due to insignificant or no changes in flight patterns or altitudes.

These six procedures were further evaluated using the OPS test. Table 2 below summarizes the data evaluated with regards to jet and propeller operations associated with each affected airport as well as their respective procedural changes. Traffic data reviewed in this evaluation included Traffic Flow Management System Counts and other non-FAA flight data to determine potential route usage between these select airports. Based on results of the OPS test, the six evaluated proposed routes identified in Table 2 pass the OPS test and therefore did not require further noise screening or analysis. Based on the MITRE screening analysis, the Proposed Action would not have an adverse effect on noise levels in the vicinity of proposed airspace changes.

Table 3: MITRE Noise Screening Options Test Results

Route	Jet Ops	Estimated No. Propeller Ops	Estimated No. Propeller Ops Allowed	Max. Jet Ops Allowed*	OPS Test Results
KPBF – KLIT • ILS OR LOC RWY 4L • ILS OR LOC RWY 4R • ILS OR LOC RWY 22L ILS OR LOC RW 22R	62	<17,000	>80,000	568	Pass
KSUZ – KLIT ILS OR LOC/DME RWY 2	17	<200	>85,000	698	Pass
KPBF – KSUZ RNAV (GPS) RWY 20	0	50-100	90,000	700	Pass
*MITRE Operations Test Formula: *#Jet Ops = 700 – (0.0077778 x #Prop Ops)*					

Temporary daytime construction noise could impact one residences at the Davidson site and three or four at the current VORTAC site.

Therefore, the Preferred Alternative would have minimal noise impacts.

4.10.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and the existing VORTAC would not be demolished. Therefore, there would be no changes to noise impacts.

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

4.11.1 Preferred Alternative

There are no displacement or other direct impacts to any specific population. No residences or business, or community feature such as a church, school, or daycare would be impacted by the Preferred Alternative. In accordance with EO 12898, Environmental Justice on Minority Populations and Low-Income Populations, minority and low-income communities within the vicinity of either the Davidson site or the current VORTAC site would not be impacted disproportionately. Specifically, other than temporary minor impacts during construction, there are no direct or indirect negative impacts to any household, minority, elderly, or low-income households or individuals, and no impacts to any community feature currently in place.

The relocation of the VORTAC will open up the area close to the Port to accommodate industrial development. The Port of Little Rock will have the ability to create up to a 1,200-acre super site served by the McClellan Kerr Arkansas River Network System and two class one railroads. The super site could generate in significant capital investment and create thousands of jobs. The local economy could benefit from short-term positive impacts such as hotel and food expenditures and temporary jobs during the construction of new plants or industrial facilities. Although not in the reasonably foreseeable future there may be positive long-term employment opportunities generated by new businesses at the Port.

The Preferred Alternative includes a gravel access road from Harris Road to the VORTAC facility. Construction traffic associated with construction of the VORTAC facility and access road are expected to be short term and minimal. Following the completion of construction, traffic levels in the area would return to current levels. Use of this access road would be solely for access to the VORTAC facility and would not noticeably increase traffic over the long-term and not create any safety or health issues. Only two visits to the site per month are anticipated for operations and maintenance.

Therefore, the Preferred Alternative would have minor temporary impacts on local road traffic during construction but would not result in negative socioeconomic, environmental justice, or children's health and safety impacts. It could, however, generate positive impacts on socioeconomic resources.

4.11.2 No Action Alternative

Under the No Action Alternative, the new VORTAC site would not be developed and the existing VORTAC would not be demolished. It would therefore not result in any positive or negative socioeconomic, environmental justice, or children's health and safety impacts.

4.12 Water Resources

4.12.1 Wetlands

4.12.1.1 Preferred Alternative

As discussed in Section 3.10, there are no wetlands in the vicinity of the existing VORTAC site, however there are wetlands on the Davidson site. A wetland delineation was conducted and the

report in Appendix F details the wetland locations. No streams, ponds, or other jurisdictional waters were located. Every effort was made to locate the facility and the access road to avoid or minimize impacts to wetlands. A total of 0.33 acres of emergent wetlands would be impacted by the Preferred Alternative. Due to the minor unavoidable wetland impacts, a USACE permit has been obtained and is provided in Appendix D. Wetland mitigation was required by the permit and satisfied through the purchase of 2.68 credit through the Pelican Mitigation Bank L.L.C (copy of mitigation contract is in Appendix D). A Stormwater pollution and Prevention Control Plan will be developed and approved by ADEE that will include sediment and erosion controls that would be implemented during construction to prevent any indirect impacts to wetlands.

Therefore, the Preferred Alternative would have minor wetland impacts.

4.12.1.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on wetlands.

4.12.2 Floodplains

4.12.2.1 Preferred Alternative

There are approximately 0.87 acres of fill within the 500-year floodplain. No development or impact will occur within the regulated 100-year floodplain and therefore under Executive Order 11988 no floodplain analysis or permit is required.

Therefore, the Preferred Alternative would have minimal floodplain impacts.

4.12.2.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on floodplains.

4.12.3 Surface Waters

4.12.3.1 Preferred Alternative

Davidson Site

No direct impacts are expected to surface waters at the Davidson site. The VORTAC facility and access road would both be constructed of a gravel base that allows some percolation of precipitation through rock to the sandy, well-drained soil below. Stormwater pollution prevention plans for construction occurring on the VORTAC relocation site would meet ADEQ standards, which also meet or exceed local and federal standards. Very little soil disturbance would be generated by the construction activities that could result in indirect sedimentation to surface water. Erosion control practices, like the use of hay bales and silt fences, would be implemented prior to and during construction to prevent indirect impacts to adjacent areas. All activities would meet ADEQ construction stormwater permitting in accordance with provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.) and Clean Water Act (33 U.S.C. 1251 et seq.), which also meet or exceed local and federal standards. The stormwater pollution prevention plan for the construction occurring on the VORTAC relocation site would also meet these standards. These plans will be developed and submitted to ADEQ for approval prior to construction and prevent or minimize any indirect impacts to surface water.

Due to the small size of the construction area and the relatively flat topography of the site, significant land contouring would not be required for construction of the VORTAC facility and access road.

Current VORTAC Site

There are no surface waters at the current VORTAC site, and the future demolition of the building is not anticipated to create any indirect impacts to surface waters.

Therefore, the Preferred Alternative would have minimal and temporary impact on surface waters.

4.12.3.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on surface water.

4.12.4 Groundwater

4.12.4.1 Preferred Alternative

The construction of the VORTAC facility under the Preferred Alternative should have no impact on the surficial groundwater table during construction. Dewatering would not take place onsite. Additionally, operation of the VORTAC facility would not require discharges to, or withdrawals from, the groundwater.

Therefore, the Preferred Alternative would have no impact on ground water.

4.12.4.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, no effect would be made on ground water.

4.13 Cumulative Impacts

The CEQ regulations, under 40 CFR § 1508.7, define cumulative impacts as impacts on the environment resulting from the incremental impact of actions when added to other actions in the past, present, and reasonably foreseeable future actions, regardless of what person or agency undertakes those actions. Analysis of cumulative impacts is imperative, since individually minor impacts can collectively become significant impacts over time.

4.13.1 Preferred Alternative

Resources resulting in direct impacts for the Preferred Alternative were evaluated. The only resource category which would potentially result in more than minor impacts was wetlands. Cumulative impacts analysis was therefore limited only to wetlands.

Other actions considered are those identified in the past five years, current projects, or those reasonably foreseeable actions planned to occur in the next five years. These other actions were identified through interviews with city planners or officials of North Little Rock, Jacksonville, LRPA, Little Rock Air Force Base, Little Rock Chamber of Commerce, and Pulaski County (See Appendix D for correspondence). Additionally, ARDOT and other transportation projects identified in the 2019-2022 Statewide Transportation Improvement Plan (STIP) were also evaluated.

In addition to the 0.33 acres of direct wetland impacts, an estimated 2 acres of wetlands have been impacted by other actions within the watershed. The largest of these impacts, and the only one known to involve a Section 404 permit from USACE, consisted of widening 1.3 miles of Hwy. 67 at Jacksonville. This project was conducted by ARDOT and resulted in 1.8 acres of wetland impacts, which were mitigated for with 3.4 acres of wetlands at the AHTD Rixey Bayou Mitigation Area near Jacksonville.

In total, the Preferred Alternative combined with other actions may cumulatively impact up to 2.4 acres of wetlands, which is less than 0.1% of the total wetland acreage (2,946 acres) found within the watershed. These impacts to wetlands are considered minor compared to the amount of wetland resources that remain and Preferred Alternative impacts to wetlands are not expected to influence other areas of the watershed or be significant in scale. Additionally, mitigation in the form of the purchase of wetland credits were incorporated into the Preferred Alternative. Thus, no significant cumulative impacts are anticipated to wetlands.

Therefore, the Preferred Alternative would have minor cumulative impacts on wetland resources.

4.13.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and therefore, would not result in any cumulative impacts.

4.14 Indirect Effects

Indirect effects are defined as impacts that are “caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable” according to CEQ regulations, 40 CFR § 1508.8, and may “include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” Any indirect affects have been discussed in each resource category above. The only potential indirect effect noted is induced growth created by opening approximately 1,200 acres for industrial development.

4.14.1 Preferred Alternative

As the Preferred Alternative will not increase public accessibility to the project area, induced growth beyond the development of the LRPA property as described in Section 4.6 is unlikely. There is not currently any reasonably foreseeable project planned for the approximately 1,200 acres that will become available by the relocation of the current VORTAC facility. Additionally, city planners or planning officials for North Little Rock, Jacksonville, LRPA, Little Rock Air Force Base, Little Rock Chamber of Commerce, and Pulaski County do not identify any reasonably foreseeable projects resulting from induced growth from the Preferred Alternative. As discussed above in corresponding sections, there is a possibility for minor temporary impacts to water resources and air quality from indirect impacts associated with construction activities.

Therefore, the Preferred Alternative would result in only temporary minor indirect impacts to air quality and water resources during construction as previously discussed above.

4.14.2 No Action Alternative

Under the No Action Alternative, the proposed VORTAC relocation site would not be constructed and the existing VORTAC would not be demolished. Therefore, it would not result in any indirect effects impacts.

4.15 Mitigation

As a result of the findings in this EA, the Preferred Alternative requires mitigation for wetlands impacts and for the demolition of the existing VORTAC which was determined as eligible for listing on the NRHP. These mitigation plans for each were discussed in Sections 4.8 and 4.12.

Additional mitigation will be provided through the implementation of Best Management Practices, such as erosion and sedimentation control methods that would minimize potential indirect impacts to water resources and air quality. If dust becomes an issue due to dry conditions during construction, dust control measures will be implemented to reduce the impacts to air quality.

4.16 Permits

The planned improvements will require a few permits prior to construction. The proposed construction activity evaluated by this DEA will require some excavation and/or discharge of dredged or fill material in wetlands, therefore, a Section 404 Permit from the USACE will be required. Due to ground disturbances of more than an acre a NPDES Permit will be required. If this Section 404 permit does not include a Water Quality Certification from the Department of Environmental Quality that certification will need to be acquired separately.

Chapter 5: List of Preparers

Name	Organization	Primary Responsibility
Bill McAbee	Garver	Task Manager / Reviewer
Tracy Michel	Garver	Document Preparation
Cassie Schmidt	Garver	Document Preparation
Colby Marshall	Garver	Biological Resources
Rae Lynn Schneider	Integrated Environmental Solutions	Hazardous Materials
Chris Branam, RPA	Flat Earth Archeology	Cultural Resources
Michele Lopez	Garver	QC Review
Ryan Mountain	Garver	QC Review
Eric Farmer	Garver	Project Manager
Todd Mueller	Garver	Technical Advisor

Chapter 6: List of Persons and Agencies Consulted

Name	Organization	Title
Everett Bandy	Quapaw Tribe of Oklahoma	Tribal Historic Preservation Officer
Earl J. Barbry, Jr.	Tunica-Biloxi Tribe of Louisiana	Tribal Historic Preservation Officer
Tamara Francis	Caddo Nation	Tribal Historic Preservation Officer
Dr. Andrea Hunter	The Osage Nation	Tribal Historic Preservation Officer
Kenneth Brazil	Arkansas Natural Resource Conservation Service	Engineering Supervisor
M. Elaine Edwards	Little Rock District Corps of Engineers	Chief, Regulatory Division
Erin Thompson	United Keetoowah Band of Cherokee Indians of Oklahoma	NAGPRA Coordinator/Tribal Archaeologist
Dr. Ian Thompson	Choctaw Nation of Oklahoma	Tribal Historic Preservation Officer
Lazendra Hairston	Arkansas Department of Environmental Quality	Ecologist
Bryan Leamons, P.E.	Arkansas Department of Environmental Quality	Senior Operations Manager, Office of Water Quality
Cindy Osborne	Arkansas National Heritage Commission	Data Manager
Eric Mills	Arkansas Historic Preservation Program	Section 106 Coordinator
Justin Stroman	Arkansas Game and Fish Commission	Environmental Coordination Biologist
Melvin Tobin	United States Fish and Wildlife Service-Arkansas Field Office	Field Supervisor
Commander Eric Washburn	United States Coast Guard	Commander, Bridge Branch
Bryan Williamson	Vicksburg Corps of Engineers	Acting Chief, Permit Section

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