

DRAFT

ENVIRONMENTAL ASSESSMENT

**Proposed Construction and Operation of a
Multi-Specialty Outpatient Clinic
Jacksonville, Onslow County, North Carolina**

**U.S. Department of Veterans Affairs
810 Vermont Avenue, NW
Washington, DC 20420**



May 2025

Executive Summary

This environmental assessment (EA) has been prepared to analyze the potential environmental impacts associated with the U.S. Department of Veterans Affairs' (VA's) Proposed Action to award a lease to a private entity that would construct a multi-specialty outpatient clinic (MSOC) for VA to lease and operate in Jacksonville, Onslow County, North Carolina. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code § 4321 et seq.).

Purpose and Need

The purpose of the Proposed Action is to provide multi-specialty outpatient health care services to area Veterans. VA is to replace the four existing Jacksonville outpatient clinics (OPCs) with one MSOC.

The Proposed Action is needed to address space gaps and operational inefficiencies at the four existing Jacksonville OPCs that were identified through the VA Strategic Capital Investment Planning process. By consolidating multiple outpatient services in geographically dispersed locations to a new MSOC with greater capacity, VA would be able to provide area Veterans timely access to state-of-the-art health care and mental health services in a centralized, appropriately sized, modern facility commensurate with current and projected demands.

Proposed Action and Alternatives

VA's Proposed Action is to award a lease to a private entity that would construct a MSOC for VA to lease and operate for up to 20 years in Jacksonville, NC. The Proposed Action site (approximately 31 acres) is located at 4424 and 4386 Western Boulevard (also known as NC-53), immediately west of the intersection of Western Boulevard and Carolina Forest Boulevard.

Alternatives

VA is considering offers from two private entities (Alternative 1 and Alternative 2) to construct the MSOC. This EA examines both Alternatives 1 and 2 in depth, as well as the No Action alternative; these alternatives are described below.

Action Alternatives

The Proposed Action site under both Alternatives 1 and 2 is a former pine tree plantation that has since been reforested and remains undeveloped.

Under both Alternatives 1 and 2, the MSOC would be located in the central portion of the site and surrounded by parking areas with capacity for approximately 1,300 vehicles. Alternative 1 would construct the MSOC with a footprint of approximately 112,366 square feet and approximately 255,318 building square feet. Alternative 2 would construct the MSOC with a footprint of approximately 153,451 square feet and approximately 244,913-building square feet. Both alternatives for the MSOC would not exceed 40 feet in height. Both alternatives propose constructing the MSOC main entrance along Western Blvd.

Under both Alternatives 1 and 2, the private entity would be responsible for designing and constructing the MSOC in compliance with VA design requirements and applicable federal, state, and local regulations. The private entity would be required to design and construct the facility to meet Green Building Initiative Green Globes certification (GBI 2025).

The MSOC would be operated and staffed by the VA Fayetteville Coastal Health Care System, with approximately 500 new staff anticipated. VA's lease would extend for up to 20 years.

VA has not identified any other reasonable action alternatives that would meet the purpose and need for the Proposed Action.

No Action Alternative

Under the No Action alternative, the Proposed Action would not be implemented. VA would continue to provide primary, mental health, and specialty care outpatient services at the four existing OPCs in Jacksonville, NC. These OPCs would continue to have space gaps and operational inefficiencies, thus limiting VA's ability to provide modern, state-of-the-art health care services to Veterans in the region, and not meet the purpose of or need for the Proposed Action. Under the No Action alternative, the proposed site for the Jacksonville MSOC could remain vacant or be developed by others for other uses. The No Action alternative provides a benchmark against which VA can compare the impacts of implementing the Proposed Action.

Summary of Potential Environmental Consequences

Table ES-1 lists the environmental resources evaluated and summarizes the potential impacts to each resource from the Proposed Action and the No Action alternative. As shown in Table ES-1, the Proposed Action under Alternatives 1 or 2 would result in no significant adverse impact on any of the environmental resources analyzed in this EA.

Table ES - 1. Summary of Potential Environmental Consequences

Resource	Proposed Action (Alternatives 1 and 2)	No Action Alternative
Aesthetics	Construction: Conversion from wooded area to active construction site for approximately 18-24 months. Temporary, minor adverse impact due to presence of construction equipment and site clearing. Operation: Permanent, minor adverse impact from conversion of wooded area to medical facility with a professionally maintained landscape.	No impact
Air Quality	Construction: Emissions of fugitive dust from grading, criteria pollutant and greenhouse gas emissions from construction equipment and vehicles, resulting in temporary, negligible adverse impact on air quality. Operation: Emissions from heating, ventilation, and air conditioning (HVAC), emergency generator testing, and vehicles, resulting in permanent, negligible adverse impact on air quality. MSOC would be designed and operated to achieve Green Building Initiative Green Globes certification.	No impact

Resource	Proposed Action (Alternatives 1 and 2)	No Action Alternative
Wildlife and Habitat	<p>Construction: Construction would clear potential habitat for federally and state listed species. Private entity would implement a time-of-year-restriction on tree clearing and conduct pre-construction clearance surveys for protected bat species and Migratory Bird Treaty Act birds if construction cannot be avoided during nesting season. Private entity would also conduct a pre-construction survey for listed plant species during optimal plant survey windows to determine the species' presence or absence within the site. If a federally listed species is found within the site or is indicated within a one-mile radius of the site, the private entity should contact Eastern North Carolina USFWS for further guidance. These impact avoidance measures would limit the effects on wildlife and habitat, resulting in permanent, less-than-significant adverse impacts.</p> <p>Operation: No additional impact beyond site development.</p>	No impact
Floodplains, Wetlands, and Coastal Zone	<p>Floodplains: Site is outside 100- and 500-year floodplains. No impact on floodplains.</p> <p>Wetlands: Construction and operation would result in a permanent, minor adverse impact due to the filling of three wetlands and one stream. Prior to construction, private entity would obtain Clean Water Act Section 404 and 401 permits and implement permit-required compensatory mitigation for wetland and stream impacts.</p> <p>Coastal Zone: Construction is consistent with NC enforceable coastal zone policies. Operation consistent with NC enforceable coastal zone policies. No impact on coastal zone resources.</p>	No impact
Cultural and Historic Resources	<p>Construction and Operation: No National Register of Historic Places-listed or eligible historic properties present at the site; no historic properties affected. Section 106 concurrence of no impact on cultural and historic properties received from State Historic Preservation Office and Catawba Nation.</p>	No impact

Resource	Proposed Action (Alternatives 1 and 2)	No Action Alternative
Geology and Soils	<p>Geology: Building foundation not anticipated to encounter bedrock. No impact on geology during construction or operation.</p> <p>Soil: Prior to construction, private entity would obtain NC Department of Environmental Quality (NCDEQ) National Pollutant Discharge Elimination System Construction General Stormwater Permit (CGP). Soil erosion and sedimentation minimized by implementing permit-required best management practices as specified in an Erosion and Sedimentation Control Plan and Stormwater Pollution Prevention Plan. Construction would result in permanent, minor adverse impact on soil quality and prime farmland soil.</p> <p>No mechanisms to further impact soil or cause erosion during operation of the MSOC. No impact.</p>	No impact
Hydrology and Water Quality	<p>Construction: Temporary, minor adverse impact by regrading site drainage patterns; construction stormwater managed through NCDEQ CGP and City of Jacksonville permit-required best management practices.</p> <p>Operation: Permanent, negligible adverse impact from increased impervious surface; operational stormwater managed in new on-site stormwater retention basins.</p>	No impact
Land Use	<p>Construction and Operation: Development consistent with Onslow County strategic plan and City of Jacksonville Corridor Commercial District zoning regulations. No impact on land use.</p>	No impact

Resource	Proposed Action (Alternatives 1 and 2)	No Action Alternative
Noise and Vibration	<p>Construction: Construction noise maintained in compliance with City of Jacksonville noise ordinance and the U.S. Occupational Safety and Health Administration would limit the effects on noise-sensitive receptors, resulting in temporary, minor adverse impacts on noise-sensitive receptors and negligible impact on construction personnel. Temporary, negligible adverse vibration impacts to sensitive receptors minimized by distance and assessed further in final design.</p> <p>Operation: Noise generated from HVAC systems, monthly emergency generator testing, and vehicles traveling to and from the site during operation, resulting in a permanent, negligible adverse impact on noise-sensitive receptors and workers. No impact on vibration-sensitive receptors.</p>	No impact
Solid Waste and Hazardous Materials	<p>Construction: The Phase I Environmental Site Assessment did not identify any recognized environmental conditions at the site. Construction debris recycled or reused to extent practicable, otherwise transported to an appropriate landfill; additional volume of waste would have a temporary, minor adverse impact on landfill capacity.</p> <p>Operation: Routine wastes managed per federal and state regulations. Permanent, negligible adverse impact due to minimal volumes of wastes generated and disposed.</p>	No impact
Traffic, Transportation, and Parking	<p>Construction: Construction material deliveries and facility entrance construction would have a temporary, minor adverse impact on traffic. Private entity would obtain NC Department of Transportation Street and Driveway Access Permit and City of Jacksonville Driveway Permit.</p> <p>Operation: During operation, vehicle traffic would increase, but level of service is projected to remain at satisfactory level or above for up to the next 20 years, resulting in permanent, negligible adverse impact on traffic conditions.</p>	No impact

Resource	Proposed Action (Alternatives 1 and 2)	No Action Alternative
Utilities	<p>Construction: Utilities services are available; extension of utility lines to site is required and responsibility of the private entity. Private entity to obtain right-of-way permits for utility extensions as needed. This would result in a temporary, negligible adverse impact on utilities.</p> <p>Operation: Increased demand from MSOC is within capacity of utility systems; operational utility use is not anticipated to impact service quality to existing customers. The increased use would result in a permanent, negligible adverse impact on utilities.</p>	No impact
Community Services	<p>Construction and Operation: MSOC resolves capacity issues at existing Jacksonville VA clinics. Permanent, significant benefit to community services related to health care for Veterans. No impact on other local community services.</p>	Permanent significant adverse impact; existing VA clinics would remain overburdened.
Socioeconomics	<p>Construction: Temporary employment and spending on construction materials would have a temporary, negligible beneficial impact on economic activity in Jacksonville.</p> <p>Operation: Permanent, negligible beneficial impact through increase in staffing and incidental spending by workers in the local economy, but no impact at regional or state level.</p>	No impact
Potential for Generating Substantial Controversy	<p>Construction: No controversy anticipated during the construction.</p> <p>Operation: Community support for improving Veterans' timely access to modern, state-of-the-art health care services is anticipated.</p>	Controversy anticipated because existing VA clinics would remain overburdened.

Agency Coordination and Public Involvement

VA electronically sent a scoping notice to selected federal, state, and local agencies; Native American Tribes; and elected officials to solicit input regarding the scope of the EA and environmental issues for in-depth analysis. The scoping notice was also published on VA's website at <https://www.cfm.va.gov/environmental/> and in *The Daily News* on December 5 and 7, 2024, to announce VA's intent to prepare an EA and request scoping input. Copies of correspondence and newspaper notices are provided in Appendix E.

This Draft EA has been published for a 30-day review and comment period. VA electronically sent a notice of availability (NOA) to federal, state, and local agencies, Tribes, and community stakeholders, to solicit input on the Draft EA. The NOA for the Draft EA was also published in *The Daily News*. The NOA explained how to obtain the Draft EA electronically from the VA website at <https://www.cfm.va.gov/environmental/> and in print at the Jacksonville Main Library, 58 Doris Avenue East, Jacksonville, NC 28540. The NOA explained that comments on the Draft EA are to be sent to vacoenvironment@va.gov. VA will summarize and address substantive comments in the Final EA.

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACAM	Air Conformity Applicability Model
AEC	Areas of Environmental Concern
amsl	above mean sea level
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CAA	Clean Air Act
CAMA	North Carolina Coastal Area Management Act
CC	Corridor Commercial Districts
CFR	Code of Federal Regulations
CGP	Construction Generic Permit
CLV	Critical Lane Volume
CO	carbon monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibels
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ETJ	Extra Territorial Jurisdiction
FEMA	U.S. Federal Emergency Management Agency
GCR	USEPA General Conformity Rule
GHG	greenhouse gas
HVAC	heating, ventilation, and air conditioning
ICRIP	Initial Cultural Resource Impact Prediction
IP	Individual Permit
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MS4	Municipal Separate Storm Sewer System
MSOC	multi-specialty outpatient clinic
NAAQS	National Ambient Air Quality Standards
NC	North Carolina
NCAC	North Carolina Administrative Code
NCDCM	North Carolina Division of Coastal Management
NCDEQ	North Carolina Department of Environmental Quality

Acronym/Abbreviation	Definition
NCDNCR	North Carolina Department of Natural and Cultural Resources
NCDOT	North Carolina Department of Transportation
NCDWR	North Carolina Division of Water Resources
NCNHP	North Carolina Natural Heritage Program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	Nitrogen dioxide
NOA	notice of availability
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
OSHA	U.S. Occupational Safety and Health Administration
Phase I ESA	ASTM Phase I Environmental Site Assessment
PSD	Prevention of Significant Deterioration
PM	particulate matter
SHPO	State Historic Preservation Office
SO ₂	Sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
UNT	unnamed tributary
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VA	U.S. Department of Veterans Affairs
VAMC	VA Medical Center
VdB	vibration decibels
VOC	volatile organic compounds
WQC	Water Quality Certification

1.0 INTRODUCTION

The U.S. Department of Veterans Affairs (VA) prepared this environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code 4321 § et seq.). NEPA requires federal agencies to consider the environmental impacts of their proposed actions.

The Proposed Action site is approximately 31 acres (comprised of two adjacent parcels), located at 4386-4424 Western Blvd. on the north side of Western Blvd. and to the west of Carolina Forest Blvd. in the northern portion of the City of Jacksonville, Onslow County, North Carolina. A Proposed Action site location map is presented in Figure 1 and a site detail map is provided in Figure 2.

This EA presents an analysis of the potential impacts on the human environment from the construction and operation of the Proposed Action, as well as the impacts of a No Action alternative. As required under NEPA, this EA considers input from the public, agencies, and Tribes into the federal decision-making process; provides the federal decision-maker with an understanding of potential environmental impacts of the decision before making it; identifies measures to reduce potential environmental impacts; and documents the NEPA process. At the conclusion of the NEPA process, VA will determine whether this EA supports a Finding of No Significant Impact or if an Environmental Impact Statement is required.

Figure 1. Jacksonville MSOC Proposed Action Site Location Map

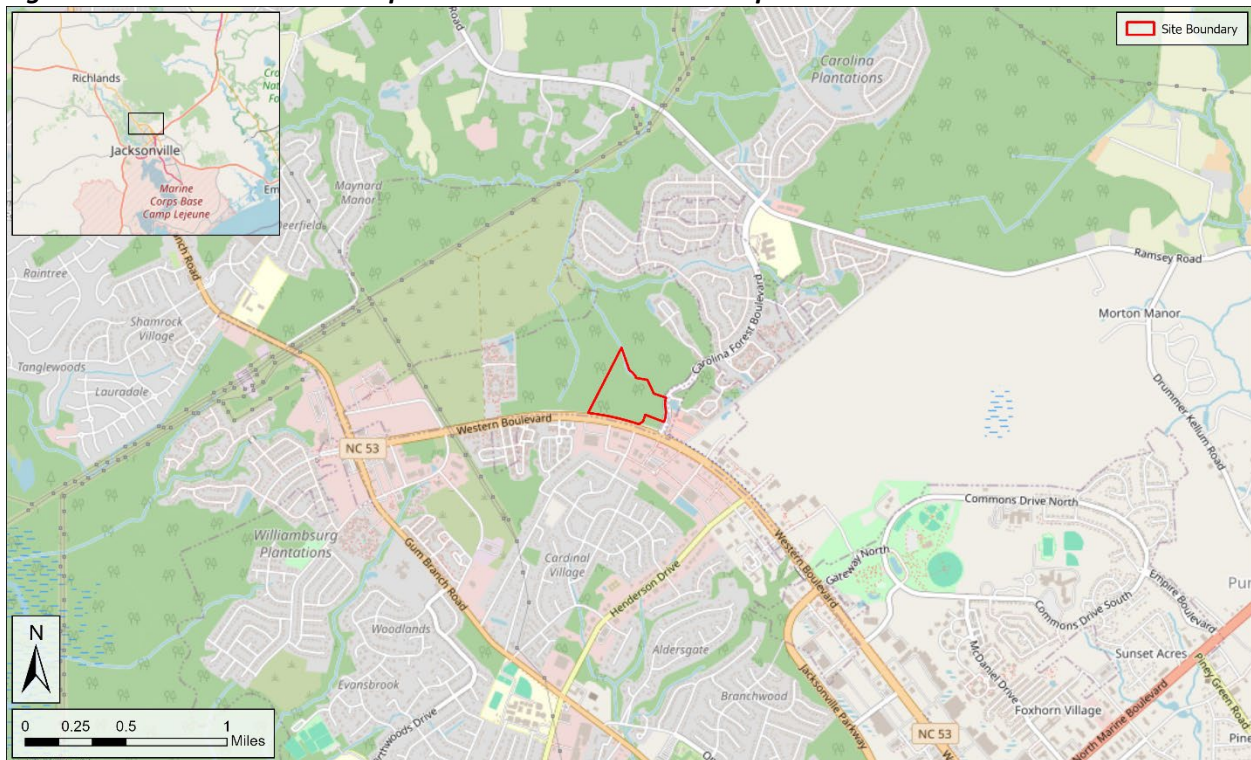


Figure 2. Jacksonville MSOC Proposed Action Site Detail Map



1.1 Background

The VA Fayetteville Coastal Health Care System consists of the main Fayetteville VA Medical Center (VAMC) and fifteen outpatient clinics (OPCs), including four OPCs in Jacksonville. The locations of each of the existing Jacksonville OPCs and the VAMC, along with their distances from the Proposed Action site, are presented in Table 1.

Table 1. Existing Jacksonville VA Clinics and Main Fayetteville VAMC

Name	Address	Distance from the Proposed Action Site
Fayetteville VA Medical Center	2300 Ramsey Street Fayetteville, NC 28301-3856	85 miles northwest
Jacksonville VA Clinic	4006 Henderson Drive Jacksonville, NC 28546-0055	0.5 miles southeast
Jacksonville 2 VA Clinic	306 Brynn Marr Road Jacksonville, NC 28546-7023	4.2 miles southeast
Jacksonville 3 VA Clinic	4 Josh Court Jacksonville, NC 28546-5253	3.4 miles southeast
Jacksonville 4 VA Clinic	2580 Henderson Drive Jacksonville, NC 28546-5252	0.9 miles south

1.2 Purpose and Need

The purpose of the Proposed Action is to provide multi-specialty outpatient health care services to area Veterans. This multi-specialty outpatient clinic (MSOC) would replace the four existing Jacksonville OPCs with one consolidated MSOC.

The Proposed Action is needed to address space gaps and operational inefficiencies at the four existing Jacksonville OPCs that were identified through the VA Strategic Capital Investment Planning process. By consolidating and expanding its capacity, VA would be able to provide area Veterans timely access to state-of-the-art health care and mental health services in a centralized, appropriately sized, modern facility commensurate with current and projected demands.

The new MSOC would support the parent facility of the Fayetteville VA Medical Center, Fayetteville, NC. The new MSOC would integrate all care delivery (Primary Care, Multi-Specialty Clinical and Subspecialty Care [including Non-invasive Cardiology, Pain Clinic, Dermatology, Oncology and Pulmonary], Women Veteran's Clinical Service, Mental Health, Audiology, Dental, Endoscopy, Eye Clinic, Physical Medicine / Rehabilitation, Prosthetics, Radiology, Laboratory, Pharmacy, Home-Based Primary Care and Whole Health) in one central location.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

VA reviewed alternative approaches for meeting the purpose of and need for action. This section describes in detail the Proposed Action and the No Action alternative.

2.1 Proposed Action

VA's Proposed Action is to award a lease to a private entity that would construct a MSOC for VA to lease and operate in Jacksonville, North Carolina. The private entity would construct the MSOC on a "build-to-suit" basis for VA to lease for up to 20 years. The VA Fayetteville Coastal Health Care System would administer and staff the MSOC, with approximately 500 new staff anticipated.

The MSOC would support the parent facility of the Fayetteville VA Medical Center, Fayetteville, NC. The MSOC would integrate all care delivery (Primary Care, Multi-Specialty Clinical and Subspecialty Care [including Non-invasive Cardiology, Pain Clinic, Dermatology, Oncology and Pulmonary], Women Veteran's Clinical Service, Mental Health, Audiology, Dental, Endoscopy, Eye Clinic, Physical Medicine/Rehabilitation, Prosthetics, Radiology, Laboratory, Pharmacy, Home-Based Primary Care and Whole Health) into an efficient state-of-the-art facility.

The Proposed Action site is approximately 31 acres and is comprised of two adjacent parcels; these parcels are identified by the Onslow County, NC Assessor's GIS parcel viewer as #338-18.55 (4386 Western Blvd.) and #338-18.45 (4424 Western Blvd.). The Assessor's database shows the parcels are owned by Western Six Investors, LLC, and BHP Western, respectively.

The Proposed Action site is a former pine tree plantation that has been cleared for timber and reforested between 1956 and 2020 and is currently wooded and undeveloped. The site is in the northwest quadrant of Western Blvd. (a state highway alternatively referred to as NC-53) and Carolina Forest Blvd. (a city-maintained street).

2.1.1 Action Alternatives

VA is considering offers received from two private entities (Alternative 1 and Alternative 2) that have proposed conceptual designs for the MSOC and supporting infrastructure that would be constructed at the site. The conceptual design is presented for Alternative 1 in Figure 3 and Alternative 2 in Figure 4.

The private entity would design and construct the MSOC in compliance with applicable VA design requirements and applicable federal, state, and local regulations, as well as meeting Green Building Initiative Green Globes certification (GBI 2025), which would minimize energy-related emissions using energy-efficient systems where feasible. The private entity would be responsible for obtaining all applicable federal, state, and local permits from appropriate government authorities. As soon as all review, regulatory, and permit requirements are met, construction would take approximately 18-24 months, with operation of the MSOC to follow.

Construction would involve clearing the site of existing vegetation within the proposed limits of disturbance, grading, excavation for the building foundation and utilities, installation of new utility lines, construction of the MSOC, and paving for roads, parking, and new entrances. Construction would require the use of diesel-fueled off-road equipment (backhoes, loaders, graders, paving equipment), transport of building materials to the site using on-road multi-axle delivery vehicles, travel to and from the site by construction workers, asphalt paving, and vertical construction of the MSOC and associated infrastructure.

2.1.1.1 Alternative 1

Under Alternative 1, the MSOC would be aligned in the central portion of the site, would not exceed three stories in height, have a footprint of approximately 112,366 square feet (SF), and have approximately 255,318-building-square feet. The MSOC would include approximately 1,300 asphalt-paved parking spaces surrounding the MSOC. Three proposed stormwater ponds would be located on the site, one each to the east, southwest, and northwest of the MSOC. Utilities for potable water, sewer, electric, and stormwater would be extended to the site from mains on Western Boulevard and Carolina Forest Boulevard. The MSOC would include two diesel-fueled generators to provide emergency backup electrical power. The main entrance, with the entrance and exit access lanes separated by a physical raised-curb divider, would be constructed along the westbound-lane of Western Blvd. A separate maintenance entrance for deliveries would be constructed along Western Blvd., approximately 500 feet east of the MSOC main entrance.

2.1.1.2 Alternative 2

The MSOC concept under Alternative 2 is similar to Alternative 1. The MSOC would be aligned in the central portion of the site, would not exceed three stories in height, have a footprint of approximately 153,451 SF, and provide approximately 244,913-building-square feet. The MSOC would be surrounded by approximately 1,300 asphalt-paved parking spaces. One proposed stormwater pond would be located on the site, northwest of the MSOC; this pond would also have a gravel walking path around its border. Utilities for potable water, sewer, electric, and stormwater would be extended to the site from mains on Western Boulevard and Carolina Forest Boulevard. The MSOC would include two diesel-fueled generators to provide emergency backup electrical power. The main entrance would be constructed along the westbound-lane of Western Blvd. and have separate entrance and exit lanes but without a physical raised-curb divider. A secondary entrance would be constructed along Carolina Forest Blvd.

Table 2 provides a comparison of the footprint, square footage, entrances, stormwater detention ponds, and impervious surface area for each Alternative, while Figure 3 and Figure 4 provide conceptual design renderings.

Table 2. Conceptual Design Alternatives for the Jacksonville MSOC

Private Entity	Building footprint (sf)	Total building square footage	Roadway Entrances	Stormwater Detention Ponds	Impervious Surface Area (acres)
Alternative 1	112,366	255,318	2 (both on Western Blvd.)	3	18
Alternative 2	153,451	244,913	2 (one on Western Blvd., one on Carolina Forest Blvd.)	1	23

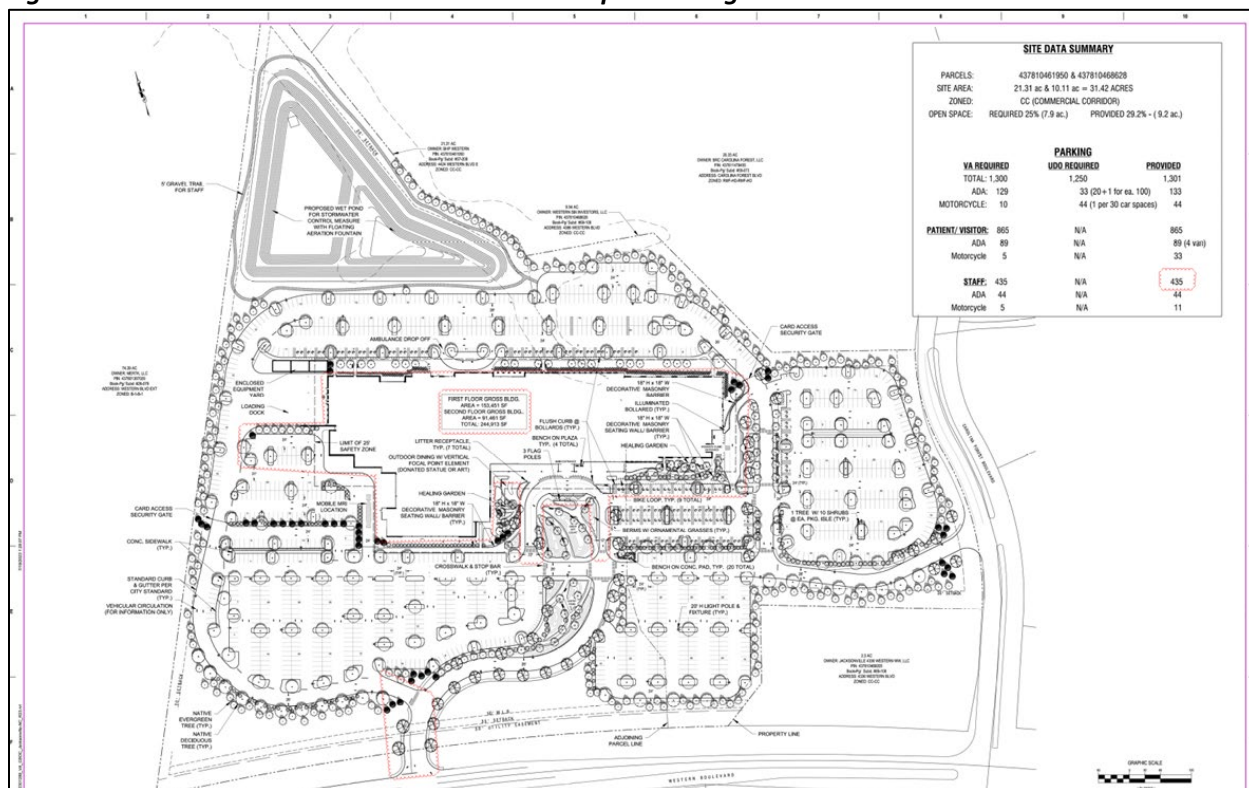
SITE DATA

SITE AREA:	38.93 AC (NOT INCLUDING DEDICATED RIGHT-OF-WAY)
ADJACENT ZONING AREA:	MU-10A 1F
PARKING PROVIDED:	2142 STANDARD 131 HANDICAP 27 VAN

SITE LEGEND

- [Symbol] EXISTING STREET LIGHT
- [Pattern] PROPOSED BUILDING
- [Line] PROPERTY LINE
- [Line] RIGHT OF WAY LINE
- [Pattern] LIGHT DUTY ASPHALT DRIVEWAY
- [Pattern] HEAVY DUTY ASPHALT DRIVEWAY
- [Pattern] CONCRETE DRIVEWAY
- [Pattern] GRAVEL DRIVEWAY

Figure 4. Alternative 2 - Jacksonville MSOC Conceptual Design



2.2 No Action

Under the No Action alternative, VA would not select this site for a new MSOC and the Proposed Action would not be implemented. The existing Jacksonville OPCs would continue to be overburdened and unable to meet the growing medical needs of the Veteran population in the Jacksonville, NC area. The No Action alternative does not meet the purpose of and need for the Proposed Action. However, VA evaluated the No Action alternative in this EA. The No Action alternative also provides a benchmark against which VA can compare the impacts of the Proposed Action.

2.3 Summary of Alternatives

VA has identified two action alternatives and the No Action alternative. A single action alternative—either Alternative 1 or 2—would be selected by VA for implementation. The final decision will be based on a comprehensive evaluation of environmental, technical, and operational factors.

The analysis of environmental impacts in this EA focuses on these alternatives to determine the most suitable development plan for the Proposed Action. No other action alternatives were identified by VA that meet the purpose and need for action.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing conditions at the Alternative 1 and Alternative 2 site and presents an analysis of the potential impacts of implementing the Proposed Action or the No Action alternative on the human environment. The affected environment includes the site and, depending on the resource, a region surrounding the site. When describing the impacts associated with the Proposed Action, the impacts apply to both Alternative 1 and 2; in cases where impacts are unique to Alternative 1 or 2, a separate subheading for the analysis is provided.

To ensure consistency in the evaluation of potential environmental effects, this section defines key impact terminology used throughout the EA. These definitions clarify the nature, scale, and duration of impacts, as well as temporary and permanent changes. Impact intensity is categorized to reflect the degree of change a resource may experience due to the Proposed Action. The following definitions provide a standardized framework for assessing environmental consequences.

- **Permanent Impacts:** Effects that are caused by the action and result in irreversible changes to the environment, such as the permanent loss of wetlands due to development.
- **Temporary Impacts:** Effects that are caused by the action and are reversible and last for a limited period, such as noise disturbances during construction.
- **Negligible Impacts:** Effects that are so minor that they do not noticeably alter any important attribute of the resource.
- **Minor Impacts:** Effects that are detectable but do not significantly alter the resource's attributes.
- **Moderate Impacts:** Effects that are readily apparent and alter the resource noticeably but do not threaten its integrity.
- **Adverse Impacts:** Effects that are detrimental or harmful to the environment, such as pollution leading to the decline of wildlife populations.
- **Beneficial Impacts:** Effects that are advantageous or positive, like restoration projects improving habitat quality.

For the purposes of this EA, a significant impact is an effect on the environment that is substantial in magnitude or duration, considering factors such as the extent of environmental change, potential harm to public health or natural resources, and whether the impact is irreversible. The determination of significance considers both the intensity of the impact and the broader environmental and societal context in which it occurs. If the analysis in this EA identifies significant impacts, a more detailed Environmental Impact Statement may be required to further evaluate those effects and identify mitigation measures.

3.1 Environmental Resources Included in this EA for Detailed Analysis

Based on the results of VA's internal and external scoping, the resources analyzed in this EA include: aesthetics; air quality; wildlife and habitat; floodplains, wetlands and coastal zone; cultural and historic resources; geology and soils; hydrology and water quality; land use; noise and vibration; solid waste and hazardous materials; traffic, transportation, and parking; utilities; community services; and socioeconomics. A definition of the environmental resource is provided in italics at the start of each section.

3.2 Aesthetics

Aesthetics refers to the visual interaction between an individual and the environment.

3.2.1 Affected Environment

The Proposed Action site is a former woodlot that was harvested for timber. The site is still currently a wooded area; however, the site is situated in a densely developed area concentrated with mixed commercial/residential land use; beyond this area the land use is primarily agricultural. The site is located north of Western Blvd. and west of Carolina Forest Blvd. Western Blvd. is a major northwest/southeast commuter route for civilian traffic and military traffic to and from Camp Lejeune. South of Western Blvd. is one of Jacksonville's primary commercial and employment corridors. A large commercial retail complex is located east of the site across Carolina Forest Blvd., while large residential developments are south and north of the site. A wooded area is adjacent west and north of the site.

3.2.2 Environmental Consequences

3.2.2.1 Construction

During construction of the Proposed Action, the presence of construction equipment, vehicles, materials, and related activity would temporarily affect the visual setting of the site. Construction would require clearing the site interior of existing vegetation, grading and compacting exposed soil, excavation for utilities, paving for new entrances and parking areas, and vertical construction of the MSOC. These activities would permanently convert the current visual aesthetic of the site from an undeveloped, wooded lot to an active construction area. The construction area would be visible to passersby on Western Blvd. and Carolina Forest Blvd. The wooded land to the west and north of the site would not be affected.

There would be no impact on scenic resources as there are no prominent scenic vistas, state scenic highways, or any other notable visual resources in the vicinity of the site. The Proposed Action development is consistent with the urban characteristics of the surrounding area and would comply with City of Jacksonville zoning regulations (see Land Use, Section 3.9). The site was also a former pine tree plantation that has undergone repeated clearing over the past several decades.

Therefore, the construction of the Proposed Action is anticipated to have a temporary, minor adverse impact on aesthetics at the site and no impact on the areas surrounding the site.

3.2.2.2 Operation

Under both Alternatives 1 and 2, the design for the MSOC would be consistent with the existing aesthetic of the urban area along the southern border of the site. The MSOC façade and any new landscaping installed during construction would be professionally maintained by the private entity during VA's lease.

Therefore, the operation of the Proposed Action would have a permanent, minor adverse impact on aesthetics in the area surrounding the MSOC.

3.2.2.3 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions at the site, though it could be developed by others. Therefore, the No Action alternative would result in no impact on aesthetics.

3.3 Air Quality

Air quality refers to the concentration of air contaminants in a specific location. Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and prevailing meteorological conditions.

3.3.1 Affected Environment

The U.S. Environmental Protection Agency (USEPA) and the North Carolina Department of Environmental Quality (NCDEQ) regulate air quality in the state of NC. The NCDEQ develops rules, regulations, and policies for regulating air quality in accordance with applicable legislation. USEPA regulations may not be superseded; however, state and local regulations may be more stringent.

3.3.1.1 Federal Air Quality Standards

The Clean Air Act (CAA) of 1970 (42 U.S. Code 7401 et seq.) authorizes USEPA to establish National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable upper concentration limits for the following criteria pollutants: particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM₁₀), particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (PM_{2.5}), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb).

The USEPA General Conformity Rule (GCR) requires federal agencies to demonstrate that actions that they undertake, approve, permit, or support in nonattainment and maintenance areas will conform to the appropriate USEPA-approved State Implementation Plan (40 CFR Parts 51 and 93). A conformity applicability analysis is the first step to assess whether a federal action must be supported by a full conformity determination. If the results of the applicability analysis indicate that the total emissions of a proposed project would not exceed GCR *de minimis* emissions thresholds, then the conformity evaluation process is complete. If total emissions would equal or exceed federal GCR *de minimis* thresholds, then a full conformity determination is required to ensure that federal actions do not cause or contribute to violations of the NAAQS or affect NAAQS attainment.

Areas that violate NAAQS are designated as nonattainment areas; areas with levels below NAAQS are designated as attainment areas. An area may also be classified as a maintenance area if it were once classified as nonattainment but has since reached attainment through implementation of a maintenance plan. Onslow County, NC is designated by USEPA as being in attainment for all criteria pollutants (USEPA 2025). Because Onslow County is designated as in attainment for all criteria pollutants, the GCR does not apply. Therefore, emissions from temporary mobile construction activities are evaluated using the Prevention of Significant Deterioration (PSD) major source thresholds (250 tons per year for criteria pollutants; 25 tons per year for lead) as conservative insignificance indicators. These insignificance indicators provide a useful benchmark for determining whether emissions from the Proposed Action would be expected to cause meaningful air quality impacts in an attainment area.

3.3.1.2 Greenhouse Gases

Greenhouse gases (GHGs) include carbon dioxide (CO₂), methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The global warming potential of these GHGs is measured relative to CO₂, the most abundant GHG, and GHG emissions are typically expressed in terms of pounds or metric tons of “CO₂ equivalents” or CO₂e.

3.3.1.3 Sensitive receptors

Sensitive receptors for air quality impacts are those that are the most sensitive to pollution impacts, such as young children, older adults, or people with respiratory and other related illnesses. Sensitive receptors include schools, daycare facilities, nursing homes, and religious institutions. Sensitive receptors within an approximately one-mile radius of the site include:

- **North:** New Beginning Child Care; Carolina Forest Elementary School
- **South:** Kid City USA/Brighter Beginnings Child Care Development Center; Children’s Castle Child Care; Excel Learning Center; Milestones Preschool and Enrichment Center; Cardinal Village Church; Catalyst Church; Covenant ARP Church; Kempton of Jacksonville
- **East:** None present
- **West:** River of Life Church

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

3.3.2.1.1 Construction

Construction emissions are primarily based on estimated operational time and number of workdays to complete each phase of the Proposed Action. Criteria pollutant emissions for construction of the Proposed Action were estimated using the U.S. Air Force’s Air Conformity Applicability Model (ACAM). Although a construction period from 2026 to 2027 was used in the model, the actual dates may occur later. Because emissions from construction equipment generally decrease over time as newer, more efficient technologies replace older models, the 2026 to 2027 timeframe provides a reasonable upper bound for anticipated emissions. If construction occurs later, emissions would likely be lower due to the continued adoption of cleaner and more efficient equipment.

Under either Alternative 1 or 2, the Proposed Action would produce construction-related emissions over an approximately 18- to 24-month construction period. Construction activities would generate criteria pollutants from the use of diesel-fueled off-road equipment (backhoes, loaders, graders, paving equipment), on-road heavy-duty vehicles (multi-axle delivery vehicles), construction workers’ passenger vehicles, curing of asphalt pavement, and interior painting. Construction would also generate fugitive dust from demolition and earth moving activities. The construction-related emissions would stop once construction is completed.

The estimated construction emissions calculated for Alternatives 1 and 2 are similar, as shown in Table 3 and Table 4, respectively. The tables use emissions of volatile organic compounds (VOC) to represent O₃ because VOCs may form ground-level O₃ by “reacting” with sources of oxygen molecules such as nitrogen oxides, and carbon monoxide (CO) in the atmosphere in the presence of sunlight. The annual net changes in estimated emissions associated with construction of the MSOC are below the PSD insignificance indicators. The insignificance indicators are trivial (*de minimis*) rate thresholds that have been demonstrated to have little to no impact to air quality. These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS.

GHG emissions generated during construction were also evaluated. Construction of the Proposed Action would result in temporary GHG emissions from combustion of fossil fuels in construction equipment and vehicles, material production and transportation, and site preparation activities, including soil disturbance and grading. The GHG emissions from construction would end once the construction phase is finished.

Though negligible, construction of either Alternatives 1 or 2 would contribute GHG emissions to the region, but these emissions would stop once construction is completed.

To further reduce criteria pollutants and GHG emissions during construction of the Proposed Action, the private entity may incorporate the following strategies to the extent practicable:

- For construction equipment greater than 150 horsepower, aim to meet USEPA Tier 4 emissions standards, or Tier 3 standards if Tier 4 equipment is not available at the time of construction.
- Tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications.
- Use low-sulfur diesel or biodiesel in construction equipment.
- Minimize off-site tracking of loose soil and the generation of dust by implementing construction best management practices (BMPs).

Therefore, construction of the Proposed Action would have a temporary, negligible adverse impact on air quality.

3.3.2.1.2 Operation

The private entity would be required to design and construct the facility to meet Green Building Initiative Green Globes certification (GBI 2025), which would minimize energy-related emissions using energy-efficient systems where feasible. Emissions would primarily result from increased vehicular traffic associated with patients, staff, and deliveries; HVAC systems; and monthly testing of two diesel-fueled emergency generators. The emissions associated with these operational activities are shown in Table 3 and Table 4, for Alternatives 1 and 2, respectively. These operational emissions are below the insignificance indicators. Similar to the estimated construction emissions, 2028 was used in the ACAM model as the first year of operation; however, the actual start of operations may vary depending on the final construction timeline.

Therefore, the operation of the Proposed Action would have a permanent, negligible adverse impact on air quality.

3.3.2.2 *No Action Alternative*

Under the No Action alternative, the Proposed Action would not be implemented, and existing air quality conditions would remain unchanged. Therefore, the No Action alternative would result in no impact on air quality.

Table 3. Alternative 1 - Criteria Pollutant and GHG Emissions from Construction and Operation of the Proposed Action

Criteria Pollutant	Year 1, construction emissions (ton/yr)	Year 2, construction emissions (ton/yr)	Year 3, operational emissions (ton/yr)	Insignificance Indicator (ton/yr)
VOC	0.231	3.155	8.667	250/No
NO ₂	1.997	1.435	6.118	250/No
CO	2.342	1.883	125.6	250/No
SO ₂	0.005	0.003	0.108	250/No
PM ₁₀	43.71	0.049	0.300	250/No
PM _{2.5}	0.070	0.045	0.278	250/No
Greenhouse Gas	Year 1, construction emissions (metric ton/yr)	Year 2, construction emissions (metric ton/yr)	Year 3, operational emissions (metric ton/yr)	Threshold
CO ₂	462	329	13,754	Not established
Methane	0.018	0.012	0.491	Not established
Nitrous oxide	0.004	0.003	0.220	Not established
CO ₂ e	464	330	13,826	Not established

Table 4. Alternative 2 - Criteria Pollutant and GHG Emissions from Construction and Operation of the Proposed Action

Criteria Pollutant	Year 1, construction emissions (ton/yr)	Year 2, construction emissions (ton/yr)	Year 3, operational emissions (ton/yr)	Insignificance Indicator (ton/yr)
VOC	0.231	3.037	8.664	250/No
NO ₂	1.995	1.432	6.068	250/No
CO	2.340	1.881	125.6	250/No
SO ₂	0.005	0.003	0.107	250/No
PM ₁₀	40.46	0.049	0.297	250/No
PM _{2.5}	0.070	0.045	0.274	250/No
Greenhouse Gas	Year 1, construction emissions (metric ton/yr)	Year 2, construction emissions (metric ton/yr)	Year 3, operational emissions (metric ton/yr)	Threshold
CO ₂	462	329	13,754	Not established
Methane	0.018	0.012	0.491	Not established
Nitrous oxide	0.004	0.003	0.220	Not established
CO ₂ e	464	330	13,826	Not established

3.4 Wildlife and Habitat

Considerations related to wildlife and habitat include the impacts of a project on wildlife including through direct habitat loss; habitat fragmentation; disruption of behavior; or the import, export, or taking of state or federally listed endangered species.

Species that are imperiled may be listed as endangered or threatened under the Endangered Species Act (ESA). In addition, specific locations may be mapped and identified as a listed species' designated critical habitat which support the continued conservation of imperiled species by guiding cooperation within the federal government. Under Section 7 of the ESA, all federal agencies are required to consult with the U.S. Fish and Wildlife Service (USFWS) about actions that they carry out, fund, or authorize to ensure that they will not harm a listed species (USFWS 2024).

3.4.1 Affected Environment

In November 2024, a biological habitat assessment was performed to assess the potential for federal and state protected species, critical habitats, or other sensitive resources to occur on the site.

The site is in the Southeastern Evergreen Forest Region (Braun 1950). This region, essentially coextensive with the Coastal Plain, is typified by its preponderance of evergreen trees. The longleaf pine forests of the sandy uplands dominate the landscape of much of the Coastal Plain. This forest is an edaphic climax modified and stabilized by recurring fires to the point that it is considered a fire subclimax. The natural vegetation of the region consists of a variety of very different forest communities: coniferous, mixed coniferous and hardwood, deciduous hardwood, and mixed deciduous and broad-leaved evergreen hardwoods. These communities are interrupted by swamps, bogs, and prairies (Braun 1950).

Historical aerial imagery documents show that the site was clear cut and has been primarily used as a pine tree plantation from 1956 to 2020. Grid patterns of planted pines can be seen in the aerial photos in the years following the clear cut. Aerial photos also show the continued growth of those pines up until the most recent photo taken in June 2023 (Figure 5). A stream and associated wetlands bifurcating the site from south to northwest is visible on the aerials, as the forested riparian buffer was not disturbed during the clear cut. Figure 6 presents a land cover map of the site.

Figure 5. Proposed Action Site Biological Survey Study Area



Figure 6. Proposed Action Site Land Cover



3.4.1.1 Federal Listed Species and Habitats

VA obtained federally threatened, endangered, proposed, and candidate species data from the USFWS Information for Planning and Consultation (IPaC) tool, which generates a list of species and other resources that may occur within or near the site. The IPaC showed thirteen species protected under the ESA that have potential to occur within the site, including one mammal, four birds, four reptiles, one insect species, and three flowering plants (USFWS 2024). The biological survey determined that the ecosystems present at the site are possible habitats for the three flowering plants: Cooley's meadowrue (*Thalictrum cooleyi*), pondberry (*Lindera melissifolia*), and rough-leaved loosestrife (*Lysimachia asperulaefolia*). There are no critical habitats within the site.

3.4.1.2 State Listed Species and Habitats

In its response to VA's request on October 21, 2024, the NC Department of Natural and Cultural Resources (NCDNCR) reported that three state listed threatened and endangered species have been observed or have potential to be within a 1-mile radius of the site: American alligator, timber rattlesnake, and dismal swamp green stink bug. NCDNCR stated there are no threatened and endangered species documented within the site. The biological survey identified potential habitat only for the timber rattlesnake due to the presence of pine trees and sandy soils at the site.

Additionally, the NC Natural Heritage Program (NCNHP) database indicated that there are no state-listed natural areas located within a 1-mile radius of the site. NCNHP lists six managed areas documented within a 1-mile radius of the site occurring toward the outer edges of this radius.

3.4.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S. Code 703-712) prohibits the pursuit, hunting, take, capture, kill, or sale of listed migratory bird species. The IPaC report identified eight bird species protected under the MBTA as having ranges with potential habitat overlapping the site. These species included: American kestrel (*Falcosparverius paulus*), Bachman's sparrow (*Aimophila aestivalis*), bald eagle (*Haliaeetus leucocephalus*), brown-headed nuthatch (*Sitta pusilla*), chimney swift (*Chaetura pelvica*), painted bunting (*Passerina ciris*), prothonotary warbler (*Protonotaria citrea*), and the red headed woodpecker (*Melanerpes erthrocephalus*). This identification reflects the species' potential to occur in the broader geographic region based on mapped habitat ranges but does not confirm the presence of suitable habitat or individuals at the site itself. Based on the biological survey results, the site habitat could potentially be utilized by these species, with the exception of the bald eagle (see Section 3.4.1.4 for additional information on the bald eagle).

3.4.1.4 Bald and Golden Eagle Protection Act

The Bald Eagle and Golden Eagle Protection Act (BGEPA; 16 U.S. Code 668-668c) enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" eagles, including their parts, nests, or eggs. The BGEPA provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The IPaC report states that there is likely habitat for bald eagles (*Haliaeetus leucocephalus*) overlapping the site. However, the NCNHP showed no known nests or occurrences of the bald eagle within 1 mile of the site. No habitat for the bald eagle was observed at the site during the biological survey.

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Under both Alternative 1 and 2, during construction the existing vegetation within the proposed limits of disturbance at the site would be cleared during grading. Due to vegetation clearing, VA preliminarily determined a ‘may affect, not likely to adversely affect’ biological conclusion for Cooley’s meadowrue, pondberry, and rough-leaved loosestrife, with the requirement that the private entity would conduct a pre-construction survey to determine the species’ presence or absence within the site during the optimal survey windows according to the USFWS North Carolina Imperiled Plant Survey Windows guidance document, dated 10 March 2020 (see Table 5 for a summary of optimal survey windows for listed plant species). If a federally listed plant species is found within the site or is indicated within a one-mile radius of the site, the private entity must contact Eastern North Carolina USFWS for further guidance about the need for compensatory mitigation, which could include on-site or off-site conservation projects designed to offset adverse impacts to the plant species by ensuring no net loss or even a net gain in conservation outcomes for the affected species.

Further, VA preliminarily determined a ‘no effect’ biological conclusion for the tricolored bat and MBTA birds because the private entity would implement a time-of-year-restriction on tree clearing, such that clearing would only occur between October 1 and January 31. Should construction be proposed to occur during the MBTA birds’ nesting season months (February – August), the private entity would conduct pre-construction clearance surveys for nesting birds between the months of February and August to determine nesting bird presence/absence and the need for non-disturbance buffers.

On February 18, 2025, VA requested a concurrence with these effect determinations from the USFWS Raleigh, NC field office. A copy of correspondence with USFWS is provided in Appendix D. VA has not received a response from USFWS as of the date of this Draft EA.

NCNHP does not require any specific measures to avoid impacts to the timber rattlesnake because this species can move to avoid construction equipment. However, on February 18, 2025, VA informed NCNHP about the biological survey findings and requested further input about any recommended avoidance measures for this species. On April 24, 2025, NCNHP provided a written response stating that the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. A copy of correspondence with NCNHP is provided in Appendix D.

Therefore, the construction and operation of the Proposed Action would have a permanent, less-than-significant adverse impact on wildlife and habitat. A summary of the required time-of-year restrictions on vegetation clearing and additional impact avoidance measures are summarized in Table 5.

3.4.2.2 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions at the site. Therefore, the No Action alternative would have no impact on wildlife and habitat.

Table 5. Summary of Time-of-Year Restrictions and Measures to Avoid Impacts to Wildlife

Month:	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
Required Restriction /Impact Avoidance Measures	Clearing OK – January 1-31 Private entity to ensure surveys completed for all listed plant species before clearing.	Avoidance of construction activities MBTA birds/bats (February-August) during nesting season; should construction be proposed to occur during these nesting months, pre-construction clearance surveys for nesting MBTA birds would need to be conducted to determine nesting bird presence/absence. *Optimal survey window for Pondberry: February-March or September-October *Optimal survey window for Rough-leaved Loosestrife: mid-May to September * Optimal survey window for Cooley’s Meadowrue: Mid-June to early July							Additional optimal survey window for Pondberry (September-October)	Clearing OK – October 1 to December 31 Private entity to ensure surveys completed for all listed plant species before clearing prior to October 1.		

3.5 Floodplains, Wetlands, and Coastal Zone

Development in a floodplain may result in adverse impacts to the floodplain that can lead to the degradation and loss of natural functions and habitat. In particular, development could have direct and indirect detrimental impacts on the quantity and quality of floodplain habitats used by fish and other wildlife. Protecting wetlands before construction is crucial because they act as natural filters for water preventing pollution from reaching waterways, help control flooding by absorbing excess rainwater, provide vital habitats for wildlife, and can contribute to shoreline erosion control.

The coastal zone is a legislatively defined geographic region that establishes the area regulated under the federal Coastal Zone Management Act (CZMA), encompassing both land and water areas.

3.5.1 Affected Environment

3.5.1.1 Floodplains

The U.S. Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (FIRMette 3720437800J, effective 11/3/2005) shows the site is located in Zone X, which FEMA defines as an area of minimal flood hazard (FEMA 2005). Zone X is outside the 100-year and 500-year floodplains. The FEMA FIRMette is shown in Figure 7.

3.5.1.2 Wetlands and Other Waters of the U.S.

A survey for wetlands and other waters of the U.S. was performed at the site on November 5, 2024. The survey identified and delineated three palustrine forested wetlands; these wetlands were identified as W-1 (0.85 acres), W-2 (0.61 acres), W-3 (0.56 acres) and considered to be provisionally jurisdictional (see map in Figure 8). Final jurisdictional determination can only be established by the U.S. Army Corps of Engineers (USACE).

Additionally, the survey identified one intermittent stream, which is an unnamed tributary (“UNT”) to Half Moon Creek, crossing through the middle of the site from south to northwest. The stream segment on the site is approximately 1,770 feet long. The stream is also considered to be provisionally jurisdictional. Half Moon Creek drains generally westward into the New River and then southeastward into the Atlantic Ocean.

Under the Clean Water Act (CWA), Sections 401 and 404 are key components for regulating water quality and protecting aquatic habitats. Section 401 focuses on water quality certification, ensuring that discharges from federally licensed or permitted activities comply with state and tribal water quality standards. Section 401 requires any applicant for a federal license or permit that may result in a discharge

into waters of the United States to obtain a Water Quality Certification (WQC) from the certifying authority; in NC, the NCDEQ is responsible for reviewing CWA Section 401 WQC applications and issuing certificates. Section 404 regulates the discharge of dredged or fill material into waters of the U.S., including wetlands, to protect their physical and biological integrity. USACE is responsible for reviewing applications and issuing permits under Section 404, as well as approving mitigation for impacts to wetlands and other waters of the U.S.

Figure 7. FEMA FIRMette for Project Site

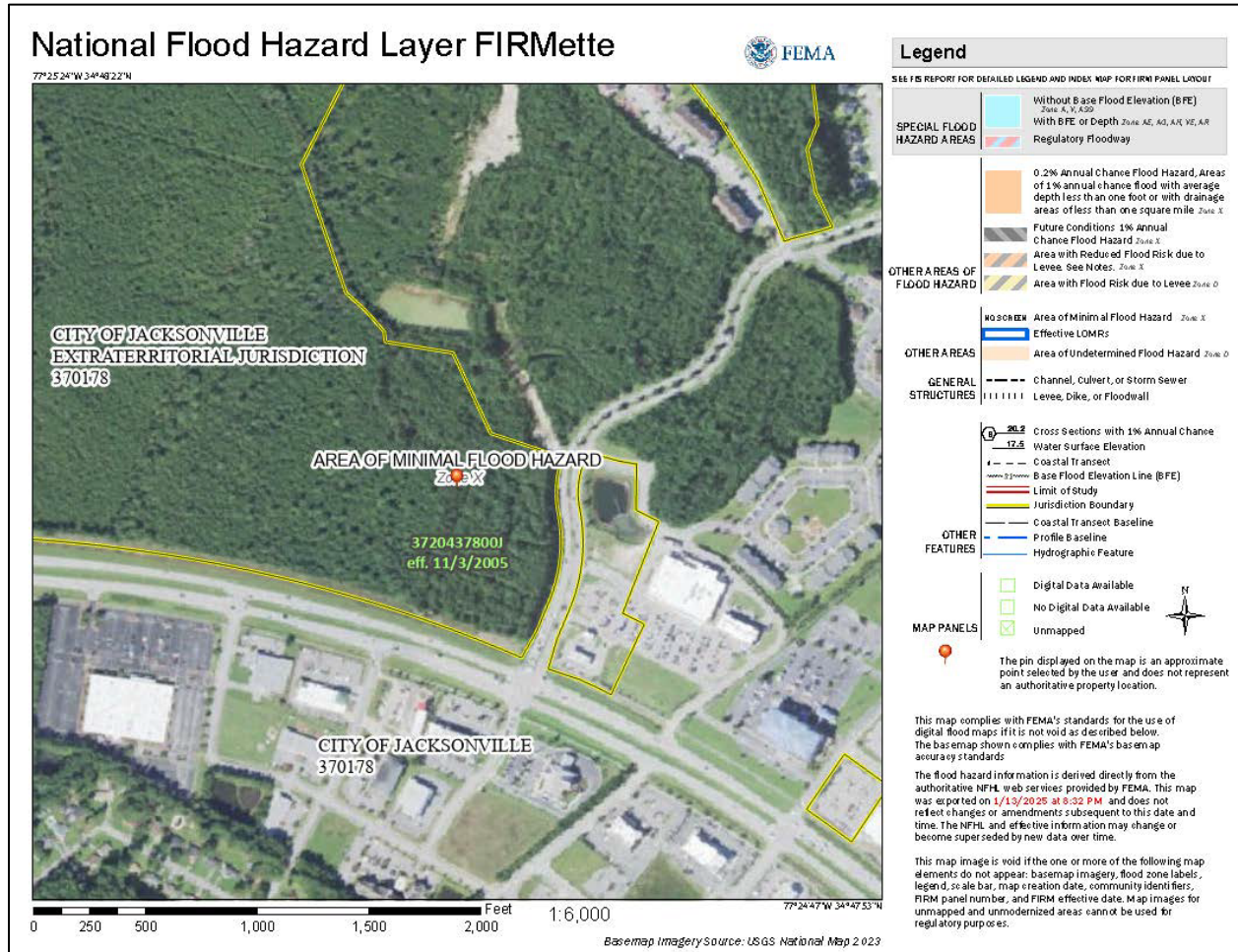


Figure 8. Wetlands and Waters of the U.S. Survey Findings



3.5.1.3 Coastal Zone

North Carolina's Coastal Management Program is federally approved and, as a result, federal activities are required to comply with the enforceable policies of the state's certified coastal management program.

This "Federal consistency" authority exists under the Federal Coastal Zone Management Act (CZMA). The Coastal Zone Management Act (CZMA) was enacted on October 27, 1972, to encourage coastal states, such as North Carolina, to develop comprehensive programs to manage and balance competing uses of and impacts to coastal resources. It applies to any activity that may reasonably affect any coastal resource or coastal use (even if the activity occurs outside of the coastal zone).

The Proposed Action site is located within Onslow County, which is one of the 20 coastal counties which are subject to the North Carolina Coastal Area Management Act (CAMA). The purpose of CAMA is to protect the unique natural resources of the North Carolina coastal areas.

Federal consistency review is performed by the NC Division of Coastal Management (NCDQM). Federal agencies proposing an activity that can reasonably affect a coastal resource or a coastal use are required to submit to NCDQM a "CONSISTENCY DETERMINATION" to certify that the proposed activity would be conducted in a manner consistent with the state's coastal zone management program. NCDQM has the authority to "concur" or "object" to the federal consistency review and has sixty (60) days to review a consistency determination.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

3.5.2.1.1 Floodplains

The Proposed Action site is outside the 100- and 500-year floodplains. As a result, the construction and operation of the Proposed Action would have no impact on floodplains.

3.5.2.1.2 Wetlands

Under both Alternative 1 and 2, construction of the Proposed Action would involve land clearing and grading. Based on the conceptual designs, the Proposed Action would result in the permanent filling of the three wetlands and stream at the site. Impacts to palustrine forested wetlands are considered permanent impacts by USACE. Consequently, before any disturbance to these wetlands or the stream occurs, the private entity must apply for and obtain a CWA Section 404 Individual Permit (IP) from USACE. Additionally, the private entity must implement any required mitigation measures to offset the impacts to these aquatic resources. The standard processing timeline for obtaining a USACE Section 404 IP is approximately 12–18 months. Concurrently, while USACE reviews the Section 404 IP application, the NCDEQ will conduct its review for a CWA Section 401 WQC.

Mitigation involves compensating for unavoidable wetland or stream impacts of a proposed permit action, after avoiding and minimizing impacts to the maximum extent practicable. Compensatory mitigation is the restoration, establishment, enhancement, or preservation of aquatic resources for the purpose of offsetting losses of aquatic resources resulting from activities authorized by the Section 404 IP. Sources of compensatory mitigation include mitigation banks, in-lieu fee programs, or permittee-responsible mitigation.

As previously discussed, the private entity would be required to coordinate with USACE to confirm the mitigation required based on the final design for the Proposed Action; the private entity would then be required to apply for and obtain the Section 404 IP and Section 401 WQC and implement the required mitigation prior to construction of the Proposed Action.

Therefore, the construction and operation of the Proposed Action would have a permanent, minor adverse impact on wetlands and other waters of the U.S.

3.5.2.1.3 Coastal Zone

VA evaluated the consistency of the Proposed Action with the NC CAMA enforceable policies. Under both Alternative 1 and 2, the Proposed Action would be consistent with the enforceable policies and would not have reasonably foreseeable effects on NC's coastal uses or resources. Additionally, the site does not have any coastal uses or natural resources of the coastal zone. The consistency review comparing the Proposed Action to the NC enforceable policies is shown in Table 6.

Therefore, the Proposed Action would have no impact on coastal zone resources.

The EA was made available to NCDWM for concurrence with VA's consistency determination. Copies of correspondence from NCDWM regarding the consistency determination are provided in Appendix D.

Table 6. NC Coastal Management Act Consistency Review

NC CAMA Enforceable Policy	Consistency Determination
15A NC Administrative Code (NCAC) 07H .205 – Coastal Wetlands	Consistent. This section defines management objectives for coastal wetlands. Coastal Wetlands are defined as any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides, that reach the marshland areas through natural or artificial watercourses, provided this does not include hurricane or tropical storm tides. As the Proposed Action is not located within coastal wetlands it is consistent with this policy.
15A NCAC 07H .206 – Estuarine Waters	Consistent. This section defines management objectives for estuarine waters. Estuarine waters are defined as all the waters of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters. The Proposed Action will not affect estuarine waters and is consistent with this policy.
15A NCAC 07H .0207 – Public Trust Areas	Consistent. This section defines management objectives for public trust areas, defined as waters of the Atlantic Ocean and the lands thereunder from the mean high-water mark to the seaward limit of state jurisdiction. The Proposed Action will not affect these areas and is consistent with this policy.
15A NCAC 07H .0208 – Use Standards	Consistent. This section states that uses that are not water dependent shall not be permitted in coastal wetlands, estuarine waters, and public trust areas. As stated above, the Proposed Action site is not located in coastal wetlands, estuarine waters or public trust areas and as such, is consistent with this policy.
15A NCAC 07H .0209 – Coastal Shorelines	Consistent. This section defines management objectives for coastal shorelines. This Proposed Action will not affect shorelines and is consistent with this policy.

NC CAMA Enforceable Policy	Consistency Determination
15A NCAC 07H .0303 – Management Objective of Ocean Hazard Areas	Consistent. This section defines management objectives for ocean hazard areas, defined as the natural hazard areas along the Atlantic Ocean shoreline where, because of their vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could endanger life or property. The Proposed Action is not located in proximity to any such areas and will not adversely impact these areas.
15A NCAC 07H .0403 – Management Objective for Public Water Supplies	Consistent. This section establishes the management objective for public water supplies. The Proposed Action will not affect public water supplies and is consistent with this policy.
15A NCAC 07H .0602 – Pollution of Waters	Consistent. This section states that no development shall be allowed in any Area of Environmental Concern (AEC), which would have a substantial likelihood of causing pollution of the waters of the state in which shellfishing is an existing use. The Proposed Action includes obtaining a National Pollutant Discharge Elimination System (NPDES) Construction General Stormwater Permit from NCDEQ and will not discharge to state waters.
15A NCAC 07J – Procedures for Processing and Enforcement of Major and Minor Development Permits, Variance Requests, Appeals from Permit Decisions, Declaratory Rulings and Static Line Exceptions	Consistent. This subchapter is concerned with Coastal Area Management Act permit applications which apply to projects located within an Area of Environmental Concern. The Proposed Action is not located in an AEC and as such, is consistent with the enforceable policies listed in this section.
15A NCAC 07K – Activities in Areas of Environmental Concern which do not Require a Coastal Area Management Act Permit	Consistent. This subchapter is concerned with activities such as maintenance and repair which do not require a Coastal Area Management Act Permit despite occurring in an Area of Environmental Concern. The Proposed Action is not located in an AEC and as such, is consistent with the enforceable policies listed in this section.
15A NCAC 07M .0301 – Public Beach and Coastal Waterfront Access Program	Consistent. The Public Beach and Coastal Waterfront Access Program aims to provide public access to the public trust beaches and waters in the 20 coastal counties. The Proposed Action is consistent with this policy as it will not restrict access to any public trust beaches or waters.
15A NCAC 07M .0501 – Post-Disaster Policies	Consistent. The Proposed Action would not increase the vulnerability of the state’s population to emergencies, including natural, technological, and human-caused disasters. The Proposed Action would increase the availability to emergency services by improving Veterans’ access to medical care.

NC CAMA Enforceable Policy	Consistency Determination
15A NCAC 07M .0601 – Floating Structure Policies	Consistent. This policy states that floating structures used for residential or commercial purposes should not infringe upon public trust rights nor discharge into public trust waters. As the Proposed Action does not involve construction or use of a floating structure or discharge into public trust waters, it is consistent with this enforceable policy.
15A NCAC 07M .0701 – Mitigation - General Policy	Consistent. This policy states that adverse impacts to coastal lands and waters must be mitigated through proper planning, site selection, compliance with development standards, and creation or restoration of coastal resources. The Proposed Action is consistent with this enforceable action as it will not have any adverse effects on coastal land or water. The site is located approximately three (3) miles north of the New River and site activities will not result in discharges to coastal waters.
15A NCAC 07M .0901 – Policies on Use of Coastal Airspace	Consistent. The Proposed Action will not utilize or interfere with coastal airspace.
15A NCAC 07M .1101 – Beneficial Use of Dredged Materials from Navigation Channel Maintenance and Excavation – General Policies	Consistent. This policy states that clean, beach quality material dredged from navigation channels within the active nearshore, ocean beach or inlet hazard area shall not be removed permanently unless the Director of the Division of Coastal Management determines that no practicable alternative exists. The Proposed Action will not dredge from navigation channels and as such is consistent with this enforceable policy.
15A NCAC 07O – North Carolina Coastal Reserve	Consistent. This subchapter is concerned with the management and protection of the North Carolina Coastal Reserve which consists of 10 protected sites. The nearest reserve site (Permuda Island) is located approximately 23 miles to the south of the Proposed Action site. As such, the Proposed Action will not introduce any adverse effects to North Carolina coastal reserves and is consistent with this enforceable policy.

3.5.2.2 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions. Therefore, the No Action alternative would result in no impact on coastal zone resources.

3.6 Cultural and Historic Resources

Cultural resources include both archaeologically significant elements and historic elements. The Archaeological Resources Protection Act prohibits the excavation of archaeological resources on federal lands. The National Historic Preservation Act (NHPA) of 1966, as amended, provides for the preservation of historic properties. Section 106 of the NHPA requires that federal agencies consider the impacts of their actions on such properties. Section 110 requires all federal agencies to assume responsibility for the preservation of historic properties under federal agency ownership or control.

3.6.1 Affected Environment

3.6.1.1 Initial Cultural Resource Impact Prediction Study

VA completed an Initial Cultural Resource Impact Prediction (ICRIP) study to assess the potential impacts of the Proposed Action on the Area of Potential Effect (APE) in compliance with Section 106 of the National Historic Preservation Act. The APE, as defined in 36 CFR 800.16(d), is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” The APE for this undertaking encompasses the proposed 31-acre site plus a 300-foot buffer around the site to account for viewshed and other potential effects.

The ICRIP incorporated the findings from the December 2024 Phase I archaeological survey of the site, which was performed to assess the potential for finding precontact Native American and historic sites as well as potential for cultural material related to former structures at the site. All shovel tests completed at the site were negative for cultural material, and no archaeological sites were documented during the survey.

3.6.1.2 Section 106 Consultation

Based on the ICRIP, VA determined that there are no known National Register of Historic Places listed or eligible properties within the APE and therefore concluded that the Proposed Action would result in no historic properties affected pursuant to 36 CFR Part 800.4(d)(1).

On February 21, 2025, VA initiated Section 106 consultation with the NC State Historic Preservation Office (SHPO); Onslow County Museum; Onslow County Planning Department; Jacksonville Planning and Inspections; and Swansboro Historic District Commission (the Certified Local Government), the Catawba Nation as required under NHPA, Native American Graves Protection and Repatriation Act, Executive Order (EO) 13007 Indian Sacred Sites, and EO 13175 Consultation and Coordination with Indian Tribal Governments. The consultation included a copy of the ICRIP and Phase I archaeological survey and a determination of finding that the Proposed Action would result in no historic properties affected.

On April 2, 2025, the NC SHPO provided written concurrence that significant archaeological sites will not be affected, and no further work is necessary for the proposed undertaking. On March 25, 2025, the Catawba Nation provided written concurrence with VA’s determination that there are no immediate concerns regarding traditional cultural properties, sacred sites, or Native American archeological sites within the boundaries of the proposed action areas. Copies of Section 106 consultation correspondence are included in Appendix C. None of the other parties that VA consulted with have responded to VA’s request for consultation.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

As previously discussed, VA concluded that the Proposed Action would result in no historic properties affected, and concurrence was received from the NC SHPO and Catawba Nation. Therefore, the construction and operation of the Proposed Action would have no impact on cultural and historic properties.

3.6.2.2 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions at the site. Therefore, the No Action alternative would also result in no effect on cultural and historic properties.

3.7 Geology and Soils

The geology of an area includes surface and bedrock materials, its orientation and faulting, and geologic resources such as mineral deposits, petroleum reserves, and fossils. Soils refers to unconsolidated earthen materials overlaying bedrock or other parent material. Excavation, soil erosion, soil compaction, soil horizon removal, grading, and cutting and filling operations can result in a potential loss of soils and/or changes in geology.

3.7.1 Affected Environment

3.7.1.1 Geology

The site is situated in the southeastern portion of the southern Coastal Plain region of NC. The Coastal Plain is characterized by flat land to gently rolling hills and valleys. Elevations range from sea level near the coast to about 600 feet in the Sandhills of the southern Inner Coastal Plain. The Coastal Plain covers approximately 45% of the land area of the State (NCDEQ 2015). The site is underlain by the River Bend Formation, a Tertiary-age limestone deposited during the Oligocene Epoch (Ward 1979).

The site is located in Onslow County approximately 3.3 mi (5.3 km) north of downtown Jacksonville in the southeastern portion of the Southern Coastal Plain region of North Carolina. In general, the Coastal Plain of the eastern United States is an area of low elevation consisting of relatively unconsolidated beds of terrestrially and marine-deposited sand, gravel, and clay sediments (Fenneman 1938) (Thorbury 1965). The Atlantic Coastal Plain includes Pleistocene terraces that range from approximately 270 to 25 ft (82 to 8 m) above mean sea level (amsl). These relict coastal terraces and scarps survive with varying degrees of preservation. Elevations within the site range from 40 to 50 ft (12 to 15 m) amsl. The project area is situated on the River Bend Formation, which consists of limestone and calcarenite overlain by and intercalated with indurated, sandy, molluscan-mold limestone (NCGS 1985).

3.7.1.2 Soils

3.7.1.2.1 Soil Types

Based on National Resource Conservation Service (NRCS) mapping, two soil types are present at the site. The NRCS features for these soils are listed in Table 7 and depicted on Figure 9. Soils in the northwest portion of the site are moderately well-drained and east of the wooded area are somewhat poorly to poorly drained soils. The southern portion of the site consists of deposits of dump, cut, or fill soils. Soil conditions in the portion of the site where the wetlands were identified may have localized drainage issues that the private entity would consider when designing site-specific stormwater management strategies.

Table 7. NRCS Mapped Soils at the Proposed Action Site

NRCS Map ID	Soil Name	Drainage Classification	Acres	Prime Farmland	Percent in Selected Parcel
GoA	Goldsboro fine sandy loam, 0 to 2 percent slopes	Moderately well drained	28.2	Yes	90.7%
Ra	Rains fine sandy loam, 0 to 2 percent slopes, Atlantic Coast Flatwoods	Poorly Drained	2.9	Yes, if drained	9.3%

3.7.1.3 Prime Farmland

The Farmland Protection Policy Act requires federal agencies to assess the potential impact on agricultural land before approving a project that might convert prime farmland to non-agricultural use. As shown in Table 7 and Figure 9, NRCS classifies one of the soils as prime farmland and the other as “prime farmland if drained”.

Figure 9. NRCS Mapped Soils at the Proposed Action Site



3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

3.7.2.1.1 Construction

3.7.2.1.1.1 Geology

Construction activities are not anticipated to contact bedrock. As a result, the Proposed Action would have no impact on geological resources.

3.7.2.1.1.2 Soil

Under both Alternatives 1 and 2, construction activities would remove vegetation during grading, exposing soils and making them susceptible to erosion by wind and surface runoff.

To minimize sedimentation of runoff, prior to construction, the private entity must apply for and obtain a National Pollutant Discharge Elimination System (NPDES) Construction General Stormwater Permit (“CGP”) from NCDEQ (NC DEQ 2025). The NPDES is a program under the CWA that controls water pollution by regulating point sources that discharge pollutants into waters of the United States, requiring permits for such discharges and is required for projects that disturb more than one acre of land. The NPDES program ensures that discharges meet specific standards and conditions to protect water quality.

The private entity would also develop and submit with the permit application an Erosion and Sedimentation Control Plan (ESCP) that details the specific best management practices (BMPs) that the private entity would implement and maintain to minimize erosion and prevent sediment from leaving the construction site.

Additionally, the private entity would apply for and obtain a City of Jacksonville Stormwater Permit, which is necessary to comply with the City of Jacksonville's Phase II NPDES Municipal Separate Storm Sewer System (MS4) permit and which ensures proper management of stormwater runoff during and after construction (Jacksonville 2025). The private entity would include in the application a detailed Stormwater Management Plan that outlines the stormwater control measure BMPs integrated into the site design, as well as a Stormwater Pollution Prevention Plan (SWPPP) that outlines the measures to be implemented and maintained to prevent stormwater runoff during the construction phase (NC DEQ 2013). The NCDEQ's *Erosion and Sediment Control Planning and Design Manual* (NC DEQ 2013) identifies BMPs which include but are not limited to:

- Installing and maintaining sedimentation and erosion control measures, including silt fences and water breaks, detention basins, filter fences, sediment berms, interceptor ditches, synthetic hay bales, rip-rap, and/or similar physical control structures.
- Retaining on-site vegetation to the maximum extent possible.
- Revegetating disturbed areas with native, non-invasive vegetation as soon as construction is completed.

The private entity would include in the Stormwater Permit application an Operation and Maintenance Agreement (also referred to as Stormwater Management Facility Maintenance Agreement), which outlines the private entity's responsibilities for operating the stormwater management facilities (the proposed stormwater basins) at the site and grants the City of Jacksonville a perpetual easement to inspect these stormwater facilities. This Operation and Maintenance Agreement ensures the ongoing effectiveness of the stormwater detention basins at the site.

During construction, the private entity would also implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the site, to reduce the impact of incidental releases of construction vehicle fluids (such as diesel or hydraulic fluids) to soil quality. Releases of regulated quantities of petroleum-based fluids would be reported to VA and the NC Division of Waste Management's Wilmington Regional Office and cleaned up per state regulatory requirements.

Therefore, the construction of the Proposed Action would have a permanent, minor adverse impact on soil quality.

3.7.2.1.1.3 Prime Farmland

Under both Alternative 1 and 2, development of the site would permanently and directly convert prime farmland soils to non-agricultural use. However, the Proposed Action has no mechanism to limit, restrict, or prevent access to other prime farmland soils in the area.

Therefore, the construction of the Proposed Action would have a permanent, minor adverse impact on prime farmland soils at the site, but no impact beyond the site.

VA completed USDA Form AD-1006, the Farmland Conversion Impact Rating Form for determination of whether the site is farmland subject to the Farmland Protection Policy Act. A copy of USDA Form AD-1006 is included in Appendix B for NRCS review. Copies of NRCS correspondence are included in Appendix B.

3.7.2.1.2 Operation

Under both Alternative 1 and 2, operation of the Proposed Action would have no mechanism to impact bedrock. During operation, soils previously exposed during construction would be revegetated or covered with structures, asphalt/paving, or landscaping, in accordance with the ESCP and SWPPP. As previously described, the private entity would be responsible for ensuring the stormwater facilities at the site remain effective for the duration of VA's lease and allow for inspection by the City of Jacksonville Stormwater Division in accordance with the Operation and Maintenance Plan issued as part of the City of Jacksonville's Stormwater Permit.

Therefore, the operation of the Proposed Action would have no adverse impact on geology or soils.

3.7.2.2 **No Action Alternative**

Under the No Action alternative, there would be no change to existing conditions. Therefore, the No Action alternative would result in no impact on geology or soils.

3.8 **Hydrology and Water Quality**

Hydrology and water quality considerations relate to both surface water and groundwater and the impact of stormwater on both. Stormwater is surface water runoff generated from precipitation and has the potential to introduce sediments and other pollutants into surface waters. Impervious surfaces such as buildings, roads, parking lots, and even some natural soils increase surface runoff. Stormwater infrastructure includes the manufactured conveyance systems that function together with natural drainages to collect and control the rate of surface runoff during and after a precipitation event. In urbanized areas, stormwater that is not infiltrated into the ground or discharged to a waterbody may be conveyed to stormwater management systems which are designed to contain runoff on site during construction and to maintain predevelopment stormwater flow characteristics following development through either the application of infiltration or retention practices.

3.8.1 **Affected Environment**

The site is located within the Middle Atlantic Coastal Plain, a region encompassing the coastal plain from South Carolina/Georgia to southern New Jersey, characterized by flat terrain, humid subtropical climate, and diverse ecosystems including swamps, marshes, and estuaries (Griffith 2002).

3.8.1.1 **Surface Water Features**

As previously described, there is a UNT intermittent stream on the site. No other surface water features are present at the site. Beyond the northern boundary of the site is a stormwater retention pond; based on aerial imagery, the pond covers an area of approximately one acre.

3.8.1.2 **Groundwater Characteristics**

According to the U.S. Geological Survey (USGS) Hydrogeologic Framework of Onslow County NC 2008 map, Onslow County sits atop a series of eight generally eastward dipping and thickening wedge-shaped aquifers that are separated by seven confining units (Fine 2008). The aquifers from top to bottom are: surficial, Upper and Lower Castle Hayne, Beaufort, Peedee, Black Creek, Upper and Lower Cape Fear Aquifers. The Castle Hayne, Black Creek, Peedee Aquifers are the major sources of water for Onslow County, however, due to increased demand, water suppliers have shifted withdrawals primarily to the Castle Hayne aquifer. The Castle Hayne aquifer ranges from 12 to 755 feet thick and averages 153 feet thick. The aquifer is composed of limestone, sandy limestone, and sand. It is the most productive aquifer in North Carolina. Wells typically yield 200-500 gallons per minute but can exceed 2,000 gallons per minute (NCDEQ 2025b).

The USGS National Water Information System shows that there are two groundwater wells located approximately 0.75 miles to the southwest of the Proposed Action site. Monitoring location 344746077260101 is an inactive national groundwater-level monitoring site with measurements taken between 2008 and 2009 and indicate a groundwater depth between 33 and 37 feet below ground surface (USGS 2024). Monitoring location 344734077254601 is an active national groundwater-level monitoring site with measurements provided from 2010 onwards. Provisional data recorded in 2024 indicates that the groundwater depth was approximately 75 feet below ground surface (USGS 2024). The presence of the UNT stream suggests that the depth to groundwater may be relatively shallow within the proposed action site.

3.8.1.3 Stormwater Management and Drainage Patterns

As previously discussed in Section 3.5.1.1, the site is not located within a FEMA-designated 100- or 500-year floodplain. The site features low and/or wet areas with typical lowland vegetation and drainageways and has been subject to forestry practices including past clear-cutting, row replanting, and access roads. The site topography slows downgradient toward the northwest.

As previously discussed in Section 3.7, the private entity would design, construct, and operate and maintain the stormwater management facilities according to the NCDEQ and City of Jacksonville permit requirements.

3.8.1.4 Water Quality Conditions

Watersheds, or drainage basins, are areas of land that drain into rivers or bodies of water. The site is located within the White Oak River basin (USGS Hydrologic Unit 030203). Within this basin are the Headwaters New River watershed (USGS Hydrologic Unit 0302030201) and the Blue Creek watershed (USGS Hydrologic Unit 12-030203020105) (NC DEQ 2025).

The one USGS-mapped intermittent UNT stream within the site flows northwest and, once beyond the northern site boundary, has a confluence with the named USGS mapped stream, Half Moon Creek.

All surface waters in North Carolina are assigned a primary surface water classification by the NC Division of Water Resources (NCDWR). The UNTs-to-named-streams share the same designation as the body of water to which they flow. Half Moon Creek is classified by NCDWR as a Class C water, which means it is protected for uses such as aquatic life propagation, survival, and maintenance of biological integrity (including fishing and fish), wildlife, secondary contact recreation, and agriculture. Half Moon Creek is also classified by NCDWR as a nutrient sensitive water due to being subject to excessive growth of micro/macro vegetation. The White Oak River basin does not have any stream buffer rules, nor does Onslow County have any additional stream buffer rules that would apply to the streams within the site.

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action

3.8.2.1.1 Construction

Construction of the Proposed Action would alter existing site conditions, potentially impacting hydrology and water quality. Key concerns include increased surface runoff due to impervious surfaces and changes to the on-site drainage patterns.

Construction activities would include clearing, grading, and constructing the MSOC building, parking lots, and other impervious infrastructure at the site. These activities are expected to result in both temporary and permanent impacts on hydrology and water quality. Soil disturbance during construction has the potential to remove vegetation and expose soils, which can lead to increased erosion during storm events. Grading and site reconfiguration may disrupt existing drainage patterns, leading to ponding in low-lying areas.

To minimize adverse impacts to hydrologic and water quality conditions from construction activities, the private entity would obtain the NCDEQ CGP and City of Jacksonville Stormwater Permit and implement and maintain permit-required BMPs, such as bio-retention areas, vegetated swales, and retention basins. These measures would minimize off-site migration of stormwater. The private entity would also implement a Spill Prevention, Control, and Countermeasure plan and train workers on how to respond to and remediate accidental releases of petroleum-based fluids to prevent impacts to groundwater.

Therefore, the construction of the Proposed Action would have a temporary, minor adverse impact on hydrology and water quality.

3.8.2.1.2 Operation

The conceptual designs for both Alternative 1 and 2 would create up to 25 acres of new impervious surface across the site. See Table 2 for each design's added impervious surface. Both Alternatives 1 and 2 include on-site stormwater management ponds to retain and manage stormwater generated at the site.

Stormwater runoff from the site during operation of the Proposed Action may contain oils, grease, heavy metals, and other contaminants associated with vehicular traffic and maintenance activities.

To minimize operational impacts to hydrology and water quality, the private entity would design, construct, maintain, and operate the stormwater management facilities (stormwater detention basins) to minimize off-site migration of stormwater runoff. The final design of the stormwater management systems would accommodate anticipated stormwater runoff volume required by NCDEQ design standards.

Therefore, the Proposed Action would have a permanent, negligible adverse impact on hydrology and water quality conditions.

3.8.2.2 *No Action Alternative*

Under the No Action alternative, there would be no change to existing conditions. Therefore, the No Action alternative would result in no impact on hydrology and water quality.

3.9 Land Use

Considerations related to land use help to provide insights into existing land use patterns, identify potential conflicts, and inform decisions related to zoning and infrastructure planning.

3.9.1 Affected Environment

The site is within the City of Jacksonville's Extra Territorial Jurisdiction (ETJ) and subject to City regulations, where applicable. The two parcels that make up the site are not among the 337 parcels selected to be removed from the five Jacksonville ETJ areas as part of the ETJ Reduction Area plan proposed in 2020 (City of Jacksonville 2025).

The site is listed in the City of Jacksonville Zoning District Map (Jacksonville 2024) as Corridor Commercial Districts (CC). The purpose of a CC zone is described as follows:

The CC district is established and intended to accommodate a diverse range of medium- to high-intensity retail, service, and office uses that provide goods and services serving the residents and businesses in the community at large, including shopping centers, convenience stores, retail sales establishments, and heavier commercial uses. The district is typically located along major arterials, at the intersection of arterials, and along growth corridors.

The zones to the east, west, and south of the Proposed Action site are also zoned as CCs, though the western zone is entirely wooded. Figure 10 illustrates the zoning districts of the area surrounding the site.

The zones north of the site are zoned as Residential Multi-Family High Density Districts, though currently most of the land is wooded.

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action

The Proposed Action site parcels are zoned by the City of Jacksonville for commercial purposes. The provision of outpatient health care services to Veterans in the community is consistent with this zoning designation. The Proposed Action is also consistent with Onslow County's Vision 2025: A Five-Year Strategic Initiative to Spur Economic Growth and Improve Quality of Life in Onslow County (JOED 2020).

Therefore, the construction and operation of the Proposed Action would have no impact on land use.

3.9.2.2 No Action

Under the No Action alternative, there would be no change to existing conditions and no impact on land use. The site could be developed by other parties for other uses in the future.

Figure 10. Zoning Districts at and in Vicinity of the Proposed Action Site



3.10 Noise and Vibration

3.10.1 Noise

Noise is generally defined as an unwanted sound that interferes with or disrupts normal human activities. Sound is most commonly measured in decibels (dB). Daytime noise levels of 40 dB are generally perceived as quiet, 60 dB as moderate, and greater than 70 dB as loud. The Noise Pollution and Abatement Act of 1972 initiated a federal program of regulating noise pollution with the intent of protecting human health and minimizing annoyance of noise to the public.

Sensitive noise receptors are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. Hospitals, schools, convalescent facilities, religious institutions, libraries, recreation areas, and residential areas are considered sensitive receptors, particularly when located within 0.25 miles of the noise source.

3.10.2 Vibration

Vibration refers to the oscillatory motion of particles in a medium, often caused by mechanical forces. Vibration decibels (VdB) are used to measure vibration because they correspond well to how humans respond to environmental vibrations. The background vibration velocity level in residential areas is usually 50 VdB or lower and the threshold of perception for humans is approximately 65 VdB. A vibration level of 85 VdB in a residence can result in strong annoyance (FTA 2018). Sensitive receptors for vibration are the same as sensitive receptors for noise.

3.10.3 Affected Environment

The soundscape and vibration at the corner of Western Blvd. and Carolina Forest Blvd. are typical of a mixed residential/commercial district. The soundscape is dominated to the south by noise from vehicles traveling to and from the nearby businesses and along the roads adjacent to the site.

The nearest sensitive noise receptors to the site are south of Western Boulevard and include residences to the southwest and daycare centers to the south of the site. Residential receptors are also located to the east and northeast of the site.

3.10.4 Environmental Consequences

3.10.4.1 Proposed Action

3.10.4.1.1 Noise

3.10.4.1.1.1 Construction

Construction noise levels vary depending on the type of equipment being used, the duration of use, and the receptor's distance from the source. Table 8 details the predicted noise levels (at a distance of 100 feet from the source) for common construction equipment (FTA 2018). The sound levels experienced by human receptors would vary depending on distance from the noise source and decrease approximately 6 dBA with every doubling of distance.

Table 8. Predicted Noise Levels for Construction Equipment

Construction Equipment	Predicted Noise Level at 100 feet (dBA)
Welding generator	65–76
Backhoe	66–87
Roller	67–69
Concrete mixer	67–82
Crane	69–81
Grader/Dozer	74–87
Jackhammer	75–92
Truck	77–88
Paver	80–82

The Proposed Action would generate noise from equipment used during site grading and vertical construction. Typical construction equipment involved in the Proposed Action would include excavators, cranes, backhoe-loaders, welders, aerial lifts, graders, pavers/paving equipment, rollers, haul trucks, and

concrete mixing trucks, though this equipment would only be in use at the site when the specific function it is designed for is needed. Construction equipment would be operated within the work site during normal daytime hours, and in compliance with the City of Jacksonville noise ordinance which states that construction activities within the city limits and within 200 feet of a residential dwelling must be conducted Monday through Friday, 6:00 a.m. to 9:00 p.m.; Saturday, 7:00 a.m. to 9:00 p.m.; and Sunday, 8:00 a.m. to 7:00 p.m. (City of Jacksonville 2024).

The nearest residential sensitive receptors are approximately 500 feet to the southwest of the site. The construction activities that are nearest to the residential receptors would occur intermittently; the activities would involve land clearing and grading. Based on a grader operating at approximately 500 feet away from the nearest residence, the estimated sound level from the grader perceived at the nearest residential receptor would be approximately 70 dBA. Common sound levels are shown in Table 9 (OSHA 2022).

Table 9. Common Sound Levels

Source	Decibel Level
Silent Study Room	20
North Rim of Grand Canyon	30
Soft Whisper (5 ft. away)	40
Urban Residence	50
Conversation (3 ft. away)	60
Classroom Chatter	70
Freight Train (100 ft. away)	80
Boiler Room	90
Construction Site	90-100
Night Club (with music)	110
Operating Heavy Equipment	120
Jet Taking Off (200 ft. away)	130
Threshold of Pain	140

The U.S. Occupational Safety and Health Administration (OSHA) requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over 8 working hours, or above 90 dBA over an 8-hour time-weighted average. The private entity would provide hearing protection to all workers who may be exposed to these noise levels.

The construction contractor would also comply with the noise ordinance as well as implement BMPs for noise control if necessary and to an extent technically practicable. These could include:

- Using shields or other physical barriers to restrict noise transmission.
- Providing soundproof housings or enclosures for noise producing machinery.
- Using efficient intake and exhaust mufflers on internal combustion engines that are maintained so equipment performs below the noise levels specified.
- Conducting truck loading, unloading, and hauling operations so that noise is kept to a minimum.
- Selecting material transportation routes as far away from sensitive receptors as possible.
- Shutting down noise-generating heavy equipment when not in use.

Therefore, the construction of the Proposed Action would have a temporary, minor adverse impact on noise-sensitive receptors and a negligible adverse impact on construction personnel working at the site.

3.10.4.1.1.2 Operation

Operation of the Proposed Action would create sounds and sound levels typical of a public facility in a mixed residential/commercial area. The soundscape at the Proposed Action site and at adjacent properties would continue to be dominated by vehicles traveling on Western Blvd.

Therefore, the operation of the Proposed Action would have a permanent, negligible adverse impact on noise-sensitive receptors in the community and to workers at the site.

3.10.4.1.2 Vibration

3.10.4.1.2.1 Construction

There would be no demolition as part of the Proposed Action. Should pile driving be required to help shore the ground and support the MSOC building, the construction contractor would implement necessary precautions to reduce the potential for vibration impact to the nearby residences.

Therefore, the construction of the Proposed Action would have a temporary, negligible adverse impact on vibration-sensitive receptors.

3.10.4.1.2.2 Operation

Operation of the Proposed Action has no mechanism to generate vibrations that would extend off-site to affect the surrounding community. Therefore, the operation of the Proposed Action would have no impact on vibration-sensitive receptors.

3.10.4.2 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions. Therefore, the No Action alternative would result in no impact on noise and vibration.

3.11 Solid Waste and Hazardous Materials

Hazardous materials include, but are not limited to, hazardous and toxic substances and waste, and any materials that pose a potential hazard to human health and the environment due to their quantity, concentration, or physical and chemical properties. Hazardous wastes are characterized by their ignitability, corrosivity, reactivity, and toxicity. Hazardous materials and wastes, if not controlled, may either (1) cause or significantly contribute to an increase in mortality, serious irreversible illness, or incapacitating reversible illness; or (2) pose a substantial threat to human health or the environment.

3.11.1 Affected Environment

Both Alternatives 1 and 2 included a Phase I Environmental Site Assessment (Phase I ESA) for the site completed by consultants to the private entities in July 2023. The Phase I ESAs were completed by qualified environmental professionals in accordance with ASTM E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, and USEPA Standards and Practices for All Appropriate Inquiries contained in 40 CFR Part 312. Each private entity used a different environmental consulting company for their Phase I ESA. Both Phase I ESA reports concluded that there was no evidence of recognized, controlled, or historical environmental conditions nor significant data gaps in connection with the site. The Phase I ESA submitted with Alternative 1 concluded that there was no evidence of vapor encroachment conditions in connection with the site. The Phase I ESA submitted with Alternative 2 concluded that there is no evidence of business environmental risks in connection with the site.

3.11.2 Environmental Consequences

3.11.2.1 Proposed Action

3.11.2.1.1 Construction

Construction of the Proposed Action would generate vegetative and material debris and excess soils during land clearing and grading. The private entity would be required to recycle or reuse materials to the maximum extent practicable or dispose of them at USEPA-approved facilities in accordance with NC Division of Waste Management Administrative Code 13B (NCDWM 2012) and Onslow County Solid Waste Management Ordinance (Onslow 2011). Only materials that cannot be reused or recycled would be transported off-site for disposal at a landfill approved for construction debris. All soil removed that cannot be reused on site would be transported to an appropriate landfill for reuse as fill or daily cover. The private entity would be responsible for the proper management and disposal of all construction wastes.

Therefore, the construction of the Proposed Action would have a temporary, minor adverse impact on solid waste by temporarily increasing the volume of construction-related debris disposed of at an off-site landfill.

3.11.2.1.2 Operation

Consistent with existing VA MSOC operational practices, the new MSOC would use a variety of small quantities of chemicals for diagnostics and treatments. Hazardous wastes may consist of chemical, low-level radiopharmaceutical, and medical wastes. Janitorial and landscaping maintenance activities include the use of cleaners, solvents, degreasers, and paints. Other non-hazardous materials used during MSOC operations include diesel fuel for emergency generators, lubricants, and oils.

The MSOC would not have an on-site solid waste management facility. Solid wastes generated at the MSOC would be disposed of in designated bins and dumpsters and transported and disposed of at a USEPA-licensed disposal facility. The private entity would be responsible for the proper management and disposal of all operational wastes.

Therefore, the operation of the Proposed Action would have a permanent, negligible adverse impact on solid waste and hazardous materials associated with routine operation of an MSOC.

3.11.2.2 No Action Alternative

Under the No Action alternative, there would be no change to existing conditions. Therefore, the No Action alternative would result in no impact on solid waste and hazardous materials.

3.12 Traffic, Transportation, and Parking

Transportation and parking refer to the movement and parking of people, goods, and equipment on a local and regional transportation network, consisting of streets, railroads, transit facilities, bicycle lanes, and other modes of transportation, including walking.

3.12.1 Affected Environment

3.12.1.1 Traffic Impact Analysis

Under Alternative 1 and 2, the conceptual plans place the MSOC in the central portion of the site, with a main entrance facing south toward Western Blvd. The primary difference between Alternatives 1 and 2 is the number of entrances proposed along Western Blvd. (see details in Table 2 and Figure 3 and Figure 4). Alternative 1 includes both a main entrance and secondary entrance along Western Blvd. The conceptual plan for Alternative 1 also shows a future right-of-way extending west from Carolina Forest Blvd. to the

northern portion of the Proposed Action site; however, this future right-of-way is not on the site and not part of the Proposed Action under consideration. Alternative 2 includes only the main entrance along Western Blvd. and the secondary entrance along Carolina Forest Blvd. Both Alternatives 1 and 2 include 1,300 asphalt-paved parking spaces surrounding the MSOC to support the anticipated number of daily staff and visitors.

On behalf of VA, a traffic impact analysis was performed to assess the existing transportation conditions surrounding the site and to estimate potential future traffic impacts on the Level of Service (LOS) on transportation conditions with and without the Proposed Action in the year 2044.

The LOS is used to rate traffic operation based on traffic volumes and roadway capacity using letter designations ranging from *A through F* (Table 10). An LOS of “A” represents good operating conditions and “F” represents unsatisfactory operating conditions (Transportation Research Board 2022).

On August 27, 2024, intersection turning movement counts and capacity analyses were conducted at five intersections selected based on their proximity to the site and the potential future access points (Figure 11). Peak hour traffic volumes were collected from 6-9 a.m. and 3-7 p.m. at each intersection. As shown in Table 11, all five study intersections currently operate at LOS “A” conditions, meaning traffic flows freely, with little or no restrictions to vehicle maneuvers within the traffic stream.

Table 10. Level of Service Definitions

LOS Rating	Description of Traffic Conditions	Critical Lane Volume (CLV)
A	Traffic flows freely, with little or no restrictions to vehicle maneuvers within the traffic stream.	Less than 1,000
B	Reasonably free-flowing conditions, with slight restrictions to vehicle maneuvers within the traffic stream.	1,000-1,150
C	Traffic speed approaches free-flowing conditions, but freedom to maneuver within the traffic stream is noticeably restricted.	1,150-1,300
D	Traffic speed begins to reduce, and freedom to maneuver is seriously limited due to a high concentration of traffic.	1,300-1,450
E	Unpredictable traffic flow, with virtually no usable gaps in the traffic stream to accommodate vehicle maneuvers.	1,450-1,600
F	Unstable traffic flow resulting in delays and the formation of queues in locations where traffic demand exceeds roadway capacity.	Greater than 1,600

Table 11. 2024 LOS for Traffic Study Intersections

Intersection (Figure 11)	Crossroads	2024 LOS (AM)	2024 LOS (PM)
1	Western Blvd. & Northwest Circle	A	A
2	Western Blvd. & Carolina Forest Blvd./N Plain Road	A	A
3	Western Blvd. & Walmart Access	A	A
4	Carolina Forest Blvd. & Walmart Access (North)	A	A
5	Carolina Forest Blvd. & Carolina Park Avenue	A	A

Figure 11. Traffic Study Intersections



3.12.2 Environmental Consequences

3.12.2.1 Proposed Action

3.12.2.1.1 Construction

Under both Alternatives 1 and 2, construction activities would be conducted over approximately 18-24 months and involve the removal of construction and demolition debris, the delivery of construction materials and equipment, worker commuting, and the removal of equipment after construction concludes. To minimize the impact on traffic flow on area roadways, delivery and removal activities would be periodic and would generally be scheduled to occur outside of peak commuting periods. Construction worker travel would recur on a daily basis and may coincide with peak commuting periods. While worker trips would recur during the peak commuting periods, some of these trips would likely involve carpooling and/or transit, thus limiting impact on traffic.

The private entity would be required to apply for and obtain a Street and Driveway Access Permit (NC DOT 2025) issued by the NC Department of Transportation (NCDOT) District Engineer to construct entrances along Western Blvd., which is a state road. Additionally, the private entity would apply for and obtain Driveway Permits (Jacksonville 2025) from the City of Jacksonville to construct any driveways with curb cuts within the city limits including any proposed entrance along Western Blvd. and on Carolina Forest Blvd.

Therefore, the construction of the Proposed Action would have a temporary, minor adverse impact on traffic conditions at or immediately adjacent to the Proposed Action site.

3.12.2.1.2 Operation

VA strives for a Proposed Action CLV increase of no more than 20% above the No Action alternative over the same period; or, if greater than 20%, then not significantly more than the CLV increase under the No Action alternative over the same period. If the CLV increase with the Proposed Action by year 2044 is significantly greater than the No Action alternative, then VA strives for no to little decrease in the corresponding LOS.

The traffic impact analysis estimated future traffic conditions by the year 2044 with and without the Proposed Action and analyzed the future LOS impacts at each intersection (TTG 2025). The study assumed a 0.5% annual increase in traffic at the study intersections for the next twenty years (to year 2044) based on population growth and annual growth rate data obtained from the NCDOT. The 0.5% annual increase was applied to the existing baseline traffic data (obtained in November 2024) for each of the five intersections, allowing for a projection of the future CLV both with and without the additional traffic contributed by the Proposed Action. The resulting data was used to assess the future impact of the Proposed Action on the CLV and LOS at each of the five study intersections by year 2044 in comparison to the No Action alternative.

Under both Alternatives 1 and 2, by year 2044, intersection #1 (the proposed main entrance for both Alternatives 1 and 2) is projected to operate at LOS "A" in the morning peak hour and LOS "B" in the evening peak hour.

The other four intersections are projected to operate at LOS "C" or better conditions. All the intersections are projected to operate at a satisfactory and acceptable LOS. While the CLV at intersection #1 during the evening peak hours is projected to increase by 44%, the intersection is projected to operate at a satisfactory LOS "B" condition. Similarly, the 32% increase in CLV at intersection #3 during the morning peak hour represents a change only from LOS "A" to LOS "B". While the LOS at intersection #2 would operate in the evening peak hour at LOS "C", this represents only a 7% CLV change.

Therefore, the operation of the Proposed Action would have a permanent, negligible adverse impact on traffic, transportation, and parking.

3.12.2.2 No Action Alternative

Under the No Action alternative, current roadway alignments along Western Blvd. and Carolina Forest Blvd. would remain unchanged because the Proposed Action would not be implemented and there would not be MSOC entrances along these roadways. Future traffic conditions may change as projected under the No Action alternative, shown in Table 12; the Proposed Action would not contribute to these changes in LOS or CLV.

Therefore, the No Action alternative would not cause or result in impacts on traffic conditions.

Table 12. 2044 Traffic Impact Analysis Summary for the Five Study Intersections

ID	Crossroads	No Action Alternative (by year 2044)				Proposed Action (by year 2044)					
		2044 a.m. LOS	2044 a.m. CLV	2044 p.m. LOS	2044 p.m. CLV	2044 a.m. LOS	2044 p.m. CLV	2044 a.m. %CLV change	2044 p.m. LOS	2044 p.m. CLV	2044 p.m. % CLV change
1	NC 53 & Northwest Cir.	A	609	A	767	A	688	13%	B	1,107	44%
2	NC 53 & Carolina Forest Blvd	A	989	B	1,146	B	1,022	3%	C	1,222	7%
3	NC 53 & Walmart Access	A	407	B	1,080	A	538	32%	B	1,111	3%
4	Wal Mart Access (North) & Carolina Forest Blvd	A	918	B	1,005	A	966	5%	B	1,050	4%
5	Carolina Park Ave & Carolina Forest Blvd	A	970	A	989	B	1,055	9%	B	1,065	8%

3.13 Utilities

Utilities are the services that support the efficient and comfortable operation of a facility or location. Utilities include potable water, sanitary sewerage, electricity, telecommunications, and stormwater management.

3.13.1 Affected Environment

The site is located in the Jacksonville ETJ, where utility infrastructure is well established and currently serves a mix of residential and commercial developments. According to the Jacksonville City Finance office, the City of Jacksonville provides water, sewer, landfill, and stormwater utilities to the site, while the Electric Membership Corporation provides electricity to the site. There are multiple telecommunications providers in the Jacksonville area. Major telecommunication providers include Spectrum, Brightspeed, T-Mobile, Verizon, and Metronet, offering a range of internet, wireless, and cable services (CNET 2025).

3.13.2 Environmental Consequences

3.13.2.1 Proposed Action

3.13.2.1.1 Construction

Under both Alternative 1 and 2, construction of the Proposed Action would require extending to the site utility lines for potable water, sewerage, electricity, and telecommunications. Stormwater would be managed on site and would not be discharged to the municipal stormwater system. The Proposed Action would not include onsite treatment of sanitary sewage; sewage would be treated by the City of Jacksonville municipal wastewater treatment plant.

As part of the final design, the private entity would be required to confirm and verify with utility providers that capacities are available to meet the projected demands for the MSOC. The private entity would also be required to apply for and obtain permits required to connect to and utilize utility services.

Construction of utility infrastructure would involve upfront site work to create utility corridors and coordination with the utility providers to ensure uninterrupted utility services continue to current customers in the community. The private entity would be required to apply for and obtain any permits needed to use or cross rights-of-way to install utilities.

Therefore, the construction of the Proposed Action would have a temporary, negligible adverse impact on utilities due to temporary construction activities in rights-of-way.

3.13.2.1.2 Operation

Under both Alternative 1 and 2, the Proposed Action would achieve Green Globes certification, which seeks to ensure the MSOC efficiently uses electricity, water, and sewerage utilities, thereby lessening the demand for utilities. The private entity would be required to maintain any privately-owned on-site utility infrastructure to ensure that the quality of utility services continuously meets VA's operational requirements for the duration of VA's lease.

Therefore, the operation of the Proposed Action would have a permanent, negligible adverse impact through the increased consumption of utilities.

3.13.2.2 No Action Alternative

Under the No Action alternative, no changes to utility consumption would occur. Therefore, the No Action alternative would result in no impact on any utility supplies or delivery infrastructure.

3.14 Community Services

Community services include police, fire, ambulance, medical and emergency services provided by VA or surrounding communities.

3.14.1 Affected Environment

The City of Jacksonville has a population of approximately 72,867, which includes approximately 7,479 Veterans or 22.4% of the population. This percentage of Veterans per capita is approximately three times higher than the state-wide rate of 7.3% (Census Reporter 2024). Existing outpatient medical services in Jacksonville, NC are available to Veterans at four clinics operated by the VA Fayetteville Coastal Health Care System. These clinics are currently over capacity, resulting in prolonged waiting times for Veterans in need of care at a VA medical facility in the Jacksonville region.

Public safety services are provided by the City of Jacksonville police and fire/emergency departments, both located at 200 Marine Boulevard, Jacksonville, NC. Onslow Memorial Hospital is the only hospital serving Onslow County, NC; this hospital provides 162 beds for general and specialized medical services and is located at 317 Western Boulevard, Jacksonville, NC.

3.14.2 Environmental Consequences

3.14.2.1 Proposed Action

Construction and operation of the Proposed Action would not induce or require changes in non-Veteran community services, such as force protection or security services. Based on community impacts analyzed under prior VA MSOC and outpatient projects, the construction and operation of the Proposed Action would not increase needs for housing, social, or emergency services in the surrounding community. The increase in available jobs associated with the construction or operation of the Proposed Action would not result in an increase in the population of families with children exceeding the capacity of local schools.

The MSOC would resolve capacity issues at the four VA clinics in Jacksonville that are slated for closure by providing a larger facility with a full range of consolidated outpatient medical services for Veterans in Jacksonville. The MSOC would serve Veterans with both primary care and mental health needs as well as offer pharmacy, laboratory, pathology, and social work services.

Therefore, by increasing area Veterans' access to quality health care, operation of the Proposed Action would result in a permanent, significant beneficial impact on community services related to health care for Veterans in Jacksonville. There would be no impact on other local community services.

3.14.2.2 No Action Alternative

Under the No Action alternative, the four Jacksonville VA outpatient clinics would continue to be overburdened, and local Veterans would continue to experience longer waiting times for routine appointments or longer travel times to obtain medical care at a VA facility outside of Jacksonville, NC. The No Action alternative does not meet the purpose and need for action and would diminish the level of care that VA is able to provide Veterans in Jacksonville.

Therefore, the No Action alternative would have a permanent, significant adverse impact on community services for Veterans.

3.15 Socioeconomics

Socioeconomics refers to the social and economic conditions in the communities surrounding the Proposed Action.

3.15.1 Affected Environment

The City of Jacksonville is the commercial hub of Onslow County and home to Marine Corps Base Camp Lejeune and Marine Corps Air Station New River. The City has grown rapidly since 1941, when Camp Lejeune was established (City of Jacksonville 2025). The most common employment sectors for those who live in Jacksonville, NC are Accommodation & Food Services, Retail Trade, and Health Care & Social Assistance (DataUSA 2025). The demographic data for Jacksonville, NC Metropolitan area, reported as percentage and compared to the entirety of North Carolina, is provided in Table 13.

The gross domestic product of the City of Jacksonville in 2023 was \$11,858.614 (in millions of dollars) (FRED 2023). Other key socioeconomic indicators defined by USEPA representing the affected environment include the unemployment rate, low-income rate, and education attainment.

Table 13. Demographic Data for Jacksonville and the State of North Carolina

Area	Population	Population under 18 Years of Age	Population over 65 Years of Age	Minority (reporting other than white alone)	High School Graduates	Veterans
Jacksonville	213,676	24.7% (52,740)	10.8% (22,992)	35.5% (75,763)	94.9% (112,071)	22.6% (27,859)
North Carolina	10.8M	21.4% (2.3M)	17.7% (1.9M)	69.8% (6.3M)	90.6% (6.7M)	7.3% (615,440)

3.15.1.1 Income, Poverty, and Employment

The City of Jacksonville is predominately a military town with multiple Marine Corps installations and is the commercial hub of Onslow County (Military One Source 2025). Jacksonville has two major military installations, including Marine Corps Base Camp Lejeune and Marine Corps Air Station New River, while the state of North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service (Department of Military and Veterans Affairs 2025). As a result, military and defense industries are the second largest employers in the state and the military has an economic impact of \$66 billion annually (Department of Military and Veterans Affairs 2025). Other major industries in the region include health care, government, education, accommodation and food services, management, construction, and sales. Jacksonville has a slightly lower median household income, slightly lower percentage of population below the poverty line, and slightly higher unemployment rate than North Carolina. (U.S. Census Bureau 2023) (Table 14).

Table 14. Regional and State Employment and Income

Area	Number of households	Median Household Income	Population Below Poverty Level	Unemployment Rate
Jacksonville	76,788	\$67,597	11.5% (22,132)	5.1% (2,617)
North Carolina	4.3M	\$70,804	12.8% (1.3M)	3.7% (195,627)

3.15.2 Environmental Consequences

3.15.2.1 Proposed Action

3.15.2.1.1 Construction

Under both Alternative 1 and 2, construction of the Proposed Action would involve the temporary employment of skilled and non-skilled laborers and require materials that may be purchased from local and regional vendors. There would also be an increase in incidental spending by workers on food, lodging, products, and services, but the amount of spending would represent a negligible increase in the overall economic activity in Jacksonville.

Therefore, the construction of the Proposed Action would have a temporary, negligible beneficial impact on socioeconomic conditions in Jacksonville.

3.15.2.1.2 Operation

Under both Alternatives 1 and 2, operation of the Proposed Action would require approximately 500 employees and serve several thousand patients per day. VA would be required to hire new staff to provide medical services at this MSOC. The increase in medical and maintenance staff at the MSOC could result in an increase in incidental spending by workers on services provided within the local community, but the amount of spending would represent a negligible increase in the overall economic activity in Jacksonville.

Therefore, the operation of the Proposed Action would result in a permanent, negligible beneficial impact on socioeconomic conditions in Jacksonville.

3.15.2.2 No Action Alternative

Under the No Action alternative, the site would not be developed for the MSOC and current socioeconomic conditions would continue. Therefore, the No Action alternative would result in no impact on socioeconomic conditions in Jacksonville.

3.16 Potential for Generating Substantial Public Controversy

The Proposed Action is consistent with the state and city's stated missions to support Veterans. At the state level, the NC Department of Military and Veterans Affairs seeks to provide timely and responsive engagement to enhance NC's current military and Veteran friendly environment and to foster and promote business, technology, transportation, education, economic development, and health care for the military and Veteran communities. The state currently ranks among the top 10 destinations in the U.S. for Veterans after their service career (NC DMVA 2024). The City of Jacksonville is home to Marine Corps Base Camp Lejeune, Marine Corps Air Station New River, Camp Johnson, the US Coast Guard Special Mission Training Center, and the Marine Forces Special Operations Command. Jacksonville is also a member of the Military Reunion Network (Jacksonville 2025) and is ranked among the top 10 destinations for Veterans after their service career.

A recent article by U.S. Representative Greg Murphy (NC 3rd Congressional District) in The Daily News (JDNews 2025), describes the plight of a Veteran with multiple medical issues who has faced setbacks due to a shortage of doctors and one clinic's refusal to accept new patients. Rep. Murphy expresses support for enhanced services in Jacksonville stating, "I have worked to secure funding for a new VA clinic in Jacksonville to expand our local resources for Veterans, but there is more to do."

VA has solicited input on the Proposed Action from the public, several federal, state, and local government agencies, and the Tribes with ancestral ties to the area. Several government agencies have provided input; none of the input has identified substantial controversy related to the Proposed Action.

Therefore, the Proposed Action is not anticipated to generate substantial public controversy but is anticipated to receive public support for improving Veterans' timely access to modern, state-of-the-art health care services.

4.0 PROTECTION AND MITIGATION MEASURES

This chapter summarizes the protection and mitigation measures identified throughout Chapter 3 that are incorporated into the Proposed Action, under both Alternatives 1 and 2, to avoid or minimize potential adverse effects. The measures identified in Table 15 would be implemented and maintained by the private entity. These measures would ensure potential impacts remain at less-than-significant adverse levels for all resources, but do not imply that impacts would be significant without these measures. For resources not listed, no measures are identified. Additionally, potentially applicable permits shown in this table are summarized in Appendix A.

Table 15. Measures Incorporated into the Proposed Action to Minimize or Avoid Potential Adverse Impacts

Resource	Minimization and Avoidance Measures
Aesthetics	The private entity would professionally manage the MSOC and the landscaped grounds at the site to maintain its appearance throughout the duration of VA's lease.
Air Quality	Design and operate the MSOC to achieve Green Globes certification. To the extent practicable, for construction equipment greater than 150 horsepower, the private entity would aim to meet USEPA Tier 4 emissions standards, or Tier 3 standards if Tier 4 equipment is not available at the time of construction; tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications; use low-sulfur diesel or biodiesel in construction equipment. The private entity would be responsible to implement any NPDES permit requirements such as dust control measures and off-site sediment tracking.
Wildlife and Habitat	Private entity to implement a time-of-year-restriction on tree clearing, such that clearing may occur without restriction between October 1 and January 31, provided that the private entity ensures surveys for all listed plant species are completed before clearing prior to October 1. Additionally, pre-construction clearance surveys for nesting MBTA birds would be conducted between the months of February and August should construction be proposed to occur during these nesting season months. If a federally listed species is found within the site or is indicated within a one-mile radius of the site, the private entity must contact Eastern North Carolina USFWS, and, if required by USFWS, implement compensatory mitigation.
Wetlands	Private entity would apply for and obtain CWA Section 404 Individual Permit issued by USACE, as well as complete any permit-required mitigation to offset impacts to the wetlands and stream. Concurrently, NCDEQ would review the permit application for a CWA Section 401 WQC.

Resource	Minimization and Avoidance Measures
Geology and Soils	<p>Prior to construction, the private entity would apply for and obtain NPDES CGP; the application would include an Erosion and Sedimentation Control Plan. Private entity would also apply for and obtain City of Jacksonville Stormwater Permit; the application would include a Stormwater Management Plan, Stormwater Pollution Prevention Plan, and Operation and Maintenance Agreement. Private entity responsible for implementing and maintaining permit-required BMPs and stormwater facilities at the site for the duration of VA's lease.</p> <p>Private entity to implement spill and leak prevention and response procedures to reduce the impacts to soils from incidental releases of vehicle fluids (such as diesel or hydraulic fluids), including maintaining a complete spill kit at the site. Report oil spills to VA and the NC Division of Waste Management's Wilmington Regional Office.</p>
Hydrology and Water Quality	<p>To minimize adverse impacts on hydrology and water quality, the private entity would obtain necessary stormwater management permits and implement BMPs such as bio-retention areas, vegetated swales, and retention basins. Private entity would also implement a Spill Prevention, Control, and Countermeasure plan and train workers to handle accidental releases of petroleum-based fluids during construction to avoid impacts to surface water or groundwater.</p>
Land Use	<p>Private entity to comply with City of Jacksonville zoning regulations.</p>
Noise	<p>If necessary during construction, the private entity would use shields or other physical barriers to restrict noise transmission; provide soundproof housings or enclosures for noise producing machinery; use efficient intake and exhaust mufflers on internal combustion engines that are maintained so equipment performs below noise levels specified; conduct truck loading, unloading, and hauling operations so that noise is kept to a minimum; select material transportation routes as far away from sensitive receptors as possible; shut down noise-generating heavy equipment when not in use. Construction will follow the City of Jacksonville noise ordinance which states that construction activities inside the city limits and within 200 feet of a residential dwelling must be conducted Monday through Friday, 6:00 a.m. to 9:00 p.m.; Saturday, 7:00 a.m. to 9:00 p.m.; and Sunday, 8:00 a.m. to 7:00 p.m.</p> <p>Private entity to implement a hearing conservation program when construction worker noise exposure is at or above 85 decibels averaged over 8 working hours, or above 90 dBA over an 8-hour time-weighted average, including providing hearing protection.</p>
Vibration	<p>Potential construction-period vibration impacts would be assessed by the private entity during the final design phase, when construction methods and the locations of specific types of construction equipment have been identified. Measures for reducing vibration impact to sensitive receptors would be considered in the development of construction plans for areas where construction activities causing temporary perceptible vibration could occur.</p>

Resource	Minimization and Avoidance Measures
Solid Waste and Hazardous Materials	Private entity to recycle or reuse construction debris to the maximum extent practicable. Only materials that cannot be reused or recycled would be transported off-site for disposal at a landfill approved for construction debris. All soil that cannot be reused on site would be transported to an appropriate landfill for reuse as fill or daily cover. Solid wastes generated at the MSOC would be disposed of in designated bins and dumpsters and transported and disposed of at a USEPA-licensed disposal facility.
Traffic, Transportation, and Parking	Private entity to obtain and comply with the conditions of a Street and Driveway Access Permit from NCDOT for the proposed entrance along Western Blvd. Private entity to obtain and comply with the conditions of a Driveway Permit from the City of Jacksonville to construct any driveways with a curb cut within the city limits.
Utilities	Private entity to apply for and obtain a permit for work or activity on or crossing any right-of-way to extend utilities. Private entity to design and operate the MSOC to achieve Green Globes certification to ensure efficient use of electricity, water, and sewerage during operation. The private entity would be required to maintain any privately-owned on-site utility infrastructure required to operation of the Proposed Action for the duration of VA's lease.

5.0 PUBLIC PARTICIPATION, COORDINATION, AND CONSULTATION

5.1 Public Involvement

VA initiated the public scoping process for the Proposed Action with publication of a notice in *The Daily News*, a daily newspaper with circulation throughout Jacksonville, announcing the opportunity to provide early input on the Proposed Action. The notice was published on December 5 and 7, 2024. The scoping notice was also published on the VA website at: <https://www.cfm.va.gov/environmental/>. VA also electronically sent the scoping notice to selected federal, state, and local agencies; Native American Tribes; and elected officials to solicit input regarding the scope of the EA and environmental issues for in-depth analysis. Appendix E contains all public engagement materials.

VA is publishing this Draft EA for a 30-day public review and comment period. A notice of availability (NOA) of the Draft EA is being posted in *The Daily News*. The NOA explained how to obtain the Draft EA electronically from the VA website at <https://www.cfm.va.gov/environmental/> and in print at the Jacksonville Main Library, 58 Doris Avenue East, Jacksonville, NC 28540. VA also electronically sent the NOA to federal, state, and local agencies, Tribes, and community stakeholders, to solicit input on the Draft EA. The NOA explained that comments on the Draft EA are to be sent to vacoenvironment@va.gov. VA will summarize and address substantive comments in the Final EA.

5.2 Consultation and Stakeholder Coordination

5.2.1 Consultation

On February 21, 2025, VA initiated Section 106 consultation with the NC SHPO, the Catawba Indian Nation, Onslow County Museum, Onslow County Planning Department, Jacksonville Planning and Inspections, and the Swansboro Historic District Commission. See Section 3.6 for more information and Appendix C for copies of all Section 106 correspondence.

VA consulted with the USFWS Raleigh, NC field office and the NCNHP to confirm affect determinations and measures to avoid impacts to federal and state-listed species. See Section 3.4 for detailed information and Appendix D for copies of USFWS and NCNHP correspondence.

5.2.2 Stakeholder Coordination

VA electronically sent scoping notices and the NOA for the Draft EA to the agencies, Tribes, elected officials, and potentially interested parties listed below. Appendix D contains copies of comments received and a summary of responses to comments.

5.2.2.1 Federal Agencies

- U.S. Environmental Protection Agency, Region 4
- U.S. Department of Agriculture, Natural Resource Conservation Service

5.2.2.2 State Agencies

- NC Department of Environmental Quality
- NC Department of Transportation
- NC Department of Natural and Cultural Resources - Division of Historical Resources
- NC Department of Military and Veterans' Affairs
- NC Division of Coastal Management

5.2.2.3 City Agencies

- City of Jacksonville Mayor Sammy Phillips

5.2.2.4 Federally Recognized Tribe with Interests in Onslow County, NC

- Catawba Indian Nation (Catawba Indian Tribe of South Carolina)

5.2.2.5 Environmental Organizations

- NC Conservation Network
- EarthShare NC
- NC Climate Solutions Coalition

5.2.2.6 Veteran Organizations

- VFW Post 9133 Jacksonville Post
- Veterans Foundation of NC
- NC Military Affairs Commission
- NC State Veterans Affairs Commission

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Degree: M.S. Environmental Management
Years of experience: 3

7.0 REFERENCES CITED

- Braun, E. Lucy. 1950. "Deciduous Forests of Eastern North America." Blakiston, Philadelphia.
- Census Reporter. 2024. "Jacksonville, NC - ACS 2023 1-year ." *Census Reporter*. Accessed January 7, 2025. https://censusreporter.org/profiles/16000US3734200-jacksonville-nc/#:~:text=Veteran%20status%20*%20about%20the%20same%20as,double%20the%20rate%20in%20North%20Carolina:%207.3%25.
- City of Jacksonville. 2025. *About Jacksonville*. January. <https://www.jacksonvillenc.gov/847/About-Jacksonville#:~:text=Jacksonville%20is%20also%20a%20%E2%80%9CTree,tourism%20destination%20in%20the%20state>.
- City of Jacksonville. 2024. *Chapter 5 - Building and Construction, Article II - Technical Codes, Division 1. Generally, Section 5-22. - Construction Hours*. Jacksonville, June 12. https://library.municode.com/nc/jacksonville/codes/code_of_ordinances?nodeId=CO_CH5BUCO_ARTIITECO_DIV1GE.
- . 2025. *ETJ Reduction 2020*. January. <https://jacksonvillenc.gov/879/ETJ-Reduction>.
- CNET. 2025. *Best Internet Providers in Jacksonville, North Carolina*. February 22. <https://www.cnet.com/home/internet/best-internet-providers-in-jacksonville-nc/>.
- DataUSA. 2025. *Jacksonville, NC - Economy, Employment, and Industries*. January. <https://datausa.io/profile/geo/jacksonville-nc/#industries>.
- Department of Military and Veterans Affairs. 2025. *Military Bases in North Carolina*. <https://www.milvets.nc.gov/benefits-services/military-bases-north-carolina>.
- Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual, Table 7-1, Construction Equipment Noise Emission Level. FTA Report No. 0123. September*. Washington, D.C.: US Department of Transportation, Federal Transit Administration.
- FEMA. 2005. "FEMA Flood Map Service Center." *Federal Emergency Management Agency*. November. Accessed January 2025. <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>.
- Fenneman, Nevin. 1938. *Physiography of the Eastern United States*. New York: McGraw-Hill.
- Fine, Jason M. 2008. *Hydrogeologic Framework of Onslow County, North Carolina*. USGS North Carolina Water Science Center.
- FRED. 2023. "Total Gross Domestic Product for Jacksonville, NC (MSA) ." *Federal Reserve Economic Data*. Accessed January 7, 2025. <https://fred.stlouisfed.org/series/NGMP27340>.
- FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual, Table 7-1, Construction Equipment Noise Emission Level. FTA Report No. 0123. September*. Washington, D.C.: US Department of Transportation, Federal Transit Administration.

- GBI. 2025. "Green Globes Certification." *Green Building Initiative*. <https://thegbi.org/greenglobes/>.
- Griffith, Glenn. 2002. *Ecoregions of South Carolina*. Corvallis: U.S. Department of Agriculture, Natural Resources Conservation Service.
- Jacksonville. 2025. "Driveway Permit." *City of Jacksonville*.
<https://www.jacksonvillenc.gov/DocumentCenter/View/2272/Driveway-Permit?bidId=>.
- . 2025. "Permits, Forms & Manuals." *City of Jacksonville*. <https://jacksonvillenc.gov/382/Permits-Forms-Manuals>.
- . 2024. "Unified Development - Adopted April 22, 2014 (Last Amended on November 2024)." *City of Jacksonville*. November. <https://www.jacksonvillenc.gov/DocumentCenter/View/850/Unified-Development-Ordinance-Amended-November-2024?bidId=>.
- . 2025. "Visit Jacksonville - Military Reunions." *Jacksonville Tourism Development*.
<https://visitjacksonvillenc.com/154/Military-Reunions>.
- JDNews. 2025. "How the VA's community care network is failing our heroes by U.S Rep. Gregory Murphy 3rd Congressional District." *Jacksonville Daily News*. January 27.
https://www.jdnews.com/opinion/columns/how-the-va-s-community-care-network-is-failing-our-heroes/article_9c0ec53c-8113-5d05-a6ae-07591a829f42.html.
- JOED. 2020. "Vision 2025: A Five-Year Strategic Initiative to Spur Economic Growth and Improve Quality of Life in Onslow County." *Jacksonville Onslow Community Development*.
https://joednc.com/wp-content/uploads/2024/06/JOED-VISION-2025-8_27-High-Rez.pdf.
- Military One Source. 2025. *Military Installations - MCAS New River*. March 10.
<https://installations.militaryonesource.mil/in-depth-overview/mcas-new-river>.
- NC DEQ. 2013. "Erosion and Sediment Control Planning and Design Manual." *NC Department of Environmental Quality*. Accessed December 31, 2024. <https://www.deq.nc.gov/energy-mineral-and-land-resources/land-quality/erosion-and-sediment-control-planning-and-design-manual/chapter-6/e-sc-manual-chapter-6-complete-rev-may-2013/download>.
- . 2013. "Erosion and Sediment Control Planning and Design Manual." *North Carolina Department of Environmental Quality*. <https://www.deq.nc.gov/about/divisions/energy-mineral-and-land-resources/erosion-and-sediment-control/erosion-and-sediment-control-planning-and-design-manual>.
- . 2025. "NPDES Construction Program." *NC Department of Environmental Quality*.
<https://www.deq.nc.gov/about/divisions/energy-mineral-and-land-resources/stormwater/stormwater-program/npdes-construction-program>.
- . 2025. "Online GIS 12 Digit HUC Subwatersheds." *NC Department of Environmental Quality*.
<https://data-ncden.opendata.arcgis.com/datasets/ncden::12-digit-huc-subwatersheds-1/explore?location=34.797794%2C-77.415883%2C15.72>.

- NC DMVA. 2024. "NC DMVA Resource Guide 2024/25." *NC Department of Military and Veteran Affairs*.
<https://www.milvets.nc.gov/documents/files/dmvaresourceguide-202425pdf/open>.
- NC DOT. 2025. "Street and Driveway Access Permit Application." *NC Department of Transportation*.
<https://connect.ncdot.gov/municipalities/Utilities/EncroachmentForms/Street-and-Driveway-Access-Permit-Application.pdf>.
- NCDEQ. 2025b. *North Carolina Aquifers*.
<https://www.ncwater.org/?page=525#:~:text=The%20block%20diagram%20to%20the,be%20salt%20in%20that%20aquifer>.
- . 2015. *Physiographic Provinces of North Carolina*. September 29. Accessed January 2025.
<https://ncdenr.maps.arcgis.com/apps/MapSeries/index.html?appid=1316f4eb4e3349298c3bd0063ab8fb89>.
- NCDWM. 2012. "Quick Reference: Illegal Dumping." *NC Division of Waste Management*. May. Accessed January 2025. <https://www.deq.nc.gov/waste-management/dwm/sw/field-operations/illegal-dumping/one-sheet-illegal-dumping-may-2012-final/download#:~:text=Construction%20&%20Demolition%20Waste:%20Separate%20into,solely%20from%20land%20clearing%20activities>.
- NCGS. 1985. *Geologic Map of North Carolina. Department of Natural Resources and Community Development*. Raleigh: North Carolina Geological Survey. Department of Natural Resources and Community Development.
- Onslow. 2011. "Solid Waste Management Ordinance of the County of Onslow, North Carolina." *Onslow County*. <https://www.onslowcountync.gov/DocumentCenter/View/2185/Solid-Waste-Management-Ordinance->.
- OSHA. 2022. "OSHA Technical Manual (OTM) Section III: Chapter 5." *Occupational Safety and Health Administration*. July 6. <https://www.osha.gov/otm/section-3-health-hazards/chapter-5>.
- Thorbury, William. 1965. *Regional Geomorphology of the United States*. New York: John Wiley.
- Transportation Research Board. 2022. "Highway Capacity Manual, 7th Edition."
- TTG. 2025. *Traffic Impact Analysis for the Jacksonville NC Multi-Specialty Outpatient Clinic. Completed for the U.S. Department of Veterans Affairs*. November. Traffic Impact Analysis, Baltimore: The Traffic Group, Inc.
- U.S. Census Bureau. 2023. *American Community Survey 1-year estimates. Retrieved from Census Reporter Profile page for Virginia Beach City, Virginia*. Accessed January 7, 2025.
<https://censusreporter.org/profiles/05000US51810-virginia-beach-city-va/>.
- USEPA. 2025. *North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants*. January 31. Accessed January 2025.
https://www3.epa.gov/airquality/greenbook/anayo_nc.html.

- USFWS. 2024. "Endangered Species Act Section 7 Consultation." *U.S. Fish and Wildlife Service*.
<https://www.fws.gov/service/esa-section-7-consultation>.
- . 2024. "Information for Planning and Consultation (IPaC)." *U.S. Fish and Wildlife Service*. Accessed
October 10, 2024. <https://ipac.ecosphere.fws.gov/>.
- USGS. 2024. "Groundwater Levels for the Nation." *United States Geological Survey*.
https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=344746077260101.
- . 2024. "Groundwater Levels for the Nation." *United States Geological Survey*.
https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=344734077254601.
- Ward, Lauck W., David R. Lawrence, and Blake W. Blackwelder. 1979. "Stratigraphic revision of the middle
Eocene, Oligocene, and Lower Miocene; Atlantic Coastal Plain of North Carolina. U.S. Geological
Survey Bulletin. 1457-F: 10-13." <https://pubs.usgs.gov/bul/1457f/report.pdf>.

Appendices

Appendix A. Permits

Appendix B. USDA AD-1006 Prime Farmland Form

Appendix C. NHPA Section 106 Consultation

Appendix D. Regulatory Agency Correspondence

Appendix E. Public Engagement