



**Final
Environmental Assessment for the
Establishment of a Fiscal Year 2010
Department of Defense Elementary
School at
Fort Stewart, Georgia**

Environmental Division,
U.S. Army Garrison, Fort Stewart, Georgia

and

U.S. Army Corps of Engineers
Savannah District, Georgia

March 2010

FINDING OF NO SIGNIFICANT IMPACT (FNSI)

1.0 INTRODUCTION

The United States Army (Army) has prepared an environmental assessment (EA) to identify and evaluate potential environmental effects that would result from construction and operation of an elementary school at Fort Stewart, Georgia.

2.0 DESCRIPTION OF THE PROPOSED ACTION

The Army proposes to construct and operate an additional elementary school within the Installation boundaries of Fort Stewart, Georgia. The school would be constructed and operated by the Department of Defense Education Activity (DoDEA) to accommodate the existing and anticipated future on-Post population of children between 5 and 11 years of age (grades kindergarten through 6). Construction of the school would begin in 2010 with a completion date in 2011.

The elementary school is to be composed of general classrooms, art, music, and computer labs, a gymnasium, multi-purpose room with stage and kitchen, specialist rooms, information center, administrative offices, teacher workrooms, and supply/storage rooms. Exterior areas shall include playground/sports facilities. The elementary school is designed to provide safe and secure, indoor and outdoor activity areas that meet Georgia Department of Education (GDE) standards as well as DoD and Army requirements, as applicable.

Inside the school, intrusion detection and video surveillance systems, advanced and general communications systems, energy monitoring and control systems, and air conditioning would be installed. Heating would be provided by a self-contained system. Supporting infrastructure includes utility lines, access roads, security buffers, parking, sidewalks, curbs and gutters, storm drainage, and landscaping for a total of about 22 acres.

3.0 DESCRIPTION OF THE ALTERNATIVES

Following application of screening criteria for siting of the facility, the Army determined that there were five action alternatives and the no-action alternative. The alternative sites are located within the Installation cantonment area. All of the alternatives are currently undeveloped wooded areas. Alternative A would be located between Austin Road and Murray Avenue. Alternative B is located along the Installation boundary west of 15th Street, adjacent to access control point (ACP) Gate 7. The Alternative C location is south of the intersection of FS 47 and Harmon Avenue, northeast of East 16th Street. The site is south of the Harmon Avenue shoppette and ACP and within the vicinity of Southern Oaks residential development. Alternative D would establish the elementary school southeast of Highway 144 and northeast of Dirt Road. Under Alternative E the elementary school would be established on the north side of Coe Road and adjacent to the National Guard Motorpools along Ricker Road. Under the no-action alternative, Fort Stewart would not construct a new elementary school on the Installation.

4.0 ANTICIPATED ENVIRONMENTAL EFFECTS

Under the proposed action the following impacts would occur at Fort Stewart:

- Alternatives A, B, D and E would result in minor impacts to land use, recreational use, and visual impacts. Although located in the designated cantonment perimeter, Alternatives B and D require official land use transfer from training to Family housing through the AR-350-19 process. Potentially significant impacts to land use would occur under Alternative C due to the proposed extension of the existing runway at Wright Army Airfield (WAAF) and Zone III Noise Level associated with National Guard training adjacent to Alternative C; therefore Alternative C is not recommended to be carried forward.
- Minor, short-term impacts to surface water quality would be expected under all action alternatives due to potential for sedimentation during construction.
- Minor wetland impacts would occur under Alternatives B and D that would require mitigation through the Fort Stewart Mitigation Bank.
- Moderate impacts/incompatibilities under Alternative D would occur due to its location within the 100-year floodplain.
- Minor impacts to native vegetation and wildlife would occur under any of the five action alternatives.
- No major impacts to protected species or sensitive habitat would occur under any of the alternatives.
- Potential to impact archaeological, historical, or traditional resources may occur with Alternatives A, C, and E as these sites have not been surveyed for archaeological, historical, or traditional resources. For Alternative D there is one known historic site, but impacts to this site would be minor as it has been determined to be not eligible for listing in the NRHP and is not a protected site. No eligible historic or architectural resources would be impacted under Alternative B or the No Action Alternative.
- For all action alternatives, minor, short-term noise increases, which would not result in any adverse impacts, would occur from construction activities.
- No significant transportation impacts are expected from any of the proposed alternatives.
- Moderate potential impacts to safety are possible under Alternatives B and D if the AR-350-19 process to officially re-designate former training lands as cantonment is not complete prior to further planning or construction activities. Moderate potential impacts to safety are anticipated under Alternative B if Gate 7 is not closed to commercial access and the Mobile Vehicle and Cargo Inspection System (MVACIS) is not moved or its evacuation arc mitigated. Under Alternative C aircraft overflight could introduce potential safety impacts during aircraft arrival and/or departure.

- Alternatives A, B, D, and E and the no-action alternative would not present any significant short- or long-term impacts when considered cumulatively, for all resource categories.
- Alternatives A, B, D, and E may result in potential direct or indirect effects on water resources, soils, biological resources, land use, noise, and safety, so these resources are further analyzed in the cumulative effects section of the EA. The proposed action would have negligible impacts on ground water quality, water use and supply, wastewater, air quality, hazardous and toxic materials, and solid waste, transportation, socioeconomics, environmental justice, and protection of children (with the exception of Alternative C). The proposed action would not present major impacts when considered cumulatively with other projects in the area.

In accordance with 32 CFR Part 651.15, the Army must indicate if any mitigation measures would be needed to implement the proposed action or any alternative selected as the preferred alternative under this environmental assessment. For purposes of this EA, it was determined that no mitigation measures would be required with Alternatives A or E, unless cultural resources are found to occur at either site.

Additional mitigation measures (beyond adherence to Federal and state requirements and permits) would be needed to arrive at a FNSI for Alternatives B and D due to wetlands. Wetlands have been delineated within Alternatives B and D sites; as such, any jurisdictional wetlands that could not be avoided would need to be offset using the Fort Stewart Mitigation Bank. Safety issues associated with the proximity of Alternative B to Gate 7 and its associated MVACIS would occur under Alternative B. Under Alternative B, the ACP would either need to be closed to commercial traffic and the MVACIS moved to a location where the evacuation safety arc would not conflict with school operation, or the system's safety arc would need to be mitigated in such a manner to not require the school's evacuation in an emergency event. Alternatives B and D will need to complete the AR-350-19 process in order to be safely cleared of potential munitions contamination and appropriately re-designated from training lands to Family housing. Alternative C cannot be mitigated in any way that would render it a viable option and thus has been eliminated from consideration.

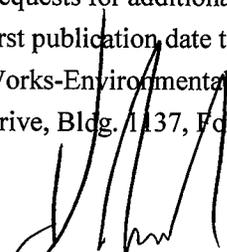
5.0 CONCLUSION

Following an evaluation and comparison of impacts, Alternative A would result in the least impacts to the human and natural environment. If the mitigation measures are applied and Alternative C is eliminated, an Environmental Impact Statement is not required for any of the alternatives. In addition, through this analysis it is recommended that Alternative A is best able to support the required criteria for the proposed action (size, within cantonment perimeter, community support facilities, vehicular and pedestrian circulation, existing utilities, no-to-negligible wetland and other environmental concerns, and avoidance of training area and noise impacts). The remaining alternatives are not as suited to the required criteria as Alternative A, but (with the exception of Alternative C) are viable options: Alternative D avoids training and noise impacts, and Alternative E avoids environmental issues. Alternative B is also a viable option with minimal impacts to both the natural and human environment.

6.0 PUBLIC AVAILABILITY

The EA and FNSI for this proposed action are available for public inspection at the following public libraries: (1) 1LT George P. Hays Library, Building 411, 316 Lindquist Road, Fort Stewart, GA; (2) Liberty County Public Library, 236 Memorial Drive, Hinesville, GA; (3) Mall Branch Library, 7 Mall Annex, Savannah, GA; and (4) Southwest Chatham Branch Library, 14097 Abercorn Street, Savannah, GA.

Requests for additional information or submittal of written comments may be made within 30 days after first publication, date to Fort Stewart and 3rd Infantry Division (Mechanized), Directorate of Public Works-Environmental Branch, ATTN: Ms. Amber Franks or Ms. Katrina Epps, 1550 Frank Cochran Drive, Bldg. 1137, Fort Stewart, Georgia 31314.



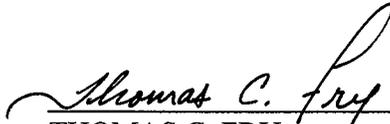
KEVIN W. MILTON
Colonel, US Army
Commanding

Date: 21 APR 10

In compliance with the National Environmental Policy Act of 1969

ENVIRONMENTAL ASSESSMENT
for
THE ESTABLISHMENT OF A FISCAL YEAR 2010 ELEMENTARY SCHOOL
AT FORT STEWART, GEORGIA

Environmental Review:



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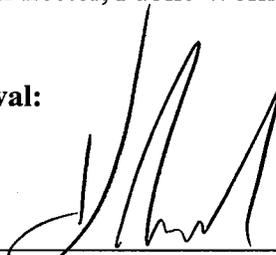
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Colonel, US Army
Commanding

Date: 21 APR 10

**Final Environmental Assessment for the
Establishment of a Fiscal Year 2010 Department of Defense Elementary School at Fort Stewart,
Georgia**

Lead Agency: Army at Fort Stewart

Title of the Proposed Action: Elementary School Construction on Fort Stewart

Affected Jurisdictions: State of Georgia

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ABSTRACT

The United States Army proposes to construct and operate one additional elementary school (grades kindergarten through 6) on a 22 acre parcel at Austin Road within the installation boundaries of Fort Stewart, Georgia. The school would be constructed and operated by the Department of Defense Education Activity to accommodate the 450 children between 5 and 11 years of age that comprise existing overflow and anticipated increase of the on-Post student population.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This Environmental Assessment (EA) provides an analysis of the potential impacts on the natural and human environment that would result from constructing and operating an elementary school on Fort Stewart lands. The school would accommodate the growing population of elementary school-aged children at Fort Stewart. The elementary school would provide education and recreational areas for approximately 450 elementary school children. Approximately 22 acres would be needed to accommodate the school/administrative rooms, associated access roads, parking areas, and activity fields. Five possible alternative locations were identified and all are located within the cantonment perimeter on Fort Stewart property. The no-action alternative and its environmental effects also are considered in this document.

Following an evaluation and comparison of impacts, Alternative A – Austin Road would result in the least impacts to the human and natural environment and thus is the preferred alternative for locating the new elementary school. (Although, the area still requires survey to ensure the absence of cultural resources and thus impacts to these resources are possible.)

Alternative site B – 15th Street, although within proximity to training and industrial zones, could be implemented with little impact to the human and natural environment. This alternative will become a viable option when the Gate 7 commercial vehicle entrance and supporting Mobile Vehicle Access Control Investigation System equipment are relocated (or the evacuation arc mitigated) and if the proposed action is implemented in such a manner that results in no net losses to wetlands. Additionally, although within the cantonment perimeter, Alternative B would require official landuse designation change from training to Family housing through AR-350-19 to ensure the absence of explosive ordinance (EOD) and other munitions constituents of concern.

Alternative site C – Southern Oaks is was found not to be an acceptable alternative due to safety and noise impacts associated with its proximity to the Wright Army Airfield (WAAF) runway extension and Accident Potential Zone (APZ) 2. This alternative is also within proximity of training and industrial zones. This site has also not been surveyed for cultural resources, so there is potential for Alternative C to present impacts to cultural resources as well.

Road access and school design may potentially impact wetlands in Alternative D – Dirt Road; thus, Alternative D may also be a viable option, but wetlands would need to be delineated, avoided, and associated mitigations employed. Alternative D also would require additional planning and construction mitigation measures as it is located within the 100-year floodplain. Additionally, although within the cantonment perimeter, Alternative D would require the completion of official landuse designation change from training to Family housing through AR-350-19 to ensure the absence of EOD and other munitions constituents of concern.

Alternative E is next to the National Guard motorpool, which may lead to possible noise impacts and other incompatibility issues. Alternative E has also not been surveyed for cultural resources so there is a potential for impacts to cultural resources at this location.

None of the alternatives would contribute significantly to cumulative degradation of any resources that may also be impacted by other Fort Stewart projects currently planned to occur or that have occurred within geographical proximity to the proposed action.

Table ES-1 presents a summary comparison of potential impacts between these alternatives.

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Size (Acres)	<ul style="list-style-type: none"> • 20 – plus 2 from National Guard • Tank trail relocation 	<ul style="list-style-type: none"> • 22 	<ul style="list-style-type: none"> • 22 • Plus access road 	<ul style="list-style-type: none"> • 22 • Plus less than 2.5 for access road 	<ul style="list-style-type: none"> • 22 • Plus access road 	N/A	N/A
Water Resources							
Surface Water Quality	<ul style="list-style-type: none"> • Minor potential increase in sedimentation impacts during construction if local, state, and Federal regulations are not met • No impacts from school operation due to LID BMPs • Potential for sedimentation and pollution impacts through continued use of tank trail along drainage 	<ul style="list-style-type: none"> • Minor potential increase in sedimentation impacts during construction if local, state, and Federal regulations are not met • No impacts from school operation due to LID BMPs 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in sedimentation impacts from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts remain cumulatively minor if local, state, and Federal regulations are met and LID BMPs are applied for all new projects
Stormwater	<ul style="list-style-type: none"> • Stormwater systems would not be impacted through construction or operation. • Estimated net increase of approximately 9.5 acres of impervious surface 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Stormwater systems would not be impacted through construction or operation. • Estimated net increase of greater than 9.5 acres of impervious surface 	<ul style="list-style-type: none"> • Same as Alternative C 	<ul style="list-style-type: none"> • Same as Alternative C 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in stormwater impacts from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts may be reduced if all new projects prioritize reduction of impervious surface and LID BMPs in design plans

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Wetlands	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor (0.71 acres of projected wetlands impacts based upon existing delineations) wetland impacts from facility construction if management practices and mitigation measures not applied 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor (3.13 acres of projected wetland impacts using NWI wetland mapping) wetland impacts from facility and access road construction if management practices and mitigation measures not applied. A field-based wetland delineation has not been performed for this location 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • The overall cumulative effects of development on Fort Stewart have been significant to wetlands resources but remediated through Cannonchee Creek Restoration Mitigation Bank. • The proposed action does not significantly contribute to wetlands losses in the region
Floodplains	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Located within 100-year floodplain with a potential for future flooding 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts
Biological Resources	<ul style="list-style-type: none"> • Minor impacts to vegetation and wildlife due to loss of vegetation and habitat and increased fragmentation • No impacts to protected species 	<ul style="list-style-type: none"> • Minor impacts to vegetation and wildlife due to loss of vegetation and habitat and increased fragmentation • No impacts to protected species 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Incremental loss of wooded area and habitat, as well as continued forest fragmentation, as rise in cantonment construction activity accommodates growing Fort Stewart population • Focus on infilling cantonment perimeter will reduce cumulative habitat loss and fragmentation

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Soils	<ul style="list-style-type: none"> • Potential short-term minor impacts to soils due to land disturbance during construction • If local, state, and Federal BMPs and LID practices are met then no impacts would result from construction or operation • Potential for erosion impacts through continued use of tank trail along drainage 	<ul style="list-style-type: none"> • Potential short-term minor impacts to soils due to land disturbance during construction • If local, state, and Federal BMPs and LID practices are met then no impacts would result from construction or operation 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in soil disturbance, compaction, hard-covering, erosion and loss of productivity from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts may be reduced if all new projects prioritize reduction of impervious surface and LID BMPs in design plans
Human Environment							
Hazardous and Toxic Materials and Waste	<ul style="list-style-type: none"> • Negligible impacts for construction and operation due to strict adherence to applicable regulations for handling, storing, and disposing hazardous and toxic materials and waste, and because such materials, if used, will be used in minute quantities. 	<ul style="list-style-type: none"> • Same as Alternative A • Potential short-term minor impact due to the possibility that EOC and other munitions constituents of concern may be discovered as training area D-1 is officially transferred to cantonment designation through AR-350-19 process 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Same as Alternative A • Potential short-term minor impact due to the possibility that EOC and other munitions constituents of concern may be discovered as training area A-20 is officially transferred to cantonment designation through AR-350-19 process 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • No impact 	<ul style="list-style-type: none"> • No impact

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Land Use, Recreation, and Visual Resources	<ul style="list-style-type: none"> • Minor impact from redesignation of land use from forested to Family housing • No impact to recreational opportunities • Minor impact to visual resources 	<ul style="list-style-type: none"> • Minor impact from redesignation of land use from forested to Family housing • Minor impact to recreational opportunities • Minor impact to visual resources • Possible conflict with nearby training area and requires transfer from Training Area D-1 designation to cantonment area through the AR-350-19 process 	<ul style="list-style-type: none"> • Significant adverse impact from redesignation of land use from forested to Family housing due to proximity of WAAF runway extension and APZ 2. • No impact to recreational opportunities • Minor impact to visual resources • Possible conflict with nearby training area 	<ul style="list-style-type: none"> • Similar to Alternative A • Lands currently designated as part of Training Area A-20 and must complete AR-350-19 process to be re-classified as cantonment area. 	<ul style="list-style-type: none"> • Similar to Alternative B 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Potential impacts to mission through continued loss of training areas to accommodate rise in Installation population • Continual infilling of forested parcels with buildings may cumulatively reduce the overall visual quality of the cantonment as construction occurs
Cultural Resources	<ul style="list-style-type: none"> • Survey would need to be conducted to ascertain whether historical, archaeological or traditional resources are impacted. 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Minor impacts due to potential impact of known but ineligible site for the NHRP 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts from Alternatives B and D • If cultural resources were found to occur at Alternatives A, C, or E they would be managed in accordance with Fort Stewart policy; thereby, there would be minor-to-negligible impacts to cultural resources from rise in cantonment construction activity to accommodate growing Fort Stewart population

Alternatives A, B, D, and E may result in potential direct or indirect effects to water resources, soils, biological resources, land use, noise, and safety, and these resources are further analyzed in the cumulative effects section of the EA. The proposed action would have negligible impacts on ground water quality, water use and supply, wastewater, air quality, hazardous and toxic materials, and solid waste, transportation, socioeconomics, environmental justice, and protection of children (with the exception of Alternative C). The proposed action would not present major impacts when considered cumulatively with other projects in the area because the alternative sites are not large enough to negatively impact the identified resources.

Following an evaluation and comparison of impacts, Alternative A – Austin Road would result in the least impacts to the human and natural environment, although an additional two acres of land would need to be acquired from the existing lease with the Georgia National Guard. In addition, as a result of the application of screening criteria and subsequent environmental analysis detailed in this EA, Alternative A is best able to support the required criteria for the proposed action (size, community support facilities, vehicular and pedestrian circulation, existing utilities, no-to-negligible wetland and other environmental concerns, and avoidance of training and noise impacts). The remaining alternatives are not as suited to the required criteria as Alternative A, but (with the exception of Alternative C – Southern Oaks) are viable options. Alternative B – 15th Street is would result in minimal impacts to both the natural and human environment, Alternative D – Dirt Road avoids training and noise impacts, and Alternative E – National Guard avoids environmental issues. Both alternatives B and D are located along the cantonment perimeter and are currently designated as training areas and require clearance through the AR-310 process to be re-classified as cantonment areas. Alternative C was discovered to not be a viable option for the location of an elementary school due to its proximity to the WAAF runway extension and APZ 2.

The no-action alternative would not result in ground disturbance or vegetation removal associated with the proposed action alternatives; however, the population growth at Fort Stewart would still require building a new elementary school to accommodate the increased number of students moving into the area.

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CHAPTER 1
PURPOSE AND NEED FOR
THE PROPOSED ACTION

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Proposed Action

The United States Army (Army) proposes to construct and operate an additional elementary school within the Installation boundaries of Fort Stewart, Georgia. The school would be constructed and operated by the Department of Defense Education Activity (DoDEA) to accommodate the existing and anticipated future on-Post population of children between 5 and 11 years of age (grades kindergarten through 6). Construction of the school would begin in 2010 with a completion date in 2011.

The elementary school is to be composed of general classrooms, art, music, and computer labs, a gymnasium, multi-purpose room with stage and kitchen, specialist rooms, information center, administrative offices, teacher workrooms, and supply/storage rooms. Exterior areas shall include playground/sports facilities. The elementary school is designed to provide safe and secure, indoor and outdoor activity areas that meet Georgia Department of Education (GDE) standards as well as DoD and Army requirements, as applicable.

Inside the school, intrusion detection and video surveillance systems, advanced and general communications systems, energy monitoring and control systems, and air conditioning would be installed. Heating would be provided by a self-contained system. Supporting infrastructure includes utility lines, access roads, security buffers, parking, sidewalks, curbs and gutters, storm drainage, and landscaping for a total of about 22 acres.

Appendix A provides a list of acronyms identified in this EA.

1.2 Purpose and Need for the Proposed Action

There is currently a deficit of one elementary school at Fort Stewart, Georgia. The Fort Stewart population has continued to grow over the past six years, due in part to the Army's Transformation and Growth and Force Structure Realignment initiatives (Army 2002 and 2007). The Installation has already seen 15 re-stationing actions of company-sized units. There are long waiting lists for Family and community services, and facilities for youth services are all over-full and exceeding design capacity.

Originally, two DOD elementary schools were added to the Future Years Defense Plan (FYDP) for Fiscal Year (FY) 10, but if Fort Stewart does not need to support a new brigade, one additional school will meet the current and reasonably foreseeable student demand. Currently operational, on-Post DoD elementary schools include Kessler, Brittin, and Diamond Elementary, all educating kindergarten through 6th-grade students living on-Post (Figure 1-1). Fort Stewart currently has 2,074 enrolled elementary school students and a facility capacity of 1,890 students. Consequently, the Installation presently has a deficit of 184 spaces for elementary students. If on-Post housing occupancy increases as projected (from 89% to 97%), Fort Stewart will require an additional 166 elementary-level spaces. Under a special agreement with Liberty County, all Fort Stewart 6th graders (approximately 170 students) will attend the new Liberty County Middle School. Despite the busing of 6th graders to Liberty County Middle school, and since trends have shown a general increase in Soldiers and their Family Members each year, Fort Stewart

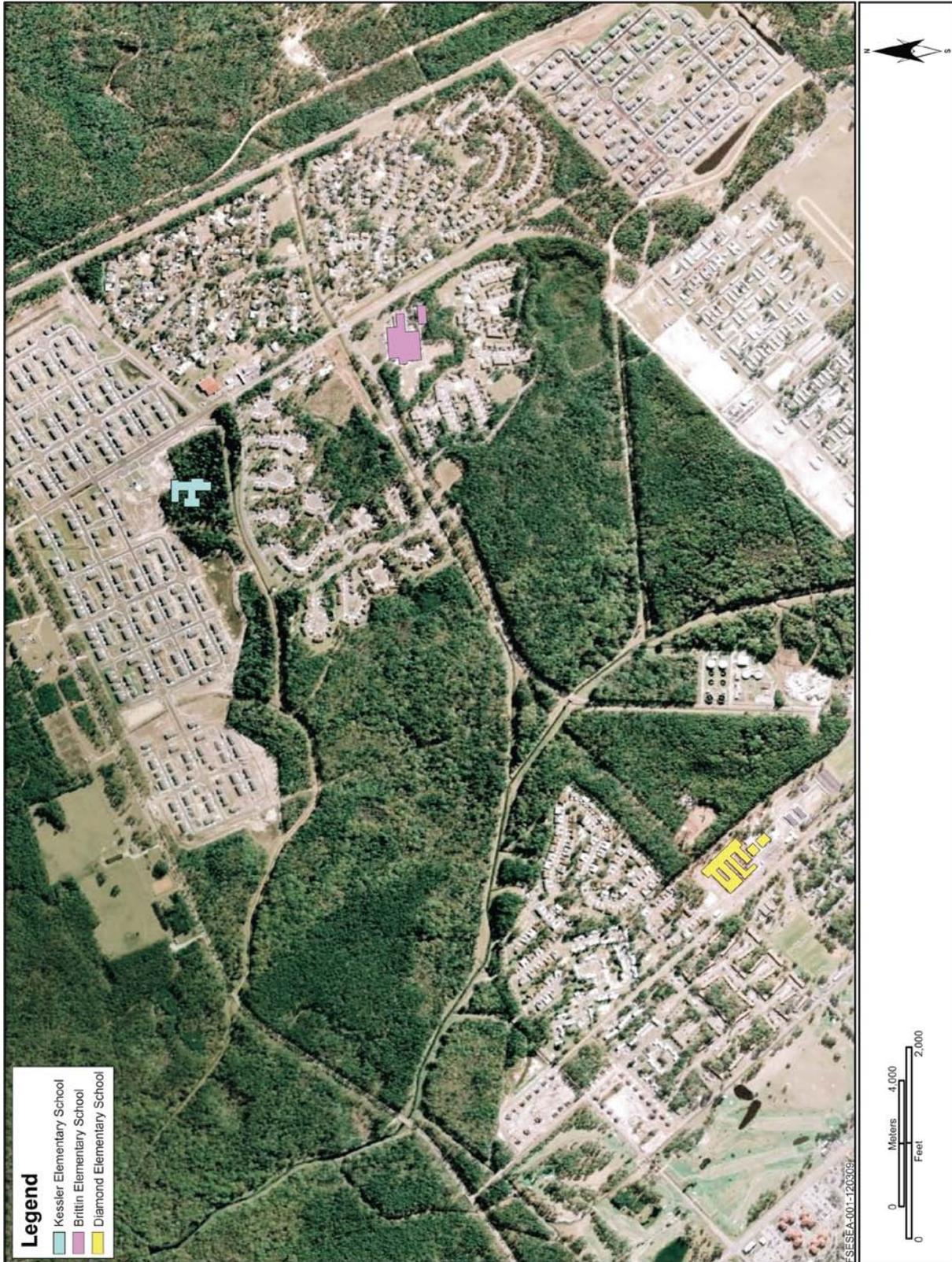


Figure 1-1 Elementary Schools Currently Operating On Fort Stewart, GA

1 would design and construct an elementary school to support 450 students to meet current and anticipated
2 demand.

3 The need for the proposed action is driven by the desire for a safe and efficient educational facility that
4 meets DoD certification, as well as Army and GDE standards, as applicable. To meet the need of the
5 proposed action, the Army analyzed five alternative locations and a no-action alternative.

6 **1.3 Location of the Proposed Action**

7 Fort Stewart occupies about 279,200 acres in southeast Georgia. Established in 1940, it is the home of
8 the 3rd Infantry Division (Mechanized). Installation lands comprise portions of Bryan, Evans, Liberty,
9 Long, and Tattnall Counties. Georgia Highways 119 and 144 intersect just north of the main cantonment
10 area. Highway 119 traverses the middle of Fort Stewart from north to south; Georgia 144 runs east to
11 west through the Installation. The main cantonment area is in the south-central portion of the Installation,
12 adjacent to the City of Hinesville in Liberty County. The Ogeechee River borders the northeastern
13 boundary of the Installation, and the Canoochee River flows through the Installation. A regional map is
14 included as Figure 1-2.

15 The City of Savannah is located 40 miles northeast of the cantonment area. Other metropolitan areas near
16 Fort Stewart include Jacksonville, Florida, 105 miles south; Macon, Georgia, 135 miles west; and Atlanta,
17 Georgia, 250 miles northwest. Cities and towns in the immediate area include: Hinesville, adjacent to the
18 Main Gate (Liberty County); Midway, 10 miles southeast of the Main Gate (Liberty County);
19 Walthourville and Allenhurst, about 6 miles southwest of the Main Gate (Liberty County); Glennville, 22
20 miles west-northwest of the Main Gate (Tattnall County); Pembroke, 22 miles north of the Main Gate
21 (Bryan County); and Richmond Hill, 20 miles east of the Main Gate (Bryan County).



1

2

Figure 1-2 Installation Location Map

1 **1.4 Environmental Compliance and Decision to be Made**

2 This EA has been prepared to identify, evaluate, and compare the potential environmental effects of
3 constructing an elementary school on Fort Stewart property and provides the environmental analysis
4 needed for an informed decision on construction of the facility.

5 This EA is prepared in accordance with the requirements of the National Environmental Policy Act
6 (NEPA); Council on Environmental Quality (CEQ) regulations implementing NEPA; and Army NEPA
7 Regulation 32 Code of Federal Regulations (CFR) Part 651, *Environmental Analysis of Army Actions*.
8 CEQ regulations implementing NEPA are contained in Title 40 CFR Part 1500-1508, *Council on*
9 *Environmental Quality*. In general, the CEQ regulations require that, early in the planning process for
10 any major action, the Federal agency must evaluate the proposal’s potential environmental effect as well
11 as notify and involve the public in the agency’s decision-making process.

12 Also in accordance with NEPA, this EA identifies the potential environmental effects of the proposed
13 action and alternatives, and contains discussions of any mitigation and permit requirements, findings, and
14 conclusions. Such information provides the basis for the agency to determine whether to prepare an
15 Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FNSI). The use of the
16 term “significant” (and derivations thereof) in this EA is consistent with the definition and guidelines
17 provided in the CEQ regulations (40 CFR 1508.27), which require consideration of both the context and
18 intensity of impacts.

19 Finally, this EA will address sustainable community principles and energy alternatives as required in all
20 NEPA documentation by Executive Order 13514, *Federal Leadership in Environmental, Energy, and*
21 *Economic Performance* (5 Oct 2009), in the relevant sections to follow.

CHAPTER 2
DESCRIPTION OF THE PROPOSED
ACTION AND ALTERNATIVES

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter describes the five proposed alternative sites to build and operate a new elementary school on Fort Stewart. The elementary school would provide educational facilities and recreational areas for up to 450 students, ages approximately 5 to 11 years old.

2.1 Alternative Identification Process

Identification of proposed action alternative locations involved reviewing the existing Fort Stewart site plan to make best use of available land, while minimizing environmental and mission impacts. In addition, the following specific criteria were applied to further refine the choice of alternative locations:

- **Size** – a minimum of 22 acres to support the school as well as provide on-site playgrounds and sports facilities; landscaping; parking space; vehicular and pedestrian circulation, including separated parent and bus entrances and loading/unloading zones; and security buffers.
- **Community Support Facilities** – must be adjacent to Family/community support facilities, such as Child Development Center (CDC) or School Age Centers.
- **Vehicular and Pedestrian Circulation** – roads and sidewalks must be available to provide bus, POV, and pedestrian access from across the Installation. Also, the site must be located within the cantonment area on-Post, i.e., avoid the need for going through Access Control Points (ACP) and/or long commutes.
- **Existing Utilities** – existing or easy availability of communication, electric, potable water, and sewage services.
- **Wetland/ Environmental Concerns** – avoid impacting wetlands, as well as threatened and endangered species, known cultural resources, and identified contaminated areas.
- **Training Area Impacts** – avoid impacting training lands. This criterion includes avoiding encroachment over or flanking training area boundaries.
- **Noise Impacts** – avoid locating near areas with activities that produce noise levels that are incompatible with classroom and outdoor student activities. While avoidance of Noise Zone Level II areas was not possible because the entire cantonment area is found within this zone, the Army did locate sites as far as possible from active weapons ranges.

By applying the above criteria, Fort Stewart determined that five alternative locations could best accommodate the proposed action. Table 2-1 provides the results of Fort Stewart's site analysis through applying these criteria. The number 5 is applied if the site most ideally met the criteria, while one represents the least favorable site for that particular criterion. The numbers were then totaled to identify the most favorable alternative in terms of meeting the selection criteria.

Table 2-1 Alternative Selection Criteria Application

	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>
Within Cantonment Area	5	3	5	3	5
Existing Community Support Facilities	5	1	3	3	3
Vehicular and Pedestrian Circulation	5	5	3	3	1
Utilities	3	3	3	3	3
Wetland Concerns	5	3	5	3	5
Training Area Impacts	5	5	3	5	5
Noise Impacts	5	3	1	5	3
TOTAL	33	23	23	25	25

- If site is within cantonment area, score 5; if within designated cantonment perimeter but requires official classification as cantonment, score 3; and if located outside of designated cantonment perimeter, score 1.
- If Family/community facilities are available, score 5; if some are near, score 3; and if not available, score 1.
- If vehicular circulation can be easily provided, score 5; if added to and modified, score 3; if must be new, score 1.
- If utilities are readily accessible, score 5; if minimal access to existing connections, score 3; if non-accessible, score 1.
- If no wetland concerns, score 5; if mitigation is required, score 3; if major impacts, score 1.
- If site has no impact on training areas, score 5; if minimal impact, score 3; if major impact, score 1.
- If existing adjacent operations have no significant noise level, score 5; if minimal noise impact, score 3; if major impact, score 1.

The minimum acreage requirement in Georgia for an elementary school is 5 acres plus one acre for each 100 children in full-time enrollment (GDE 2008). For the purposes of this proposed action, a minimum of 9.5 acres is required by the state of Georgia, and all action alternatives meet this requirement. In developing the site selection alternatives, a parcel size of 22 acres was determined by Fort Stewart to be optimal to meet the needs of an on-Installation elementary school. Although minimum acreages are established, larger parcels are highly desirable and necessary as Fort Stewart also provides community support facilities within close proximity to student or housing centers. This concept is part of sustainable and pedestrian-friendly community design and meets the intent of EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* and Fort Stewart master planning and Sustainability Management System initiatives. Figure 2-1 shows the geographic relationship of all the action alternative locations to each other and the southern portion of the greater cantonment area.

Based on the results of the matrix and application of the defined selection criteria, Alternative A is identified as the Preferred Alternative.

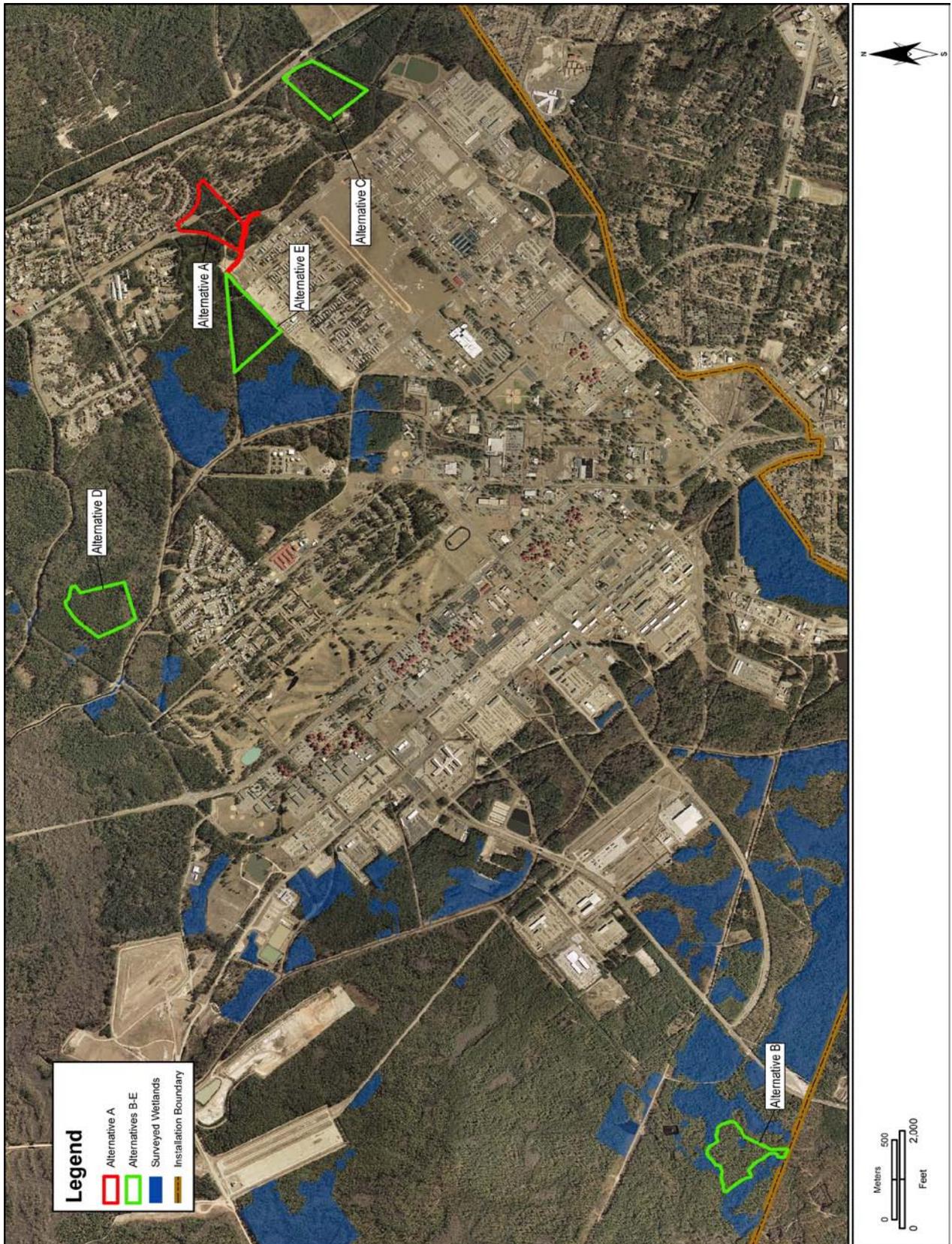


Figure 2-1 Geographic Relationship of Action Alternatives

2.2 Alternative A: Austin Road

Under Alternative A the site for the elementary school would be located between Austin Road and Murray Avenue (Figure 2-2). The site is within the cantonment area and ACP and meets Force Protection Requirements.

Advantages of the site include existing utility and road access availability. The site is centrally located and surrounded by cantonment areas, making walking to the school an advantageous element to this alternative. Additionally, this location is across the street from the CDC and avoids environmental impacts as addressed in Chapter 4 of this document.

The disadvantage of this site is that it is currently only 20 acres, falling two acres short of meeting the optimal 22 acre size target established by Fort Stewart. However, an agreement with the National Guard is being proffered that will provide these needed two acres to the Elementary School. It is not expected that these additional acres will be directly developed upon; rather, they will be used by the school for passive recreational use. A tank trail that is perpendicular to Murray and Austin Roads and bisects the parcel will be relocated to the west along East 16th Street North.

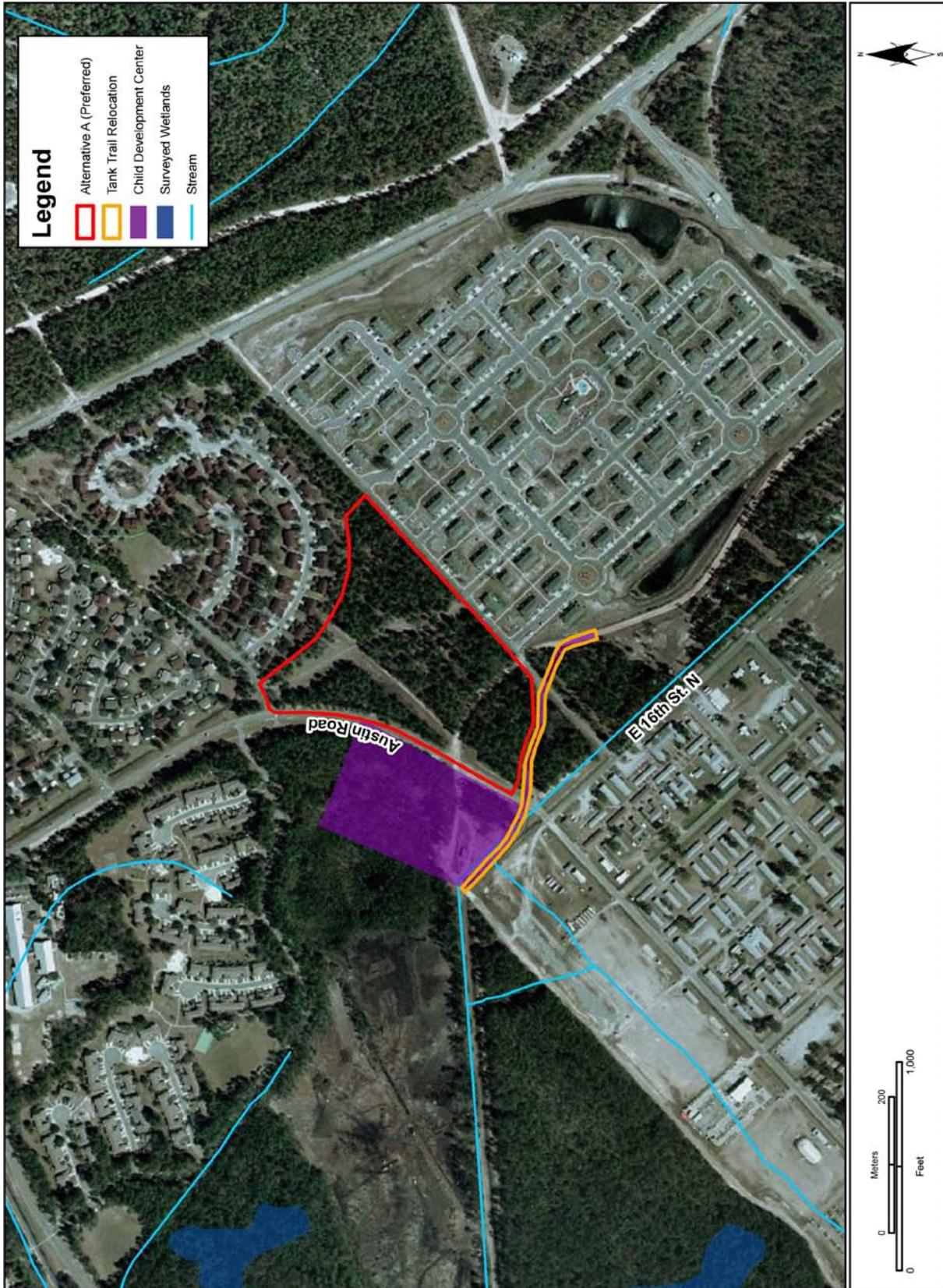


Figure 2-2 Alternative A - Austin Road Proposed Location

2.3 Alternative B: 15th Street

Under Alternative B the site for the elementary school would be located on the west side of 15th Street, behind and adjacent to the proposed location for the approved but currently unfunded Liberty County Middle School (Figure 2-3). The planned Liberty County Middle School is located on government property, but will be under a long-term lease with Liberty County. The site is within the cantonment perimeter and ACP and meets Force Protection Requirements.

Advantages of the site include the size as well as existing utility and road access availability. Although no community support facilities are currently located within close proximity to this site, the site is large enough to also accommodate one School Age Center for children 6 to 10 years old. Additionally, Fort Stewart will establish a vehicular and pedestrian network for Liberty County Middle School and the surrounding area as development occurs.

Disadvantages of this site include land use, location, wetlands impacts, and noise. The site is within the designated cantonment perimeter area, but is currently listed as training area D-1 and would need to be officially reclassified as cantonment prior to any further planning or construction activity. The site is not currently near other Family Housing Areas on-Post, thereby necessitating that students be bused to and from the location. While not immediately adjacent to the proposed Alternative B site, there are motor pools and military facilities approximately 1 mile to the northeast. Also, this site is adjacent to training areas and an abandoned tank trail that may lead to possible noise impacts and other incompatibility issues. A fence would be erected around the school to discourage access to adjacent training areas so security would not be an issue.

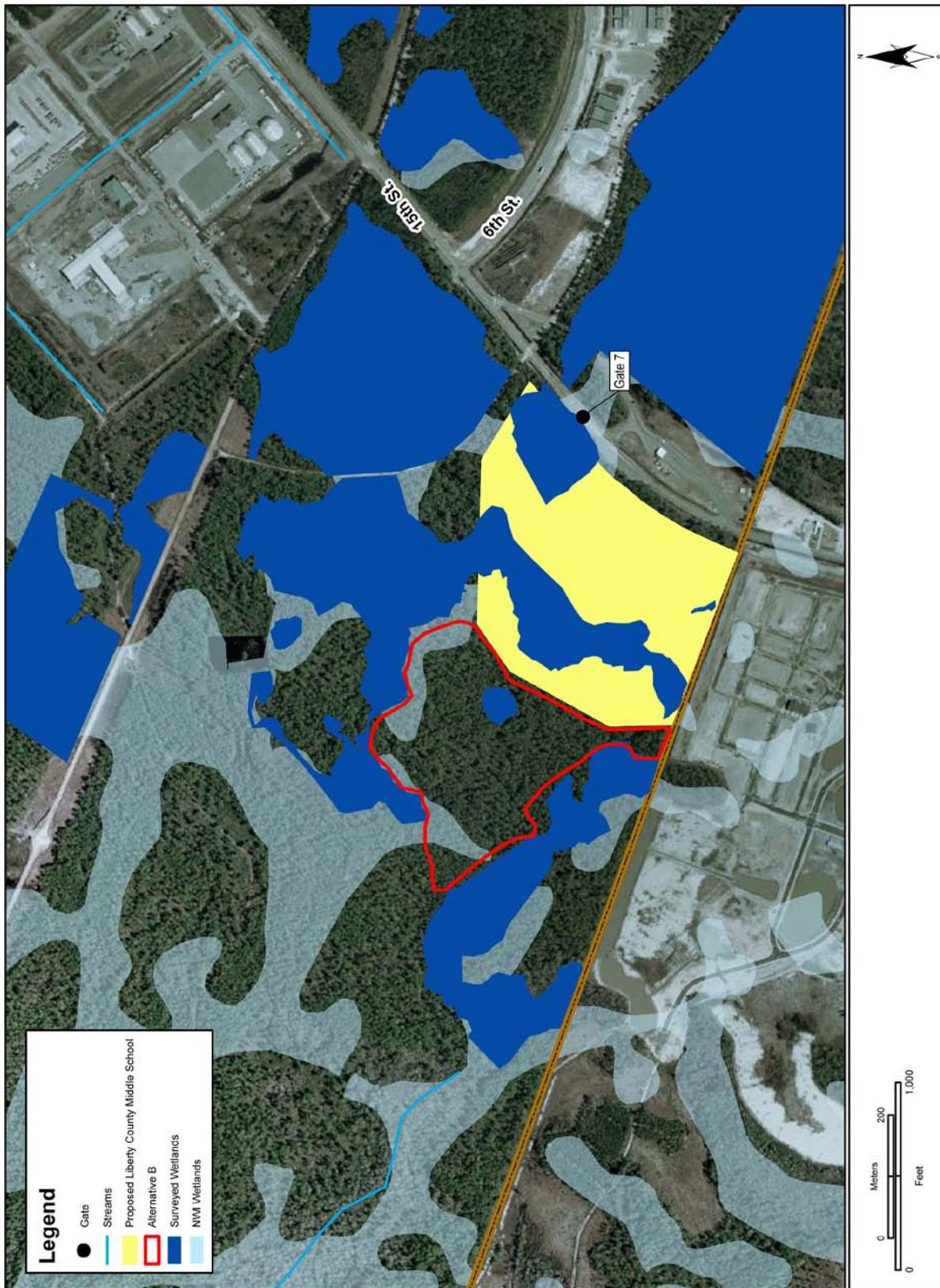


Figure 2-3 Alternative B - 15th Street Proposed Location

2.4 Alternative C: Southern Oaks

Under Alternative C the site for the elementary school would be located south of the intersection of Fort Stewart Road 47 and Harmon Avenue, northeast of East 16th Street. The site is south of the new Harmon Avenue shoppette and ACP and within the vicinity of Southern Oaks residential development (Figure 2-4). This alternative is within the cantonment area and ACP and meets Force Protection Requirements.

Advantages of the site include the size and location, as well as existing utility availability. Although no community support facilities are currently located within close proximity to this site, the site is big enough to also accommodate one School Age Center for children 6 to 11 years old. Additionally, the site is near other Family Housing Areas on-Post. The Southern Oaks site avoids wetlands altogether and has no other environmentally sensitive areas of concern.

Disadvantages of this site include location and noise. Although the site is near some Family Housing Areas on-Post, other students would need to be bused to and from the location and a road would be required to access the site. Also, this site is immediately adjacent to the newly expanded National Guard Training Center (NGTC) boundary, training and industrial zones, a tank trail, and future runway clearance for Wright Army Airfield (WAAF) that may lead to possible noise impacts and other incompatibility issues.



Figure 2-4 Alternative C - Southern Oaks Proposed Location

2.5 Alternative D: Dirt Road

Alternative D would establish the elementary school southeast of Highway 144 and northeast of Dirt Road (Figure 2-5). The site is within the cantonment perimeter area and ACP and meets Force Protection Requirements.

Advantages of the site include size, existing utility availability, and location. Although no community support facilities are currently located within close proximity to this site, the site is also big enough to accommodate one School Age Center for children 6 to 11 years old. It is within walking distance to existing Family Housing Areas (as well as potential Family Housing Area expansion) and addresses student overflow issues at Kessler Elementary School.

Disadvantages to the Dirt Road site are land use changes and wetlands concerns. The site is within the designated cantonment perimeter area, but is currently listed as Training Area A-20 and is in the process of official reclassification to cantonment. Additionally, an access road would need to be constructed, affecting an additional 2.5 acres of land that would further increase NWI wetlands impacts. Alternative D it is located within a floodplain, and there would be additional costs incurred for construction and operation of the building.

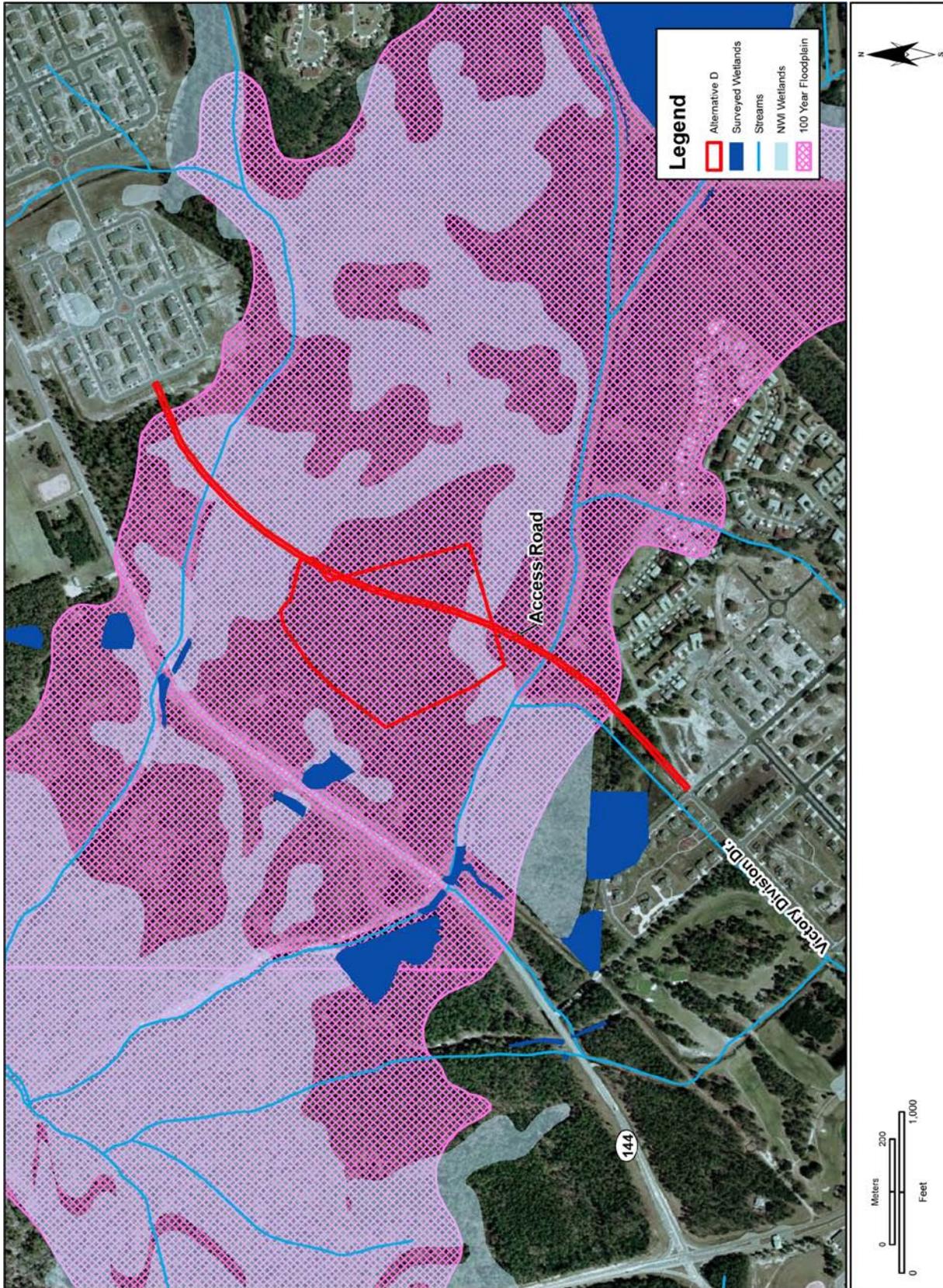


Figure 2-5 Alternative D - Dirt Road Proposed Location

2.6 Alternative E: National Guard

Under Alternative E the elementary school would be established on the north side of Ricker Avenue and adjacent to the National Guard Motorpools along Ricker Avenue (Figure 2-6). This alternative is within the cantonment area and ACP and meets Force Protection Requirements.

Advantages of the site include the size, location, and existing utility availability. The site is near other Family Housing Areas on-Post, and, although no community support facilities are currently located within close proximity to this site, it is adjacent to the planned location of a new Youth Center with a multipurpose field, a modular CDC, and a permanent CDC.

The National Guard site completely avoids wetlands, and there are no floodplains or other natural or cultural resource issues apparent at the site.

Disadvantages of this site include access and location. Although the site is near some Family Housing Areas on-Post, other students would need to be bused to and from the location and a road would be required to access the site. Additionally, the site is adjacent to single soldier housing areas and training and industrial zones, including the National Guard motorpool, which may lead to possible noise impacts and other incompatibility issues.



Figure 2-6 Alternative E - National Guard Proposed Location

2.7 No-Action Alternative

Under the no-action alternative, a new elementary school would not be constructed on Fort Stewart property and the current facilities would continue to be over capacity and thereby outside of GDE, DoD, and Army standards.

2.8 Other Alternatives Considered

Other alternatives that were considered but found to be insufficient and therefore not carried forth for further analysis include two no-build options that would make use of the existing elementary school facilities and footprint. The first option would be to renovate the existing elementary schools and/or construct a permanent annex in a way as to provide no less than 10 additional classrooms (assuming an average of 20 children per class). A second no-build option would be the Installation of mobile trailers, again, no less than 10 would be needed to meet the current demand of 184 students.

Neither of these options is carried forth for further analysis because, although there may be sufficient space in designated school properties to meet the current demand, there is not enough space to amend current facilities in the existing footprint to meet the reasonably foreseeable future growth projections and associated child service needs at Fort Stewart. Land used for out-buildings or reconstruction activities would encroach upon outdoor school requirements, such as playgrounds, sports fields, and parking lots. These options do not provide the most efficient and comfortable learning environment for students, and likewise mobile or prefabricated structures would consume more natural resources being separated from and built with less efficient construction material as a permanent school structure.

CHAPTER 3
AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

Analysis Approach

NEPA requires focused analysis of the areas and resources potentially affected by an action or alternative, and an EA should consider, but is not required to analyze in detail, those areas or resources not potentially affected by the proposal. Therefore, an EA should not be encyclopedic; rather, it should be succinct and to the point. Both description and analysis in an EA should provide sufficient detail and depth to ensure that the agency (i.e., the Army) took a hard look at the proposal and the potential impacts it might have on the human and natural environment. NEPA also requires a comparative analysis that allows decision makers and the public to differentiate among the alternatives. This EA focuses only on those environmental resources that would be affected by the establishment of an elementary school at Fort Stewart.

CEQ and Army regulations (40 CFR Parts 1500-1508 and 32 CFR 651, respectively) for NEPA also require an EA to discuss impacts in proportion to their significance and present only enough discussion of non-significant issues to show why more study is not warranted. The analysis in this EA considers the current conditions of the affected environment and compares those to conditions that might occur should the Army implement any one of the five action alternatives or the no-action option.

Affected Areas

Although the five alternative locations for the proposed action are in different areas in or directly adjacent to the already occupied and built-up southern portion of the Installation, the affected environment is expected to be similar for all action alternative sites. Due to its limited geographic scope and locally isolated environmental interactions, the proposed action would potentially affect only a small portion of Fort Stewart (22 out of 280,000 acres of the Installation). As such, the affected environment is grouped together rather than separated by alternative.

Resources Analyzed

Table 3-1 presents the results of the process of identifying resources to be analyzed in this EA. A total of 14 resource categories were evaluated for their potential to be impacted by the proposed action: 1) water resources (including surface and ground water quality, water use, wetlands, wastewater, and stormwater); 2) soils; 3) biological resources (including vegetation and wildlife and protected species); 4) air quality; 5) hazardous and toxic materials and waste; 6) utilities (power, communications, sewage, and solid waste); 7) land use, recreation, and visual resources; 8) cultural resources; 9) noise; 10) transportation; 11) public health and safety; 12) provision for the handicapped; 13) socioeconomics and environmental justice; and 14) protection of children.

Resources Eliminated from Further Analysis

Table 3-1 presents the results of a screening analysis to identify resources to be analyzed in this EA. Consideration was given to each resource and it was noted if the resource would be potentially impacted

by construction and/or operation of the proposed action. If a resource experiences a minor impact it was considered “not impacted,” and justification for those decisions follows the table.

Table 3-1 Resources Analyzed to Determine Further Evaluation

Categories/Resources	Construction	Operation
Natural Environment		
Water Resources		
Surface Water Quality	Yes	Yes
Ground Water Quality	No	No
Stormwater	Yes	Yes
Wetlands	Yes	Yes
Water Use	No	No
Wastewater	No	No
Floodplains	Yes	Yes
Soils	Yes	No
Biological Resources		
Vegetation and Wildlife	Yes	Yes
Protected Species*	No	No
Air Quality	No	No
Human Environment		
Hazardous and Toxic Materials and Waste	Yes	No
Utilities (power, communications, sewage, solid waste)	No	No
Land Use, Recreation, and Visual Resources	Yes	No
Cultural Resources	Yes	No
Noise	No	Yes
Transportation	No	No
Public Health and Safety	Yes	Yes
Provision for the Handicapped	No	No
Socioeconomics and Environmental Justice	No	No
Protection of Children	No	No

** Although it has been determined that the proposed action will have no impacts on these resources, the resource itself demands a more detailed analysis than some of the others listed in the Table. Thus, although no impacts have been found to occur to these resources, they will still be analyzed in detail and the results presented in Chapter 4.*

Water Resources (ground water quality, water use and supply, and wastewater). There would be no impact from construction or operation activities to ground water quality due to the nature of the construction and future building operation, the locations of the proposed alternatives with respect to groundwater resources, and the strict adherence to Installation construction Best Management Practices (BMPs). Likewise, construction activities will not impact water use and supply or wastewater resources. Because there are no expected impacts, the analysis of ground water quality is therefore eliminated from further consideration in this EA.

The Upper Floridan aquifer provides most of the fresh water for cities and communities throughout southeastern Georgia. Water service to the main cantonment area is provided from five wells with a combined maximum rated capacity of 6.7 million gallons per day (mgd). Water service is provided to outlying areas by 10 additional wells. Fort Stewart permitted drinking water capacity is 4.5 mgd with a

current use of 2.7 mgd. The Georgia Department of Natural Resources (GA DNR) Environmental Protection Division has identified Fort Stewart as one of the top 10 water users in the southeastern region of Georgia (Army and USACE 2008).

Fort Stewart operates an Industrial Wastewater Treatment Plant that treats a monthly average of 0.50 mgd with a monthly maximum of 1.50 mgd of wastewater in accordance with a National Pollutant Discharge Elimination System (NPDES) permit (issued by Georgia). It currently treats 0.29 mgd and removes all regulated constituents to below permit limits (Army and USACE 2008). The Installation is tied into and uses the Hinesville Wastewater Treatment Plant. By agreement, Fort Stewart can generate a maximum of 3.79 mgd of wastewater. Fort Stewart's average daily flow into the wastewater treatment plant for Calendar Year 2009 was 2.17 mgd (Norby 2009). Water and wastewater services for the school's operation would be supplied by Fort Stewart, which is ultimately obtained from and returned to the Ogeechee River watershed.

Under all alternatives, providing water use to supply 450 students, staff, operations, and landscaping for 8-hour days, 9 months a year would constitute a negligible increase as compared to water resources consumed across the Installation and would not increase to an extent that would be considered significant or outside of the delivery capability of existing infrastructure. For schools with a cafeteria only (no gym or showers), EPA estimates that wastewater generation is 15 gallons per student per day, i.e. 6,750 gallons a day for a school with 450 students (EPA 2002). Additionally, water use would be reduced through the Installation of Low Impact Development (LID) technologies, such as low-flow fixtures, and implementation of conservation practices, such as appropriate regional landscaping. The LID measures and current landscaping guidelines will be part of the final planning and design for the proposed action (Fort Stewart 2008b). Because there would be a negligible increase in water use and wastewater generation, and LID technologies and conservation practices would greatly diminish the water required by school operations, there would be no significant impact to water use or wastewater services.

Air Quality. Only 22 acres of land would be disturbed during land clearing activities, which could result in the temporary production of large-particulate matter (PM10) in the form of dust. Construction equipment emissions are not expected to degrade regional air quality. The production of fugitive dust emissions would be short-term and would not degrade local air quality. Following construction, several new busses would be required to service student transportation at regular routes throughout the Installation; however, these busses would service the growing student population regardless of the construction of a new elementary school and would likely just be shifted from current routes to accommodate the new school location. As such, further analysis of air quality is not required and has been eliminated from further consideration in this EA.

In addition, Fort Stewart is actively engaged in monitoring and reducing on-Post Greenhouse Gas (GHG) Emissions. While the school will include a computer lab and air conditioning systems, the technology procured to equip these needs will be new and low- to no-GHG impact. A GHG Study is currently underway at Fort Stewart, and its results are not expected to be impacted by the construction or future daily operations of the elementary school.

Utilities. Construction of an elementary school on Fort Stewart property would not affect utilities (power, communication, sewage, and solid waste) availability or service. Utility use would increase, but not to such an extent that cannot be provided through existing suppliers and infrastructure. Existing utilities are readily available to all of the alternative locations. Locally compatible utility lines would be extended to connect the school with the existing grid, and all utilities would be supplied from on-Post utility networks. All cantonment areas use electricity supplied from Canoochee Electric Membership Corporation (EMC) as the main power source with diesel-powered generators used for emergency situations. Fort Stewart would be responsible for supplying, maintaining, and paying for all requisite utilities at the school.

In accordance with EO 13423 *Strengthening Federal Environmental, Energy, and Transportation Management*; The Energy Independence & Security Act of 2007; EO 13514, *Leadership in Environmental, Energy, and Economic Performance*; and the Leadership in Energy and Environmental Design (LEED) Implementation Guide (USACE 2008), Fort Stewart will employ efficient, low-energy use appliances, fixtures, and practices throughout the new facility as well as consider alternative energy sources as available and applicable. The Army ensures implementation of LEED practices through the Bid-Design proposal process by requiring contractors to list which LEED measures will be implemented in their proposals. These measures are itemized in the bid, and the proposals are awarded points for incorporation of the LEED features – the proposal with the highest number of points wins the bid. The latest, mandatory set of energy conservation tools and recommendations will be incorporated into the final planning and design of the proposed action (DoD 2008).

Solid waste generation specific to typical elementary school activity is conservatively estimated to be three pounds per child per week (City of NY 2001). For the proposed action, less than approximately 1,350 pounds of solid waste would be expected from 450 students through weekly school operations. Additionally, rather than being sent to an off-Post landfill, much of this solid waste would be diverted to the Fort Stewart recycling program (12 February 2007, Policy Memorandum #8, *Command Recycling Program*). Under Fort Stewart policy, Army personnel, on-Post housing and other community members, and contractors are required to actively participate in the recycling program. Recyclable items include paper, cardboard, metals, glass, plastic, electronics, and printer cartridges, and materials are turned in to the Installation recycling facility for processing. The school's interior will have designated trash and recycling collection amenities, including means to collect and separate used cooking oil at the cafeteria. The proposed action will include the construction of gated, segregated dumpster pads facilitating trash collection for offsite disposal (including a safe receptacle for used cooking oil from cafeteria operations) and collection of recyclable items.

In general, the provision of utilities services, including resource consumption and disposal, would not be affected by the new elementary school, and no further analysis of utility resources is carried forward in this EA.

Transportation. Transportation resources refer to the infrastructure and equipment required for the movement of people, manufactured goods, and raw materials in geographic space. For purposes of this EA, transportation resources surrounding Fort Stewart are the focus of the analysis.

GDE guidelines for school site selection recommend avoiding sites adjacent to heavily traveled streets and highways. The site should also be accessible to community services needed by the school and be appropriately located with respect to the population to be served (GDE 2008).

The region of influence for transportation includes gates, access points, and on- and off-Post roads since these elements could be potentially impacted by increased traffic from both school construction and its operation. Under Alternative A, Austin Road is the primary access route to the proposed school where transportation could be affected. Under Alternative B, 15th Street constitutes the area where transportation could be affected. For Alternatives C, D, and E access roads and circulation routes would need to be constructed. Outside of the proposed access routes, the existing collector roads that may be affected through the proposed action are Harmon Avenue and Highway 144 for Alternative C, and Ricker Avenue and Austin Road for Alternative E. The access road associated with Alternative D would extend Victory Division Drive to directly link the school with local housing areas on the northeast and southwest borders. For all alternatives, no ACPs or off-Post roadway systems would be impacted after construction activities were complete.

For construction activities, traffic at ACPs may be slowed as construction equipment and materials are brought into the Installation. Additionally, construction of the access roads required as part of Alternatives C, D, and E, may alter or slow short-term traffic flow at the new intersections with existing roads.

With the exception of Alternative B, all alternatives are located in proximity to housing areas on secondary, low-traveled roadways, meaning short bus trips and that at least a portion of the students could walk to school. Additional school busses would be on the roads at regular morning and afternoon schedules, but the occurrence of these busses is not expected to influence vehicular volume or flow in comparison to existing on-Post traffic.

In general, transportation would not be affected by the new elementary school, and no further analysis of transportation resources is carried forward in this EA.

Provision for the Handicapped. The Americans with Disabilities Act guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications. Construction of the elementary school would conform with and enforce this Act and any other Federal and state disability regulations; thus this provision has been eliminated from further analysis in this EA.

Socioeconomics/Environmental Justice. Socioeconomics focuses on the general features of the local economy that could be affected by the proposed action alternatives. Completion of this 22-acre construction project, initial landscaping, and some ongoing school maintenance would be accommodated by a private contractor. Various ongoing facility and road maintenance activities would be provided by

Fort Stewart Logistics Division's existing workforce. Few to no new jobs would be created in association with this project. In addition, construction materials, if available and purchased locally, may result in a temporary, minor increase within the local economy. However, conventional or green-designated construction materials and operations products (paper, landscaping products, parks and recreation products, etc.) would need to meet the requirements of EO 13101, *Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*. Following construction, the new school would hire new employees as needed, which would result in a minor employment opportunity increase in the regional economy. However, the regional population demographics are not expected to change and the small scale of the proposed construction expenditures would not result in noticeable regional direct or indirect effects. As such, this resource has been eliminated from further discussion.

Environmental justice compliance is prescribed by EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. This policy directive to Federal agencies outlines appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects to the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Because the proposed locations would not be built in areas supporting a disproportionate amount of low-income or minority populations or support operations that could affect these populations, environmental justice has been eliminated from further analysis.

Protection of Children. Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires each Federal agency to identify and assess environmental health and safety risks that may disproportionately affect children and ensure that the agency address these disproportionate risks to children. Environmental health and safety risks are those which are attributable to products or substances a child is likely to come into contact with or to ingest. As was mentioned for hazardous materials, any substances stored or used onsite that may pose a risk will be secured and access tightly controlled. In addition, construction activities would ensure that health and safety risks would be negligible or non-existent.

3.1 Affected Environment

All of the proposed alternative locations are on Fort Stewart property and involve up to 22 acres of land disturbed by the school's construction, subsequent operation, sports activities, perimeter fencing, and road access. The affected environment for Alternative A - Austin Road, is found on the east side of Austin Road across the street from the existing modular and new permanent CDC building (Figure 2-2). Under Alternative B - 15th Street, the school site would be located west of 15th Street near ACP Gate 7 (about 3 miles west of Hinesville city center) and behind the planned location for the Liberty County Middle School (Figure 2-3). Alternative C - Southern Oaks is located southwest of the intersection of Harmon Avenue and Fort Stewart Road 47 (Figure 2-4). Alternative D - Dirt Road is located west of Highway 144 and north of Victory Division Drive (Figure 2.5). Alternative E, the National Guard site, is located north of and adjacent to Ricker Avenue and the National Guard Motorpools (Figures 2-6). Alternatives C, D, and E would also require the construction of access roads that would serve the school and its

associated facilities, and access roads are thereby accounted for in the affected environment of these three alternatives.

3.1.1 Water Resources

Water resources analysis for this EA focuses on surface water quality, stormwater, floodplains, and wetlands in the Fort Stewart portion of the Canoochee/Ogeechee watershed potentially impacted by the proposed alternative sites. The Clean Water Act (CWA) of 1972 is the primary Federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the Nation's waters. Jurisdictional waters of the U.S. are regulated resources and are subject to Federal authority under Section 404 of the CWA. This term is broadly defined to include navigable waters (including intermittent streams), impoundments, tributary streams, and wetlands.

Surface Water Quality

Fort Stewart's surface water resources are diverse and include over 265 miles of freshwater rivers, streams, and creeks, numerous ponds and lakes, and over 12 miles of brackish streams (Fort Stewart 1999). The majority of the surface waters of Fort Stewart are part of the Ogeechee River drainage system, which forms parts of the eastern boundary of the Installation. The Canoochee River is the main tributary of the Ogeechee and bisects Fort Stewart. Unlike the Ogeechee River, the Canoochee River has not developed large natural levees; thus, the floodplain is generally narrow, with little lateral migration of the stream channel. Portions of the Canoochee on the Installation are being restored for the Fort Stewart wetlands mitigation banking project. Taylor's Creek is a tributary of this system and also runs through the Installation, as well as Savage Creek, Malden Branch, and Clyde Creek.

Taylor's Creek, below the Hinesville/Fort Stewart municipal wastewater treatment plant, was previously listed on the GAEPD 303(d) list of impaired streams for lead, copper, and mercury (EPA 2000). Taylor's Creek has also been identified as not meeting dissolved oxygen (DO) standards (GAEPD 2008). A Total Maximum Daily Load (TMDL) standard has been developed for lead, copper, and mercury as well as DO on Taylor's Creek, and the segment was delisted for lead, copper, and mercury in 2002.

Fort Stewart realizes the importance of surface water quality and has implemented practices to renovate or prevent damage caused by military training. The following practices would be expected to be implemented by the construction team:

- Implementing an Erosion and Sedimentation Pollution Control Plan (ESPCP) for land disturbing activities greater than 1 acre (Georgia Erosion and Sedimentation Control Act [ESCA]),
- Using Georgia Forestry Commission BMPs for timber harvests,
- Adopting Natural Resources Conservation Service (NRCS) conservation practices,
- Adopting proper unpaved road maintenance practices, and

- Repairing and preventing stream bank erosion due to increased stream flow velocities caused by urban runoff.

For purposes of this water resource analysis, the affected environment for all of the alternative project sites is in the southeastern portion of the Installation and Ogeechee River watershed. All sites are located on flat, wooded terrain.

Wetlands

Lands that are subject to regulation as wetlands under Section 404 of the CWA are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The wetland types occurring on Fort Stewart include blackwater swamps, bay forests, streamhead pocosins, wet pine flatwoods, cypress-gum ponds, and salt marsh. Wetlands are in the vicinity of each alternative site. According to the National Wetlands Inventory (NWI) maps, wetlands are found contiguous to Alternative B and within Alternative D. No wetlands are found near Alternatives A, C and E according to NWI data. Additionally, in Fall 2009, Alternative A was reviewed by the Fort Stewart Wetlands Program Manager to confirm that no jurisdictional wetlands present within the boundaries of Alternative A. Prior to any ground disturbance, Fort Stewart will be required to submit a Section 404 permit package to the U.S. Army Corps of Engineers, Savannah District, for approval if wetlands impacts occur in the chosen alternative site.

Stormwater

Fort Stewart operates industrial activities subject to the requirements of the United States Environmental Protection Agency (USEPA) and State of Georgia industrial NPDES regulations under the CWA. These regulations involve regulating stormwater discharges from industrial activities that have the greatest potential to contaminate runoff. The applicable Installation industrial sectors include roads; motor pools; landfills; wastewater treatment facilities; hazardous waste storage, treatment, or disposal activities; and others.

A Stormwater Pollution Prevention Plan (SWPPP) has been developed and implemented at Fort Stewart. The SWPPP prescribes BMPs that have been implemented to reduce the potential for stormwater pollution, especially as impervious surface increases across the Fort Stewart footprint. With respect to this EA, asphalt in parking lots and building rooftops introduces additional, permanent impervious surface that increases stormwater quantity and velocity while reducing water quality as it flows across hard surfaces and potentially washes various hazardous substances into local watersheds.

In addition, the goal of LID is to maintain or restore the natural hydrologic functions of a site to achieve natural resource protection objectives and fulfill environmental regulatory requirements. LID employs natural and built features that reduce the run-off rate, filter out its pollutants, and facilitate the infiltration of water into the ground. By reducing water pollution and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters and stabilizes the flow rates of nearby streams (Oak Ridge National Laboratory 2009). These measures will include a series of integrated management practices to

match the “pre-/post-” hydrologic conditions in the construction areas. Example BMPs that mitigate impervious surface include vegetated infiltration swales, dry detention basins, porous pavers, and bioretention cells (rain gardens) with native plantings (Moncrief 2009).

The CWA and Georgia ESCA require that erosion and sedimentation controls be implemented during construction projects that disturb one or more acres of ground. Thus, the Army consistently obtains a NPDES General Permit to Discharge Stormwater Associated with Construction Activities via submittal of a Notice of Intent (NOI) to the GA DNR and develops an ESPCP prior to implementation of actions, as described in Section 3.1.2, Soils. Although the State of Georgia’s threshold is one acre, Fort Stewart requires the General Permit and NOI submittal for all projects that disturb 0.75 acres or more.

Additionally, EO 13514 requires that all new construction, major renovations, or repairs and alteration of Federal buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*, (Guiding Principles) (ISWG 2008). This includes reducing potable water consumption by a minimum of 50 percent over water consumed by conventional means and employing design and construction strategies that reduce stormwater runoff. Furthermore, Section 438 of the Energy Independence and Security Act of 2007 require that any development or redevelopment project involving a Federal facility with a footprint exceeding 5,000 square feet shall use site planning, design, construction, and maintenance strategies in order to maintain or restore the predevelopment hydrology of the property with regard to temperature, rate, volume, and duration of flow. Compliance with this requirement can be met through the implementation of LID technologies.

To meet the NPDES Permitting requirements for Pre-construction and Post-Construction, the Energy & Independence Security Act of 2007, and TMDL requirements, construction project managers must utilize the Coastal Stormwater Supplement (CSS) in the Georgia Stormwater Manual Worksheet (Center for Watershed Protection 2009a and 2009b). To ensure consistency with the CSS, the United Facilities Criteria (UFC) Manual for LID Design for DoD Facilities (DoD 2008), and the USACE LID for Sustainable Installations: Stormwater Design Planning Guidance for Development within Army Training Areas (USACE 2008b), construction project managers are required to consult the Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of EO 13423 and EO 13514 Section 14 (USEPA 2009b).

Floodplains

Executive Order 11988, *Floodplain Management*, instructs Federal agencies to consider the risks, danger, and potential impacts of situating projects within floodplains. The EO specifies that in situations where alternatives are impractical, the agency must minimize potential harm to or within the floodplain and take appropriate steps to notify the public. Floodplains typically are described as areas likely to be inundated by a particular flood. A flood that has a one percent chance of occurring in any one year is the 100-year flood; a 500-year flood has a 0.2 percent chance of occurring in any one year.

Floodplains on Fort Stewart, as in much of the south Atlantic Coastal Plain, are inextricably linked to the adjacent streams and rivers. Floodplains adjacent to the Ogeechee River, Canoochee River and the lower reaches of Canoochee Creek, Taylor's Creek, Mill Creek, and Savage Creek may be inundated for eight months or more annually. The U.S. Geological Service has mapped flood-prone areas on Fort Stewart, and lands lying within the 100-year floodplain have been delineated. Much of the eastern and southeastern portions of the Installation would become inundated by floodwaters from the Ogeechee and Canoochee Rivers during a 100-year storm event. The majority of the cantonment area is outside the 100-year floodplain although portions of the northern boundary and west side of the cantonment are in the 100-year floodplain area. Alternative D would be situated in a floodplain.

3.1.2 Soils

Soils are the unconsolidated earthen materials overlying bedrock or other parent material. At Fort Stewart, the parent material for all soils is water-lain sediments deposited during and prior to the Pleistocene era. Generally, the soil types most common on Fort Stewart are classified as sandy and infertile.

The land surface on Fort Stewart consists of gently rolling terraces separated by broad, low-lying areas with poor drainage. Due to Fort Stewart's mild climate, the cycles of freezing and thawing during season change has little impact on soil weathering. However, a lot of rainfall infiltrates through the soil and moves dissolved and suspended materials downward. This effect is more pronounced on slopes and hills than it is on level ground. Within the locations proposed for siting the elementary school, most of the topography is level, although there are some minor ditches located along roadsides (approximately 3 to 5 feet below the level of the road bed) and some drainage crossings, especially in Alternatives A, C, D, and E. Many of the soils on Fort Stewart are subject to seasonal high water tables due to the lack of topography and elevations near sea level. The elevation generally runs from 15 to 25 feet above sea level. Soils in low-lying, poorly drained areas are typically high in organic matter content and may remain saturated or inundated for eight months or more annually (Fort Stewart 2001a).

Erosion control is a major emphasis of land rehabilitation efforts at Fort Stewart. Low Impact Development erosion control measures implemented by Fort Stewart include establishment of filter strips adjacent to water bodies; terracing, seeding, and mulching; gully healing and stabilization; construction of run-off diversions, berms and sediment traps; vegetation planting; stabilization of reclaimed sites with chemical binders; use of fibrous mats and other stabilizing materials; road improvement; vehicle traffic restrictions; and hardening of stream crossings. Projects with potential erosion impacts adopt all NRCS erosion and sedimentation safeguards and implement the Georgia rules mandating erosion, sedimentation, and pollution prevention measures. These programs, BMPs, and rules would govern all soils disturbing activities related to any elementary school construction activities (refer to Section 3.1.1, Water Resources).

The affected environment for soils would include those areas that would be impacted both directly and indirectly by either construction or operation of the elementary school and associated access roads, where

needed. The affected environment for this proposed action includes the five alternative sites, areas immediately adjacent to the sites, and streams and/or water bodies that could be indirectly impacted by sedimentation and/or erosion.

3.1.3 Biological Resources

Biological resources include native or naturalized plants and animals and the habitats in which they occur. Management of wildlife and wildlife habitat is conducted in accordance with the provisions of the Fort Stewart/Hunter Army Airfield Integrated Natural Resources Management Plan (INRMP) (Fort Stewart 2001a). For purposes of this EA, discussion of biological resources affected by implementation of the proposed action at any of the alternative sites applies to: 1) vegetation and wildlife, including migratory birds, and 2) threatened, endangered, and other special status species.

The affected environment for biological resources includes the five proposed action alternatives and lands, streams, and/or water bodies adjacent to these sites.

Vegetation and Wildlife

Vegetation. All proposed action alternative sites lie directly adjacent or close to suburban/industrial areas in the partially undeveloped southern portion of the Installation. With the exception of a tank trail in Alternative A, these sites are all currently undeveloped and include upland forests dominated by loblolly pine (*Pinus taeda*). These forested areas are characterized by a closed-canopy of loblolly pine, with an understory of sand laurel oak (*Quercus hemisphaerica*), water oak (*Q. nigra*), sweet-gum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), blueberries (*Vaccinium* spp.), and bracken fern (*Pteridium aquilinum*).

Fort Stewart manages Installation timber resources to improve military training lands, enhance Threatened and Endangered Species habitat, and to improve forest health. Timber management activities primarily involve control burning and timber harvesting operations. The majority of these timber harvests are select thinning of residual timber stands. Timber is clear-cut to support military construction projects, longleaf pine/wiregrass restoration sites, and pine bark beetle infestations as needed.

Wildlife, including Migratory Birds. Fort Stewart supports over 400 invertebrate, fish, and wildlife species within Installation boundaries (Fort Stewart 2001a). From the standpoint of the proposed action, common wildlife that would be expected to occur include white-tailed deer (*Odocoileus virginianus*), wild boar (*Sus scrofa*), foxes (*Felis* spp.), bobcat (*Lynx rufus*), rabbits (*Sylvilagus* spp.), squirrels (*Sciurus* spp.), and a variety of smaller mammals. In addition to a diverse assemblage of forest songbirds, wild turkey (*Meleagris gallopavo*), bobwhite quail (*Colinus virginianus*), and several other species are important game birds on the Installation (Fort Stewart 2001a).

There are approximately 170 species of birds protected under the Migratory Bird Treaty Act (MBTA) that could occur on Fort Stewart, either seasonally or year round, and many of these species are expected to occur at least temporarily in the areas potentially affected by the proposed action alternatives (Fort Stewart 2001a). Fort Stewart complies with the MBTA by implementing Army Policy Guidance (17

August 2001) and Executive Order 13186, *Responsibilities of Federal Agencies to Migratory Bird Treaty Act*. Fort Stewart manages and conserves migratory bird species through implementation of the INRMP and considers effects to migratory birds in any proposed action through the NEPA process (Fort Stewart 2001a).

Protected Species

Protected species include those that are listed or proposed for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS); and state-protected species listed as rare, threatened, or endangered by the GA DNR. A complete listing of threatened, endangered, and other species of concern that occur on Fort Stewart is provided in Table 3-2.

Three species listed as endangered (red-cockaded woodpecker [RCW], wood stork, and shortnose sturgeon), and two species listed as threatened (Eastern indigo snake and frosted flatwoods salamander) on the Federal list are currently known to occur on Fort Stewart. Four of the five Federally-listed species do not occur within or near to the areas proposed for construction, but Alternative B shares an external border with a frosted flatwoods salamander potential breeding pond buffer zone (Figure 4-3). While no wood stork nests are found in the proposed alternative locations (or on Fort Stewart) it is a visitor to local wetlands and ponds. The nearest water body that could support shortnose sturgeon is several miles away from any of the proposed locations. The Eastern indigo snake, is not found or there is no suitable habitat to support this species at any of the proposed alternative locations.

Table 3-2: Federal and State Special Status Species Found at Fort Stewart

<i>Scientific Name</i>	<i>Common Name</i>	<i>Federal Status</i>	<i>State Status</i>
Plants			
<i>Balduina atropurpurea</i>	Purple honeycomb head	None	Rare
<i>Elliottia racemosa</i>	Georgia plume	None	Threatened
<i>Epidendrum conopseum</i>	Green-fly orchid	None	Unusual
<i>Fothergilla gardenia</i>	Dwarf witch-alder	None	Threatened
<i>Litsea aestivalis</i>	Pond spice	None	Rare
<i>Pteroglossaspis ecristata</i>	Crestless plume orchid	None	Threatened
<i>Sarracenia minor</i>	Hooded pitcher plant	None	Unusual
<i>Sideroxylon thornei</i>	Swamp buckthorn	None	Rare
<i>Stewartia malacodentroid</i>	Silky camellia	None	Rare
Mammals			
<i>Corynorhinus rafinesquii</i>	Rafinesque's big-eared bat	None	Rare
<i>Trichechus manatus</i>	West Indian manatee	Endangered	Endangered
Birds			
<i>Aimophila aestivalis</i>	Bachman's sparrow	None	Rare
<i>Elanoides forficatus</i>	Swallow-tailed Kite	None	Rare
<i>Falco peregrinus</i>	Peregrine falcon	None	Rare
<i>Falco sparverius paulus</i>	Southeastern kestrel	None	Rare
<i>Mycteria americana</i>	Wood stork	Endangered	Endangered
<i>Picodes borealis</i>	Red-cockaded woodpecker	Endangered	Endangered
<i>Sterna antillarum</i>	Least tern	Endangered	Rare
Reptiles and Amphibians			
<i>Clemmys guttata</i>	Spotted turtle	None	Unusual
<i>Drymarchon couperi</i>	Eastern indigo snake	Threatened	Threatened
<i>Gopherus polyphemus</i>	Gopher tortoise	None	Threatened
<i>Heterodon simus</i>	Southern hognose snake	None	Threatened
<i>Malaclemys terrapin</i>	Diamond back terrapin	None	Unusual
<i>Ophisaurus mimicus</i>	Mimic glass lizard	None	Rare
<i>Rana capito</i>	Gopher frog	None	Rare
<i>Ambystoma cingulatum</i>	Flatwoods salamander	Threatened	Threatened
<i>Notophthalmus perstriatus</i>	Striped newt	None	Threatened
Fishes			
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	Endangered	Endangered
Invertebrates			
<i>Cordulegaster sayi</i>	Say's spiketail	None	Threatened

Sources: Fort Stewart 2001a and GA DNR 2009

Red-cockaded woodpecker. The RCW is listed by the USFWS and the state of Georgia as endangered, and the recovery plan notes that the rate of increase in RCW populations reported at Fort Stewart during the 1990s is among the highest yet documented (from 189 to 212 RCW clusters). The success of this population increase is attributed to intensive, well-planned, and well-executed management. RCW foraging habitat can be characterized as open stands of pine over 30 years old with a scarce to moderate midstory. The main threat to the RCW is habitat loss and degradation as a result of development, fire suppression, and silvicultural practices that do not allow for development of mature, open pine stands.

To standardize foraging habitat evaluation, a RCW Foraging Matrix Application has been developed for projects that alter RCW foraging habitat. Avoidance of RCW foraging habitat was a priority during the selection of the considered alternatives; therefore, no RCW habitat will be altered by the proposed action and it was not necessary to apply the RCW Foraging Matrix Application to any of the alternatives.

Frosted Flatwoods Salamander

The frosted flatwoods salamander is listed by the USFWS and the state of Georgia as Threatened. This amphibian is dependent on both wetlands and their associated uplands throughout its lifecycle. It spends



Frosted Flatwoods Salamander

most of the year in uplands burrows left by tree roots or crawfish. From September to December the salamander lays its eggs in the dry, isolated wetlands or in upland margins associated with isolated ponds where it was born. When water levels rise due to increased seasonal rains, the eggs hatch. These waterbodies must remain inundated for at least 11 weeks for the larvae to achieve adulthood, after which the new generation will migrate into the drier uplands to carry out its lifecycle (USFWS 2009).

There are five existing frosted flatwoods salamander populations and 21 breeding sites on Fort Stewart. Ten habitat management units (HMUs), including both known populations and potential additional habitat, have been designated for species conservation over 79,917 acres of the Installation. Logging is prohibited within 100 feet of a potential breeding wetland or pond, and logging activities are restricted and managed with specific BMPs within 1,476 feet of the pond's outer edge. No excavation or road building is permitted in the wetland areas, but training exercises and other uses are allowed to continue unimpeded.

The outer edge of Alternative B may cross briefly into the 1,476 feet outer buffer for a potential breeding wetland for the frosted flatwoods salamander.

3.1.4 Hazardous and Toxic Materials and Waste

Hazardous materials and waste are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Act (OSHA); the Resource Conservation and Recovery Act (RCRA); the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and the Emergency Planning and Community Right-to-Know Act (EPCRA). The CWA also addresses hazardous materials and waste through Spill Prevention, Control, and Countermeasure (SPCC) and NPDES requirements. Hazardous materials have been defined to include any substance with special characteristics that could harm people, plants, or animals when released.

Hazardous waste is defined in the RCRA as any "solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment." Waste may be classified as hazardous because of its toxicity, reactivity, ignitibility, or corrosivity. In addition, certain types of waste are "listed" or identified as hazardous in 40 CFR 263.

Routine operations across the Installation generate a variety of hazardous wastes, including various solvents; paints; antifreeze; aerosols; contaminated filters, rags and absorbents; weapon cleaning patches and sludges; and some items managed as universal wastes, such as used batteries and fluorescent light tubes.

Fort Stewart began in the 1940s as an anti-aircraft artillery training center and has since seen its mission changed or expanded to provide tank, field artillery, helicopter gunnery, and small arms training. Although nowadays tightly controlled and intensively managed, historically, the hazardous materials required for training operations were not regulated, and these materials are occasionally found at some training areas (Fort Stewart 2008). All of the known contaminated sites have been restored or are in the process of restoration (USAEC 2005). Materials commonly found at former training areas include munitions and explosives of concern (EOC) and munitions constituents. Due to routine surveys, extensive restoration efforts, and continued use of many of the training areas it is possible but not likely that unexploded ordnance or other EOC could be found on the Installation. Other contaminants that may be found in the soil or groundwater at former training areas as a result of training operations are typically metals and petroleum hydrocarbons.

The Fort Stewart Environmental Division oversees the management of hazardous materials at Fort Stewart, and works with master planning, Garrison Command, and Installation Management Agency (IMA) personnel as training areas are re-designated into cantonment or other uses (Army 2005).

3.1.5 Land Use, Recreation, and Visual Resources

Land use generally refers to human modification of land, often for residential, commercial, industrial, agricultural, recreational, and economic purposes. Land use also refers to the use of land for preservation or protection of natural resources such as wildlife habitat, vegetation, or unique features. Unique natural features are often designated as national or state parks, forests, wilderness areas, or wildlife refuges. Land uses are frequently regulated by management plans, policies, ordinances, and regulations that determine the types of activities that are allowed or that protect specially designated or environmentally sensitive uses.

There are 280,000 acres of land within the boundaries of Fort Stewart. It is bordered to the north by agriculture and wetlands; to the east by the Ogeechee River; to the south by agriculture, wetlands, and the city of Hinesville; and to the west by agricultural lands. The nearest cities are Hinesville, abutting the southern boundary and cantonment area; Richmond Hill, 1 mile to the east of the eastern boundary; Pembroke, 2 miles to the north of the northern boundary; Glennville, on the western boundary; and Savannah, approximately 40 miles to the northeast of the cantonment area.

Land use at Fort Stewart is divided into 120 training areas (mechanized and non-mechanized maneuver areas and impact and restricted areas), cantonment, recreation, and environmentally sensitive/buffer areas. Areas used for training activities make up the largest portion of the Installation (68 percent, or 191,000 acres, the majority of which is contiguous heavy maneuver area). The remainder of the land base is used for cantonment, recreation, and environmentally sensitive/buffer areas (Fort Stewart 2001a; 2005a). Each of the four land use designations may be further described in land use planning documents and defined by natural attributes (forested) or zoned by allowable activities (Family housing, institutional, or community service, etc.). The process through which lands historically used for training activities may be transferred to other uses (AR-350-19) involves Garrison Command, environmental, and planning staff, and IMA

(Army 2005). This extensive process ensures the continued safety of the site as the Army's needs transform.

Fort Stewart has been open to public hunting and fishing since 1959 and is the second largest single public hunting and fishing entity in the state. All hunters on the Installation must possess a Hunter Safety Course certificate, a valid Georgia hunting license, and the appropriate Fort Stewart hunting permit (Fort Stewart 2009b). White-tailed deer, feral hog, and wild turkey are prominent game species on Fort Stewart, and largemouth bass and redbreast sunfish are popular species targeted by anglers. Additional outdoor recreation activities include wildlife observation, hiking, camping, shooting sports (including archery, skeet, and paintball), volleyball, horseshoes, and playgrounds, which are in the Holbrook Pond Recreational Area. Existing fishing facilities include Installation ponds and waterways. Access to the Canoochee and Ogeechee Rivers is provided by a limited number of landing sites.

Visual resources are defined as the natural and manufactured features that comprise the aesthetic qualities of an area. These features form the overall impression that an observer receives of an area or its landscape character. Landforms, water surfaces, vegetation, and manufactured features are considered characteristics of an area if they are inherent to the structure and function of the landscape. The significance of a change in visual character is influenced by social considerations, including public value placed on the resource, public awareness of the area, and general community concern for visual resources in the area. Recreational resources include evaluation of the potential effects to activities such as swimming, boating, hiking, and fishing and the lands that support these activities. For this EA, these social considerations are addressed as visual and recreational sensitivity, and are defined as the degree of public interest in a visual or recreational resource and concern over adverse changes in the quality of that resource.

MidCoast Regional Airport at Wright Army Airfield (WAAF) is situated within the Installation to the north-east of the cantonment area. This airport operates under class D airspace and is open to General Aviation and Military use (Joint-Use). Although the airport does not operate or accommodate commercial passenger aircraft, it does offer a flight school, charter groups, wounded warrior programs, flight tours, fly-in's, air shows, and other commercial operations along with military operations (MidCoast Regional Airport 2009). WAAF is presently undergoing upgrade and expansion projects, including runway upgrade and 1,500ft extension (it currently only accommodates rotary-wing aircraft and must be restored in order to continue helicopter use and return service to C-130s and other large fixed-wing aircraft), facilities and equipment upgrades, and stormwater management improvements (Fort Stewart 2004b/2006). The WAAF projects also include the construction of a civilian access road to facilitate Joint-Use without taxing ACPs or increasing other safety issues.

Under all alternatives, the affected environment for land use, recreation, and visual resources include those sites proposed for school construction and the immediately adjacent lands (Figures 2-1 through 2-6).

3.1.6 Cultural Resources

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural properties. Historic districts can be classified under all three of these categories depending upon what they contain. Objects are defined in 36 CFR 60.3(j) as a material thing of functional, aesthetic, cultural, historical, or scientific value that may be, by nature of design, movable yet related to a specific setting or environment. *Archaeological resources* include any material remains of past human life or activities that are capable of providing scientific or humanistic understanding of past human behavior and cultural adaptation through the application of scientific or scholarly techniques (Archaeological Resources Protection Act of 1979, Section 3(I) 16 U.S.C. 470bb). For example, archeological resources include but are not limited to sites, pottery, baskets, basketry, weapons, weapon projectiles, tools, stone flakes, graves, or bottles.

Under the National Historic Preservation Act (NHPA) as amended, only historic properties warrant consideration of impacts from a proposed action and any associated mitigation. Historic properties are defined by the NHPA as any districts, sites, buildings, structures, or objects included on or eligible for inclusion on the National Register of Historic Places (NRHP). Historic properties include traditional cultural properties, and in general, must be more than 50 years old to be considered for protection under the NHPA. However, more recent structures associated with significant national events may warrant protection if they are “exceptionally significant.” To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4, *Criteria for Evaluation*, for inclusion in the National Register.

The NHPA requires the Army to identify and protect cultural resource sites that are listed on, eligible for listing on, or of indeterminate eligibility for listing on the NRHP. The Integrated Cultural Resources Management Plan (ICRMP) for Fort Stewart describes numerous cultural resource investigations that have been conducted since the 1970’s (Fort Stewart 2001c). Protected cultural resource sites are posted with signs and stakes as well as painted boundaries. Restrictions on military activities in the vicinity of posted cultural resource sites are described in Fort Stewart Regulation 385-14, *Post Range Regulation*. A Programmatic Agreement (PA) between Fort Stewart and the Georgia State Historic Preservation Office (SHPO) signed in September 2000 and renewed in 2006 allows for Fort Stewart to manage its own cultural resources provided agreed-upon conditions are met. The NEPA documentation for the revised 2009 ICRMP and new proposed PA has already been completed. Minor modifications to the revised 2009 ICRMP and proposed PA are in progress and are pending finalization.

Several other Federal laws and regulations have been established to manage cultural resources, including the Archaeological and Historic Resources Preservation Act (1974), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990). In addition, coordination with Federally recognized American Indian Tribes associated with the HAAF area

must occur in accordance with the American Indian Religious Freedom Act (1978), Executive Order 13007, *Sacred Sites*; and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*. The area of potential effect for cultural resources consists of the proposed construction locations for all alternatives.

Archaeological Resources. As of 2001, nearly 174,832 acres of Fort Stewart had been surveyed for archaeological resources or excluded from survey through categorical exclusion (Maggioni et al. 2009). Overall, these completed surveys resulted in the identification of 3,557 archaeological sites at Fort Stewart and HAAF. These sites include prehistoric archaeological sites through recent 20th century historical components. Of these sites, 3,196 were determined not eligible, and 35 are considered eligible to the NHRP. One site, Fort Argyle at Fort Stewart, is currently listed on the NRHP. The remaining 325 archaeological resources are potentially eligible and have not been evaluated (Maggioni et al. 2009). All unevaluated resources are treated as eligible for the National Register until determined otherwise.

In areas with concerns or that have not been surveyed, Fort Stewart Cultural Resources Management (CRM) is consulted prior to any disturbance/alteration to the landscape. Until areas are surveyed and potential eligible resources are identified, the area will be taken into account prior to disturbance/alteration to the landscape. Projects with potentially eligible resources, in or near the proposed construction area, would then be marked in order to avoid them. If sites cannot be avoided, then sites are tested and mitigated in accordance with formal consultation with the SHPO on a case-by-case basis prior to project commencement.

Architectural Resources. Since 1986 architectural resources at Fort Stewart have been inventoried, including those at the proposed alternative sites. In order to assess the precise extent of the Installation's historic structure, from 2001 to 2004 the Installation researched and wrote historic contexts and conducted comprehensive building surveys of Fort Stewart and Hunter Army Airfield (HAAF), with an emphasis on Cold War significance. Thus all buildings on Fort Stewart and HAAF constructed prior to 1990 have been surveyed for NRHP-eligibility (Maggioni et al. 2009). Also, each year the Cultural Resource Manager at Fort Stewart sends an update of each building survey to the SHPO as buildings on the Installation approach the fifty year mark and would then require assessment (Maggioni et al. 2009, Fortune and Maggioni 2002, and Maggioni 2004). No National Register-eligible or listed buildings or structures are located within the area of potential effect for the proposed action alternatives.

Traditional Resources. Specific American Indian traditional resources or sacred sites or areas on Fort Stewart where such sites may be located, have not all been identified to date. However, Fort Stewart routinely consults with the Native American Tribes (Tribes) having an ancestral affiliation with the Fort Stewart area on a case-by-case basis, specifically when projects arise with the potential to affect Tribal resources. No traditional resources are located within the area of potential effect for the proposed action alternatives.

3.1.7 Noise

Noise is often defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, diminishes the quality of the environment, or is otherwise annoying. Human response to noise varies by the type and characteristics of the noise source, distance from the source, receptor sensitivity, and time of day. Noise can be intermittent or continuous, steady or impulsive, and it may be generated by stationary or mobile sources. Sound levels are expressed in decibels (dB), usually weighted for human hearing (dBA). To describe “average” sounds on a 24-hour basis, the day-night sound level (DNL) metric is used. The DNL provides a single measure of overall noise impact and is the accepted single measure for determining human annoyance. All of Fort Stewart cantonment area is within the Noise Zone II contour for impulsive noise (i.e., noise emanating from artillery) (Fort Stewart 2003).

The Army uses a widely accepted metric to measure environmental noise levels for their activities, the DNL measurement. This metric is recommended by the USEPA, used by most Federal agencies when defining their noise environment, and applied as a land-use planning tool for predicting areas of potential annoyance both inside and outside of an Installation. DNL describes the average daily acoustic energy over an entire year—meaning that the whole spectrum of sound, from quiet to loud noises, is averaged across the year. The DNL metric also incorporates a “penalty” for nighttime noise (normally 10:00 p.m. to 7:00 a.m.) when loud sounds are more noticeable and annoying. However, when measuring noise levels from small arms and large caliber sources, weighted noise metrics are used (USACHPPM Undated).

The weighted measurements screen out the very high and low sound frequencies that cannot be heard by humans. A-weighted noise measurements reflect what people hear, noted as dBA or ADNL.

A-weighting is typically applied to measuring noise for small arms activities. For low-frequency sounds that can cause vibrations, a C-weighting metric is used; noted as dBC or CDNL. Many find that these lower frequency sounds like artillery and explosions are more annoying than other noises so that is taken into account in this metric.

To assist the community in land-use planning and zoning, the Army uses planning zones where noise levels are separated into four categories associated with noise level contours: Land Use Planning Zone (LUPZ), Zone I, Zone II, and Zone III. The paragraphs below and Table 3-3 present these zones and the types of activities that are considered compatible within these zones (USACHPPM Undated).

- **LUPZ** – is an area around a noise source which is between 60 dBA or 57 dBC and 65 dBA and 62 dBC. These areas are a buffer in Zone I where the noise could reach Zone II levels during periods of increased operations. This zone is used to provide the community with additional information regarding land use decisions. LUPZ contours are generally shown on land use planning noise documents.

- **Zone I** – includes all areas around a noise source in which DNL is less than 65 dBA or 62 dBC. This area is usually suitable for all types of land use activities (e.g., homes, schools, and hospitals). Zone I on maps are simply areas that are neither Zone II nor Zone III.
- **Zone II** – consists of an area where the DNL is between 65 and 75 dBA or 62 and 70 dBC. Exposure to noise within this area is normally incompatible with noise-sensitive land uses and use of the land within the zone should normally be limited to activities such as industrial, manufacturing, transportation, and resource production (e.g., industrial parks, factories, and highways).
- **Zone III** – is an area around the source of noise in which the DNL is greater than 75 dBA or 70 dBC. The noise level within this zone is considered incompatible with noise sensitive land uses such as churches, schools, parks, playgrounds.

Table 3-3 Noise Zones and Compatibility

Zone	Decibel A-weighted/ C-weighted	Compatibility Level
LUPZ	60 to 65 dBA / 57 to 62 dBC	Compatible
I	<65 dBA / <62 dBC	Compatible
II	65 to 75 dBA / 62 to 70 dBC	Normally Incompatible
III	>75 dBA / >70 dBC	Incompatible

The affected environment for noise analysis includes the area that could be potentially impacted by noise emanating from the school while under construction or during operation. In addition, noise generated from on-Post sources (such as training ranges) would also constitute the affected environment since this could impact classroom instruction or outdoor activities. All alternative sites are found within the Noise Zone II contours for impulsive noise (i.e., C-weighted) due to artillery operations (Fort Stewart Undated).

3.1.8 Public Health and Safety

Public health and safety includes evaluation of fire and police protection, health services, traffic hazards, and surface danger zones associated with on-Post training ranges and airfields, as well as safety issues during construction. The affected environment encompasses Fort Stewart.

The Directorate of Emergency Services commands the Military Police Units, civilian police, the Fort Stewart Fire Prevention and Protection Division, and the Post Safety Office. This Directorate ensures unity of effort among Fort Stewart emergency services to ensure a safe and secure environment to work, train, live and play. Winn Army Community Hospital and the Lloyd C. Hawks Medical Clinic provide health services for active and retired military personnel and their families.

While no impacts to existing public health and emergency services are expected from adding an elementary school to Fort Stewart, the school itself is also subject to health and safety analysis. Therefore, this EA will analyze potential impacts associated with ground safety and incompatible land uses. An example of an incompatible land use would be a site laying within an airfield Accident Potential Zone (APZ). APZs are established at airfields to delineate recommended surrounding land uses for the protection of people and property on the ground. APZs define the areas in the vicinity of an airfield that

would have the highest potential to be affected if an aircraft mishap were to occur. Air Installation Compatible Use Zone guidelines identify three types of APZs for airfields based on aircraft mishap patterns: the Clear Zone, APZ I, and APZ II. The standard Clear Zone is a trapezoidal area that extends 3,000 feet from the end of a runway and has the highest probability of being impacted by a mishap. APZ I, which typically extends 5,000 feet from the end of the Clear Zone, has a lower mishap probability; and APZ II, which typically extends 7,000 feet from the end of APZ I, has the lowest mishap probability of the three zones. As detailed in Section 3.1.5, land use plans, programs, and controls address compatible development within the APZs.

Additionally, safety concerns may exist if land that is previously used as training area is transferred to other uses. As discussed in Section 3.1.4, hazardous materials (especially EOC) may be present in areas historically used for training activities. The existence of these materials onsite would pose a safety risk to construction personnel and continued facility operations. Through AR-350-19 (Section 3.1.5), the Fort Stewart Environmental Division oversees the management of hazardous materials at Fort Stewart, and works with master planning, Garrison Command, and IMA personnel as training areas are re-designated into cantonment or other uses (Army 2005).

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

The approach used for this impacts analysis is to compare what would occur if the proposed action alternatives and no-action alternative were implemented at Fort Stewart. The environmental assessment process is designed to focus analysis on only those environmental resources that could potentially be affected by the construction or operation of an elementary school.

Chapter 4 presents the environmental consequences of constructing and operating an elementary school at Fort Stewart for each of the resources carried forward from Chapter 3. The proposed action includes both short-term, temporary construction impacts, and ongoing operations and maintenance of the school. Actions can directly impact a sensitive resource, or changes to the resource may occur indirectly as a result of actions that occur adjacent to it. The resources that may be impacted by the proposed action and are thus carried forward for analysis are water resources; soils; biological resources; hazardous and toxic materials and waste, land use, recreation, and visual resources; cultural resources; noise; and public health and safety. Cumulative effects of the construction and operation of the elementary school when considering past, present, and foreseeable future actions are presented in Chapter 5.

4.1 Natural Environment

4.1.1 Water Resources

Effects to water resources could result from erosion and runoff. Impacts to water resources could occur if implementation of any of the alternatives resulted in changes to water quality or supply, threatened or damaged unique hydrologic characteristics, or violated established laws or regulations.

The threshold level of significance for water resources is defined as any impacts (chemical, physical, or biological effects) that are detectable and frequently altered from the historical baseline or desired water quality conditions; and/or chemical, physical, or biological water quality standards or criteria are locally, slightly, and singularly, exceeded on either a short-term or prolonged basis. In addition, the proposed action would be considered adverse if it impacted a waterbody currently considered impaired under the CWA.

Under the proposed action, approximately 20-22 acres of land would be disturbed by the school, parking, access roads, playgrounds or activity fields, fencing, and landscaping at any of the alternative locations. Prior to implementing any of the action alternatives, Fort Stewart would ensure that the construction contractor would develop, submit, and adhere to all state and Federal permits (e.g., NPDES, Section 404) and a state-approved ESPCP. The contractor would ensure proper implementation of BMPs stipulated in the ESPCP (e.g., silt fencing, dust control, vegetation cover, and timely revegetation) during tree removal, site preparation, and during and after construction. Although the need for potentially hazardous materials and waste is not anticipated, the contractor would handle these materials in accordance with all Federal, state, and local requirements. While the contractor will be responsible for implementing all applicable requirements, Fort Stewart is ultimately responsible for ensuring the impact to water resources is mitigated and insignificant.

Taylor's Creek is the closest named tributary to any of the alternatives. Taylor's Creek is listed as a 303(d) impaired waterbody; however, Taylor's Creek is approximately 3,200 feet from Alternative D, which is the closest alternative to the creek. Alternative B, the next closest, is over 10,000 feet from Taylor's Creek. Additionally, Taylor's Creek is listed as impaired due to lead, copper, mercury, and DO content, none of which are expected to be released or affected through the construction activities described in the proposed action. Although Alternatives A and E have small drainage ditches through a portion of the parcel, there appear to be no mainstem streams or creeks, and thereby no 303(d) listed waterbodies, within any of the sites.

The new school will include low flow fixtures, be metered, have backflow preventers installed, and the reuse of waterline (Purple Pipe) and existing utilities will occur to the extent possible. However, if the water main, wastewater main, or septic system is modified and/or a lift station is installed, State approval is required and the Fort Stewart Environmental Division will be contacted to make this submittal.

Alternative A: Austin Road Location. Despite the implementation of BMPs to control runoff, proposed construction activities could temporarily increase localized erosion rates, which could lead to short-term increases in sediment discharge to surface water resources. However, since there are no impaired waterways adjacent to the proposed site (neither the Canoochee nor the Ogeechee Rivers are within proximity to the Austin Road location), and the construction contractor would employ all applicable erosion and sedimentation controls, it is expected that construction activities may cause only minimal impacts to surface water quality.

Alternative A also includes re-routing a portion of an unpaved tank trail, which currently bisects the property, to the border of the proposed school location (Figure 2-2). The new tank trail route would run adjacent to the channelized drainage ditch along 16th Street for approximately 460 feet and also include the relocation of the current ditch crossing. The new route would be located in a flat and open, previously cleared and developed industrial area. All required permits would be obtained prior to relocation of the trail. The trail would be constructed and maintained with applicable BMPs so as to minimize additional erosion from ongoing mechanized use; however, as it would be closer to the drainage, continued use of the tank trail in its new location would have the potential to increase ongoing erosion and sedimentation over that which occurs at its existing location.

There would be no wetland or floodplain impacts associated with siting the school at Austin Road. The Fort Stewart Wetlands Program Manager has inspected the Alternative A site in addition to the NWI reference maps and confirmed that no jurisdictional wetlands occur at this alternative location.

For all alternatives, once the school is established there would be an estimated net increase of approximately 9.5 acres of impervious surface that will increase water runoff to Fort Stewart storm drainage systems. This increase would be managed and minimized through onsite LID practices and required stormwater BMPs (see Section 3.1.1), and therefore, is not expected to introduce any major impacts to the Installation stormwater drainage system.

Due to the additional short-term construction activity and ongoing use of the relocated tank trail, impacts to surface water quality and stormwater drainage under Alternative A would be similar in nature but slightly greater in intensity than those affects discussed for Alternatives B and C. Overall, minor and mitigatable impacts to water resources would result from construction and operation activities under Alternative A.

Alternative B: 15th Street Location. Despite the implementation of BMPs to control runoff, proposed construction activities could temporarily increase localized erosion rates, which could lead to short-term increases in sediment discharge to surface water resources. However, since there are no impaired waterways adjacent to the proposed sites (neither the Canoochee nor the Ogeechee Rivers are within proximity to the 15th Street location), and the construction contractor would employ all applicable erosion and sedimentation controls, it is expected that construction activities may cause only minimal impacts to surface water quality.

Approximately 0.71 acres of surveyed wetlands would be directly impacted by the implementation of Alternative B, and an additional 3.50 acres onsite are classified as wetlands that may be disturbed by implementation actions according to NWI mapping (Figure 4-1). School design and construction operations (especially if an outdoor classroom or interpretive trail could be established at the wetland) would strive to minimize impacts by avoidance. If avoidance or further minimization is not possible, then mitigation would be required through the use of the Fort Stewart Mitigation Bank. Prior to any ground disturbance a Section 404 permit package would be submitted by the contractor to the Savannah District Regulatory Branch, U.S. Army Corps of Engineers, for their permitting review and necessary approval, which includes an alternatives analysis performed to minimize the wetland impacts. Similar to Alternative A, the increase in impervious area would be managed and minimized through onsite LID practices and required stormwater BMPs (see Section 3.1.1), and therefore, is not expected to introduce any major impacts to the Installation stormwater drainage system. Overall, minor and mitigatable impacts to water resources would result from construction and operation activities under Alternative B.

Alternative C: Southern Oaks Location. The proposed action in Alternative C is the same for all the other alternatives, but Alternative C would also include the construction of an access road to reach the school. The exact size and route of this access road has not been determined at this time; however, it can be assumed that the access road will increase impacts to surface water quality and stormwater drainage from both construction activities and ongoing use of the road.

Despite the implementation of BMPs to control runoff, proposed construction activities could temporarily increase localized erosion rates, which could lead to short-term increases in sediment discharge to surface water resources. However, since there are no impaired waterways adjacent to the proposed sites (neither the Canoochee nor the Ogeechee Rivers are within proximity to the Southern Oaks location), and the construction contractor would employ all applicable erosion and sedimentation controls, it is expected that construction activities may cause only minimal impacts to surface water quality.

There are no wetlands or floodplain impacts associated with this alternative.

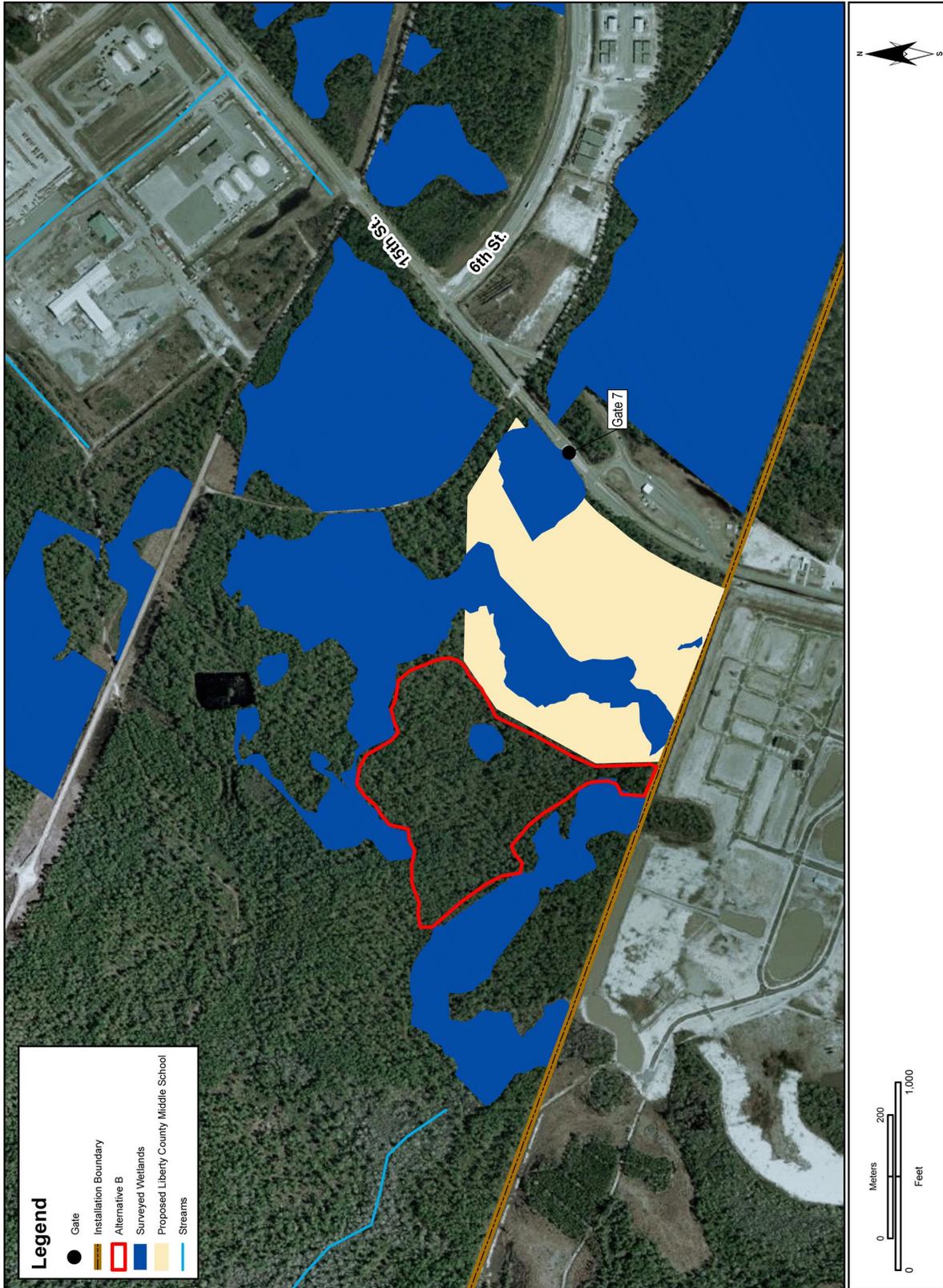


Figure 4-1 Wetlands Found in Vicinity of Alternative B

Once the school is established, there would be an estimated net increase of about 9.5 acres (plus additional area from paving the new access road) of impervious surface that will increase water runoff to Fort Stewart storm drainage. This increase would be managed and minimized through onsite LID practices and required stormwater BMPs (see Section 3.1.1), and therefore, is not expected to introduce any major impacts to the Installation stormwater drainage system.

Due to the additional short-term construction activity and permanent impervious surface of the additional access road, impacts to surface water quality and stormwater drainage under Alternative C would be similar in nature but slightly greater in intensity than those affects discussed for Alternative B. Overall, minor and mitigatable impacts to water resources would result from construction and operation activities under Alternative C.

Alternative D: Dirt Road Location. The proposed action in Alternative D is the same for all the other alternatives, but Alternative D would also include the construction of an access road to reach the location, affecting an additional 2.5 total acres and involving a stream crossing (Figure 2-5).

Although Alternative D is approximately 3,200 feet from Taylor's Creek, it may be hydrologically connected in a way that uncontrolled runoff from construction activities could eventually affect the Creek's water quality. A 50-foot buffer between any streams and onsite activities is recommended, and BMPs are required to manage runoff from all earth-moving activities. The proposed action is not likely to affect the continued impairment or recovery of Taylor's Creek.

Despite the implementation of BMPs to control runoff, proposed construction activities could temporarily increase localized erosion rates, which could lead to short-term increases in sediment discharge to surface water resources (especially to the stream that exists at the site and crosses the estimated route of the required access road) . However, since there are no impaired waterways adjacent to the proposed sites (neither the Canoochee nor the Ogeechee Rivers are within proximity to the Dirt Road location), and the construction contractor would employ all applicable erosion and sedimentation controls, it is expected that construction activities may cause only minimal impacts to surface water quality.

All of Alternative D is located within the 100-year floodplain (Figure 4-2) thereby requiring additional building design considerations and costs. Additionally, there are 2.47 acres of NWI wetlands estimated to occur on this site, with approximately 0.66 acres of NWI wetlands that would be directly impacted by the new access road associated with this alternative (Figure 4-2). Prior to further site planning, these wetlands would be surveyed to maximize avoidance and verify the exact acreage to mitigate if full avoidance is not possible. Similar to Alternative B and before commencing any ground disturbance, a Section 404 permit package would be submitted by the contractor to the Savannah District Regulatory Branch, U.S. Army Corps of Engineers, for their review and necessary approval.

While 0.66 acres of wetland would be permanently altered to accommodate the new road, additional acreage would be indirectly impacted at the margins of the road through hydrologic fragmentation of the contiguous wetland complex, stormwater runoff from the road into the wetland, and the potential introduction of invasive species through increased traffic and exposure.

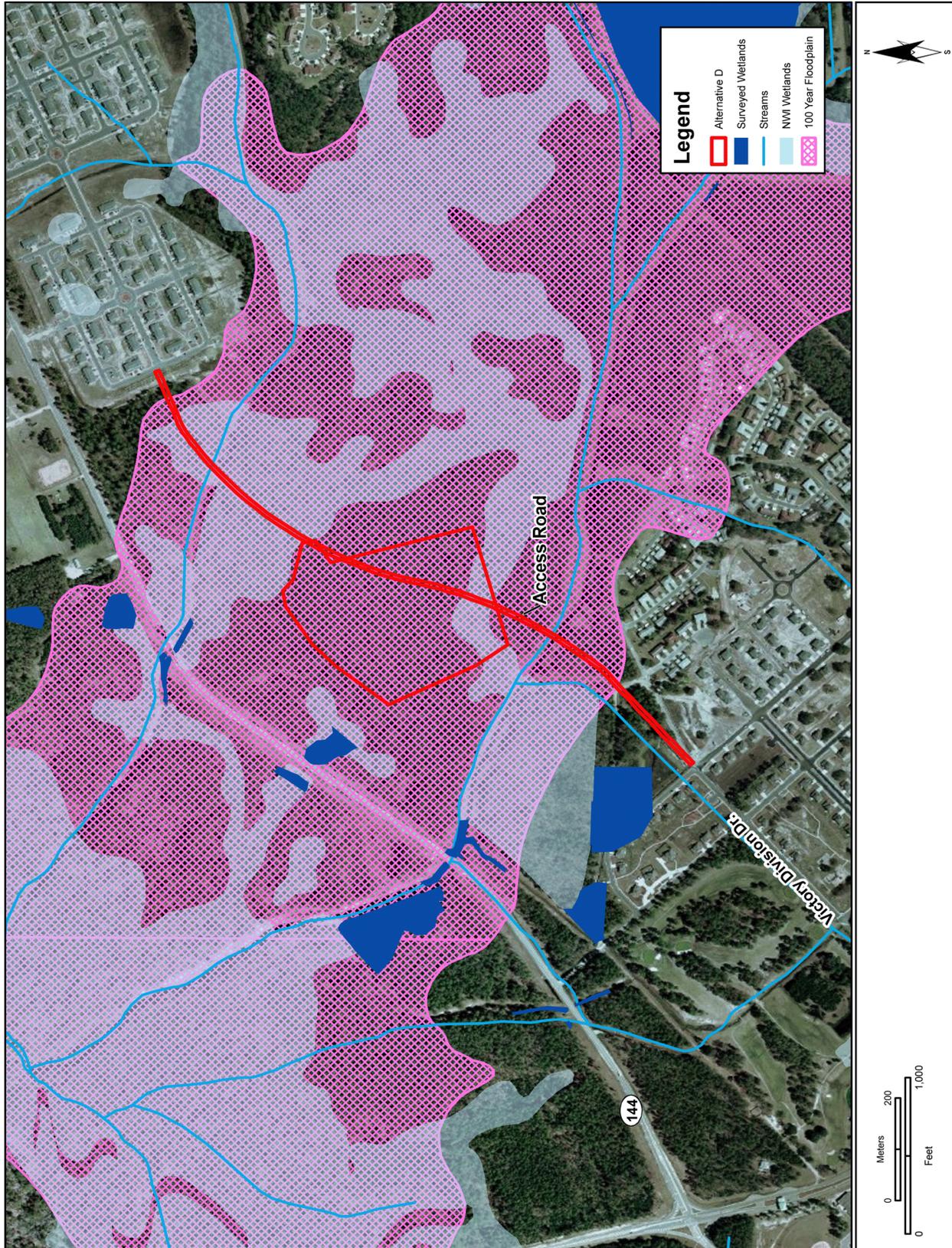


Figure 4-2 Wetlands and Floodplain Impacts for Alternative D

Once the school is established, there would be an estimated net increase of about 12 acres (school estimate plus access road) of impervious surface that will increase water runoff to Fort Stewart storm drainage systems. This increase would be managed and minimized through onsite LID practices and required stormwater BMPs (see Section 3.1.1), and therefore, is not expected to introduce any major impacts to the Installation stormwater drainage system.

Due to the additional short-term construction activity and permanent impervious surface of the additional access road, impacts to surface water quality and stormwater drainage under Alternative D would be similar in nature but greater than those affects discussed for Alternative B as the entire site is within the floodplain and requires more intensive drainage management. Overall, minor and mitigatable impacts to water resources would result from construction and operation activities under Alternative D.

Alternative E: National Guard Location. The proposed action in Alternative E is the same for all the other alternatives, but Alternative E (like Alternatives C and D) would also include the construction of an access road to reach the school. The exact length and route of this access road has not been determined at this time; however, it can be assumed that the access road will increase impacts to surface water quality and stormwater drainage from both construction activities and ongoing use of the road.

There would be no wetland or floodplain impacts expected with the implementation of Alternative E. Surface water quality and stormwater drainage would be similar to the effects discussed for Alternative C. Overall, minor and mitigatable impacts to water resources would result from construction and operation activities under Alternative E.

No Action Alternative. Under the no-action alternative, the elementary school would not be constructed and existing conditions (as described in Chapter 3) would remain relatively unchanged. There would be no impacts to wetlands, no short-term decreases in water quality, and no potential for increases in stormwater runoff.

4.1.2 Soils

Potential short-term minor effects to soils could result from ground disturbance leading to soil erosion, fugitive dust propagation, sedimentation, and pollutants such as hazardous materials and/or waste. Impacts would be considered adverse if ground disturbance or other activities would violate applicable Federal or state laws and regulations, such as the Georgia ESCA, and cause the issuance of notice of violations for the failure to receive applicable state permits, such as a NPDES construction/operation permit under the ESCA, prior to initiating the proposed action under any of the five action alternatives. Obtaining and adhering to all state and Federal construction-related permits and plans will be the responsibility of the construction contractors; ongoing maintenance will be the responsibility of Fort Stewart.

Under any of the action alternatives, construction would result in the displacement of less than 22 acres of soil as a part of earthmoving and cut-and-fill operations for the school construction, parking facilities, activity fields, landscaping, fencing, and trenching for underground utility upgrades to support school functions. Temporary construction activities may result in the migration of airborne or waterborne soil

particles and petroleum, oil, and lubricants from equipment; however, the construction contractor would be responsible to enforce spill countermeasures to prevent contamination of soil during any fueling and maintenance practices on construction equipment. Also, efforts would be made during the construction process to reduce the number of construction exits, which would result in a lower potential for sediment tracking off site.

Prior to any site disturbance, the contractor would develop and have approved an ESPCP, a notice of intent submitted for any disturbance in excess of 0.75 acres, and the acreage disturbance fees paid to the state under the construction NPDES permit process (see also Section 4.1.1., Water Resources).

Adherence to the ESPCP would include measures to minimize impacts to soils, including erosion and sedimentation control and soil conservation measures, as described in the soils and water sections of Chapter 3. As part of the ESPCP, SPCC Plan measures would also be implemented during construction activities to prevent and/or minimize release of hazardous materials onto the ground. In addition, the ESPCP would describe and the NPDES permit would require regularly scheduled site inspections, BMPs, maintenance, and reporting to the Georgia Environmental Protection Division. This standard set of measures would help minimize effects to soils from construction activities.

All practices for erosion and sedimentation control would be designed and implemented in accordance with the Manual for Erosion and Sediment Control in Georgia (GASWCC 2000) and LID practices (see Section 3.1.1 for further discussion of LID). BMPs specified in the ESPCP could include erosion control matting, channel stabilization, silt fencing, brush barriers, storm drain inlet protection, stone check dams, rock filter dams, construction exits, temporary and permanent seeding, the application of mulch, buffer zones, and dust control. The application of any or all of these BMPs would depend upon precise, specific ground conditions in the areas disturbed by construction. The selected construction contractor would be responsible for continually maintaining all erosion and sediment control measures during the construction phase of the project.

All Action Alternatives (A, B, C, D, and E). If all prescribed measures described above are undertaken, then no adverse impacts to soils should occur. In summary, short-term minor impacts during construction are anticipated.

No Action. Under the no-action alternative, construction of a new elementary school at Fort Stewart would not occur. Thus, there would be no soil disturbance and no impact to soils.

4.1.3 Biological Resources

Determination of the significance of potential impacts to biological resources is based on: 1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; 2) the proportion of the resource that would be affected relative to its occurrence in the region; 3) the sensitivity of the resource to proposed activities; and 4) the duration of ecological ramifications. Impacts to biological resources are considered significant if species or habitats of concern are significantly affected over relatively large areas or disturbances result in reductions in the population size or distribution of protected species.

Alternatives A, C, D, and E. Direct impacts to biological resources would result from construction activities for approximately 22 acres for each alternative, including the loss of vegetation and other habitat features from land-clearing activities. Standard management practices would control erosion and sedimentation, limiting the potential for indirect effects and degradation of surrounding habitat.

All alternatives are located in currently undisturbed forested parcels, with the exception of the existing tank trail that currently bisects a portion of proposed Alternative A. After construction is complete, ongoing effects of the proposed action include increased forest fragmentation and the disturbance and degradation of vegetation, especially at the property margins.

No direct or indirect effects to protected species, especially RCW and frosted flatwoods salamander, would be expected because no species or suitable habitat is known to occur within potential alternative boundaries. Minor indirect effects on RCW habitat could result as immature pine stands would be removed and thereby prevented from maturing to become future foraging habitat, especially for Alternative D, which is currently in a less fragmented landscape as it is situated further from existing development than the other alternatives. Continuing implementation of management practices as provided in the INRMP and Endangered Species Management Plans (Fort Stewart 2001a) would minimize any adverse impacts by supporting habitat in other areas of the Installation. Figures 4-3 and 4-4 present the location of sensitive biological resources in the vicinity of Alternatives A and C. There are no sensitive biological resources in the areas surrounding Alternatives D or E.

Noise and activity during construction would result in disturbance to wildlife primarily within the construction footprint. This area currently experiences military exercise-related noise, and the short-term increase due to construction noise would not cause an adverse impact to biological resources.

Overall, the extent of 22 acres of vegetation removal and habitat alteration associated with these alternatives would not have a negative impact on native vegetation, natural communities, or wildlife resources given the abundance of similar habitat in surrounding areas and the Fort Stewart landscape. Consequently, there would be only minor effects to vegetation and wildlife and no effects to protected species under Alternatives A, C, D and E.

Alternative B: 15th Street Location. Impacts to vegetation, wildlife and protected species under Alternative B would be similar to those presented for the other alternatives. This alternative is well beyond the primary buffer for the frosted flatwoods salamander potential breeding pond (Figure 4-5). However, the northern tip of Alternative B is adjacent to the designated 1,476 foot outer boundary of frosted flatwoods salamander potential breeding pond buffer. The outer boundary is designated so that incompatible activities do not inadvertently endanger the species' potential use of the site (see Section 3.1.3). Restricted activities generally refer to certain logging practices and simply require the implementation of specific BMPs for logging activities. As this buffer area occurs on the margin of both the alternative and the outer buffer boundary, and most likely no construction or ongoing school activities are expected to alter any land near to this area, no impacts to the frosted flatwoods salamander are expected under this alternative.



Figure 4-3 Sensitive Biological Resources in Vicinity of Alternative A

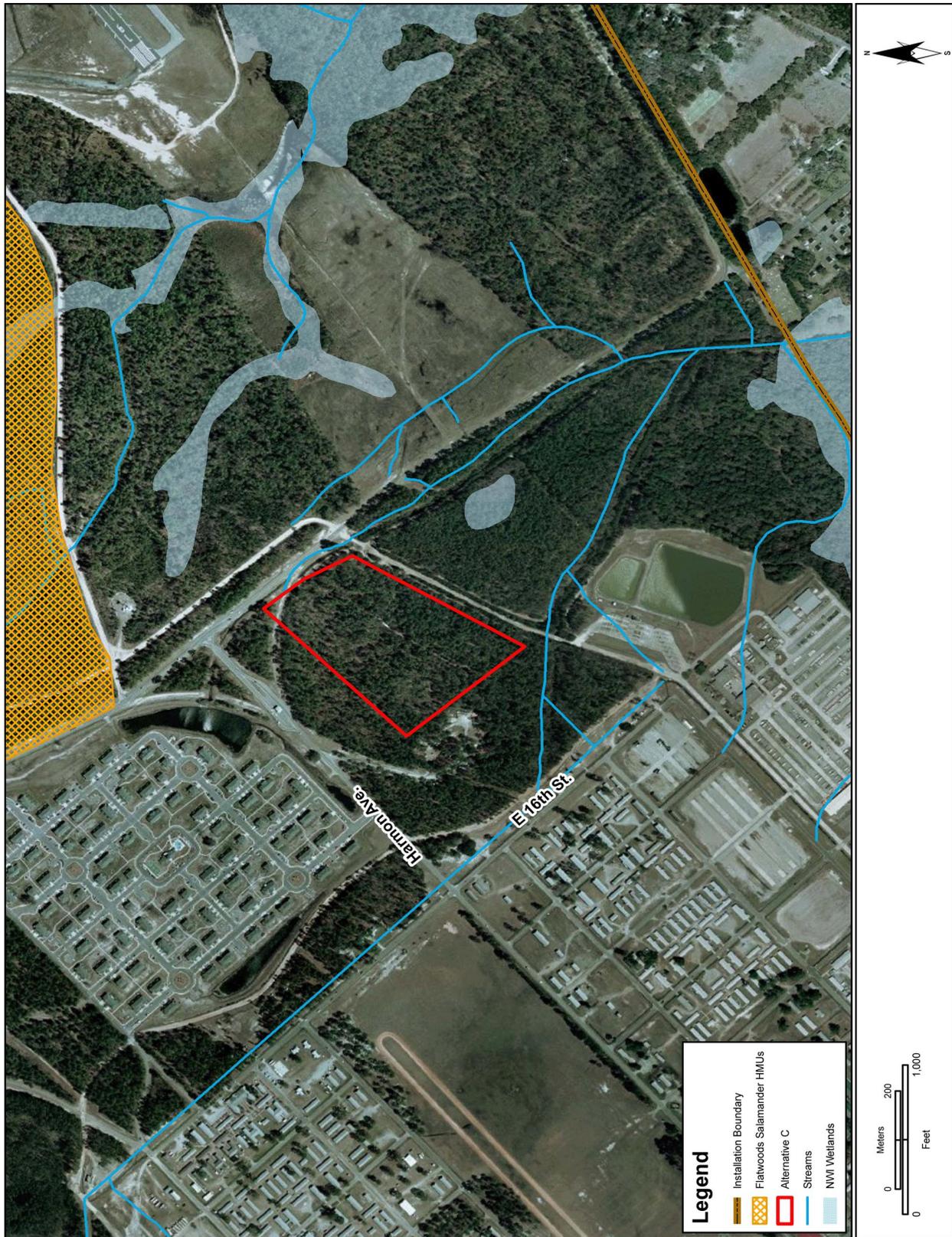


Figure 4-4 Sensitive Biological Resources in Vicinity of Alternative C

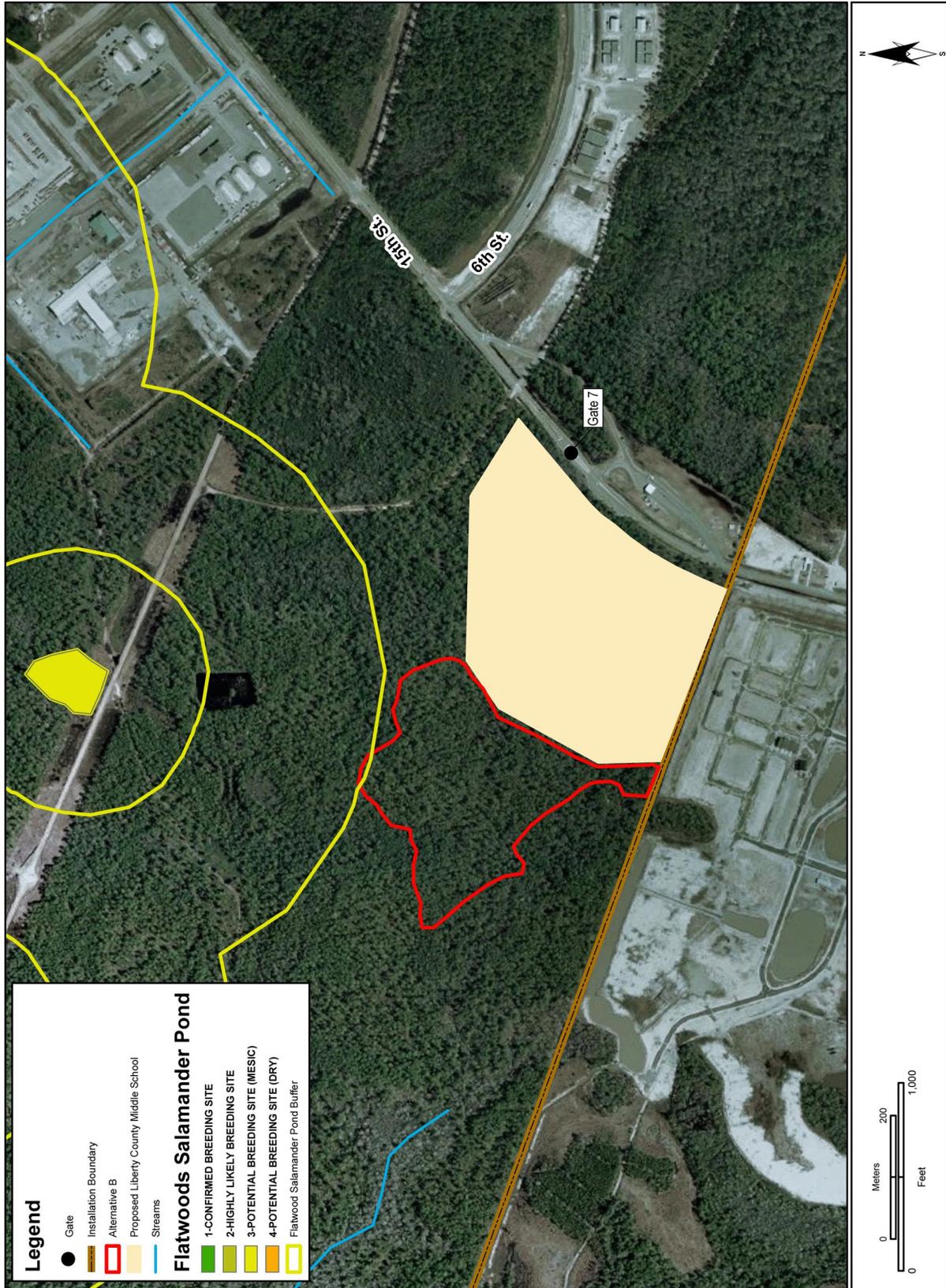


Figure 4-5 Sensitive Biological Resources in Vicinity of Alternative B

As found with the other alternatives, the habitat removed under Alternative B would not represent a significant direct or indirect impact to the overall native vegetation, natural communities, or wildlife resources found at Fort Stewart.

No Action. If no action were taken, there would be no change to biological resources from current conditions at Fort Stewart.

4.2 Human Environment

4.2.1 Hazardous and Toxic Materials and Waste. Construction activities may require use of hazardous materials such as paints, solvents, petroleum, oils, and lubricants, but existing state and Federal laws (for instance, OSHA standards and regulations) regarding their use would be followed and all appropriate construction permits obtained prior to construction. The only hazardous materials anticipated for school operations may be certain cleaning materials, which would be stored in secured areas to prohibit use of such materials by anyone not authorized to do so. Furthermore, EO 13101, *Greening the Government through Waste Prevention, Recycling and Federal Acquisition*, dictates that non-toxic and/or non-hazardous cleaning materials shall be substituted through green-purchasing/acquisition practices where possible. Therefore, any wastes generated during cleaning would be minimal and disposed of according to state and local regulations. The amount of these materials generated would not be at a level that would significantly impede the ability of local disposal sites to handle such wastes.

In addition, it is anticipated that there are no past practices at any of these sites that could produce unsafe environmental conditions (e.g., soil or water contamination due to historic land uses) due to the Army ownership and oversight for over 60 years. A preliminary site review for potential contamination was performed on the alternative locations, and no hazardous and toxic materials are known to occur at any of the alternative locations (Ft Stewart 2009c). However, Alternatives B and D are located in areas that were actively used for training purposes (Training Areas D-1 and A-20, respectively). A review of Alternative D/Training Area A-20 is in progress and the review of Alternative B/Training Area D-1 will be needed to determine the absence of any EOC and/or military munitions constituents of concern prior to any further planning or land disturbing activities. As described in Sections 3.1.5 and 4.2.2 (Landuse), these two alternatives would need to proceed through the AR-350-19 process to ensure the site is properly re-classified and restored, if necessary. If hazardous materials are located at either of these two sites the level of contamination would be assessed and remediated as directed by the Fort Stewart Environmental Division. Any hazardous material found onsite would be removed and disposed of in a permitted off-site facility by appropriately-licensed waste management and transportation companies through a Defense Reutilization and Marketing Office (DRMO) contract.

4.2.2 Land Use, Recreation, and Visual Resources

The threshold level of significance for land management and use is the potential for the proposed action alternatives to change the land use (from training, cantonment, environmental, or recreation) in such a manner as to cause incompatibility with adjacent land management and/or uses. Additionally, land use

designation changes may become significant if land uses change in such a way that degrade mission-essential training or conflict with community environmental goals.

All alternatives are located within the designated cantonment area perimeter, which is already densely developed and supports mixed uses.

Alternative A: Austin Road Location. The current land use designation for the area under Alternative A is cantonment area and the parcel is classified as forested. The adjacent northern boundary of the alternative is Family housing (High Density Residential [HDR]), and institutional zones are also found adjacent to the southeast and southwest borders. A tank trail that currently bisects the property would be relocated to outside of the southern boundary of the site.

Land use classification of the proposed elementary school under Alternative A would require a change from forested to Family housing since the school will only support on-Post Families (Fort Stewart 2010). The site is currently woodlands, and through the use of the existing tank trail, it supports tank, troop, or other military activities as they migrate between adjacent institutional-designated lands (Figure 4-6). As the tank trail would be relocated to the southern boundary of the property, the two institutional zones would remain linked and military or training activities would not be adversely impacted.

While the housing development at the northern boundary of the proposed Alternative A location is a compatible and desirable neighbor to an elementary school, the industrial areas to the south, including the relocated tank trail, may cause safety or noise impacts to school operations. However, these potential impacts may be mitigated through fencing off the school property, siting the school building to the north of the property away from the industrial area, and using parking areas and other landscape features at the south of the area as a buffer between the two potentially incompatible uses. Additionally, school building walls will attenuate noise from industrial activities and classroom disruption would be minimized.

There are no recreation activities currently occurring at the Alternative A location.

Visual resources would be impacted from the conversion of a forested area to a building and parking lot. However, the construction of a building on this site would not be unique in the area as training and industrial buildings and housing areas already occur within the viewshed.

In summary, the Alternative A location would create minor impacts to land use and visual resources and no impacts to recreation resources.

Alternative B: 15th Street Location. Although within the cantonment area perimeter, the current land use designation for the area under Alternative B has not yet been transferred from training to cantonment. Historically, this area was used as Training Area D-1, and the AR-350-19 process must be initiated in order to verify that redesignation to cantonment for Family services is safe and appropriate. The parcel is categorized as forested, and it is almost completely surrounded by forest/ forested wetlands, with a cleared tract for the proposed Liberty County Middle School immediately to the west (Figure 4-7). A portion of the southern border is adjacent to the Installation boundary, the other side of which is a new, off-Post, private subdivision development, Independence Community.

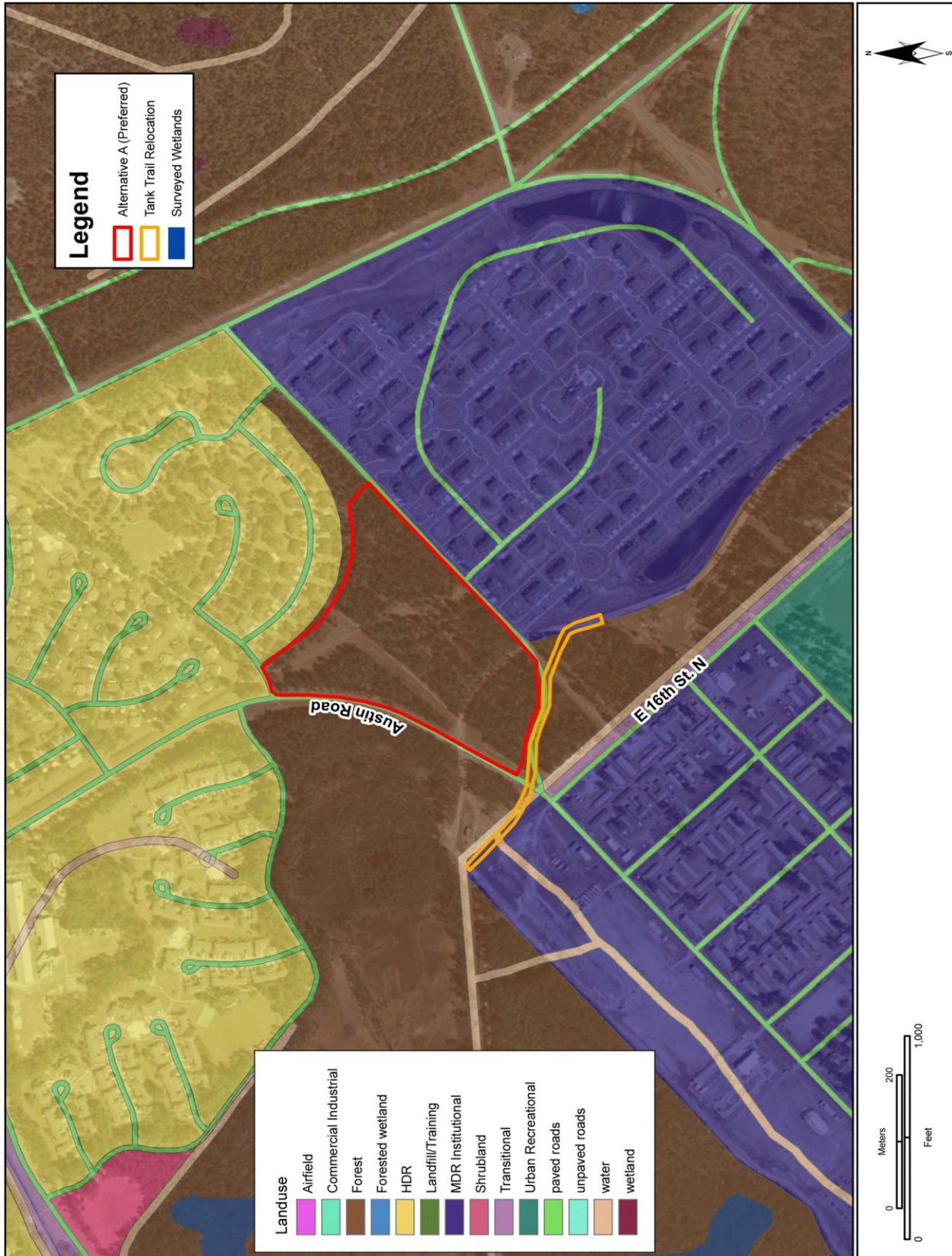


Figure 4-6 Land Uses in Vicinity of Alternative A

The site is currently woodlands and natural areas supporting training and occasional recreational (i.e., hunting) pursuits. Land use classification under Alternative B would change from forested to Family housing. Current use of this area for training maneuvers is likely less than historical use due to the planned development of the new middle school next door. If the elementary school was sited in this location it may further encroach on potential training areas, but the impacts from the loss of training resources would be negligible considering that 68 percent of the Installation area is dedicated to training activities. Training activities may either be pushed further out of proximity to the school or cause safety or noise impacts to school operations. However, these potential impacts may be mitigated through fencing off the school property, siting the school building on the parcel away from the training area, and using parking areas and other landscape features to buffer the two potentially incompatible uses. Additionally, school building walls will attenuate noise from industrial activities and classroom disruption would be minimized.

A minor impact to recreational activities would be expected from the loss of 22 acres for hunting pursuits and by reclassifying the existing land use to Family housing lands.

Visual resource impacts are also negligible because surrounding woodlands would largely remain and blend the elementary school presence with the surrounding landscape on the Fort Stewart boundary. The adjacent middle school to the west and Independence Community to the south would be compatible with the school as well.

In summary, the Alternative B location would create minor impacts to land use, recreation, and visual resources.

Alternative C: Southern Oaks Location. The current land use designation for the area under Alternative C is cantonment. The site itself is classified as forested, and it is immediately surrounded by trees on all sides (Figure 4-8). However, just beyond this small margin of additional forest the Alternative C site is adjacent to institutional, commercial industrial, urban recreational, and shrubland designated areas, i.e. it is in a high-density, mixed-use region of the cantonment area. Additionally, it is directly west of WAAF and the associated APZ 2 for Runway 33.

Land use classification of the proposed elementary school under Alternative C would require a change from forested to Family housing. The site is adjacent to the National Guard Training Center and a tank trail, and if the elementary school was sited in this location it may be subject to higher traffic volumes than if located elsewhere on the cantonment area. Potential safety impacts from these neighboring uses may be mitigated through fencing off the school property, siting the school building on the parcel away from busy roads and the tank trail, and using parking areas and other landscape features to buffer potentially incompatible uses (see Sections 4.2.3 and 4.2.4). Additionally, school building walls will attenuate noise from industrial activities and classroom disruption would be minimized, although children playing outdoors will be subject to noise from the National Guard training activities (see Section 4.2.3, Noise).

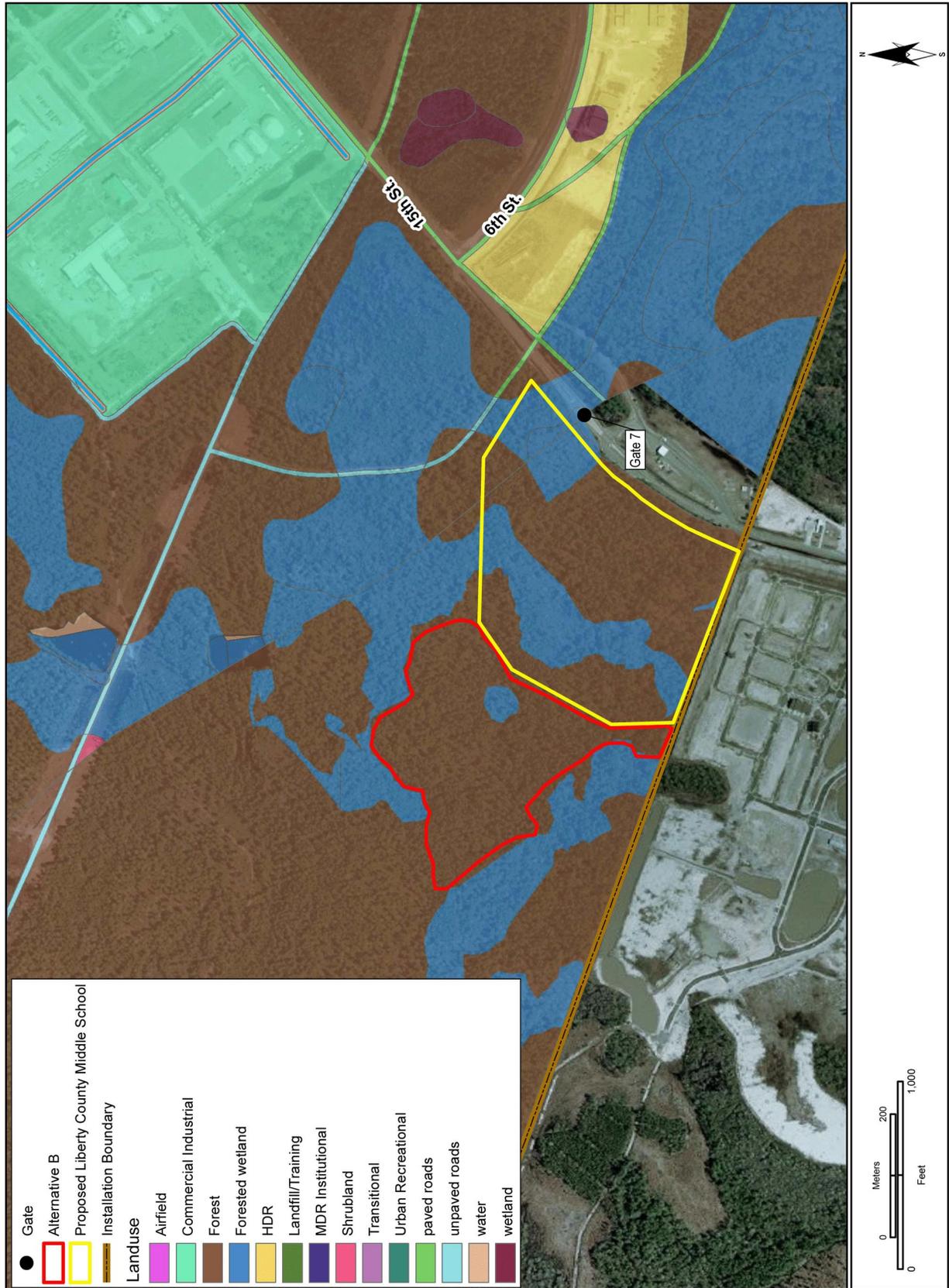


Figure 4-7 Land Uses in Vicinity of Alternative B

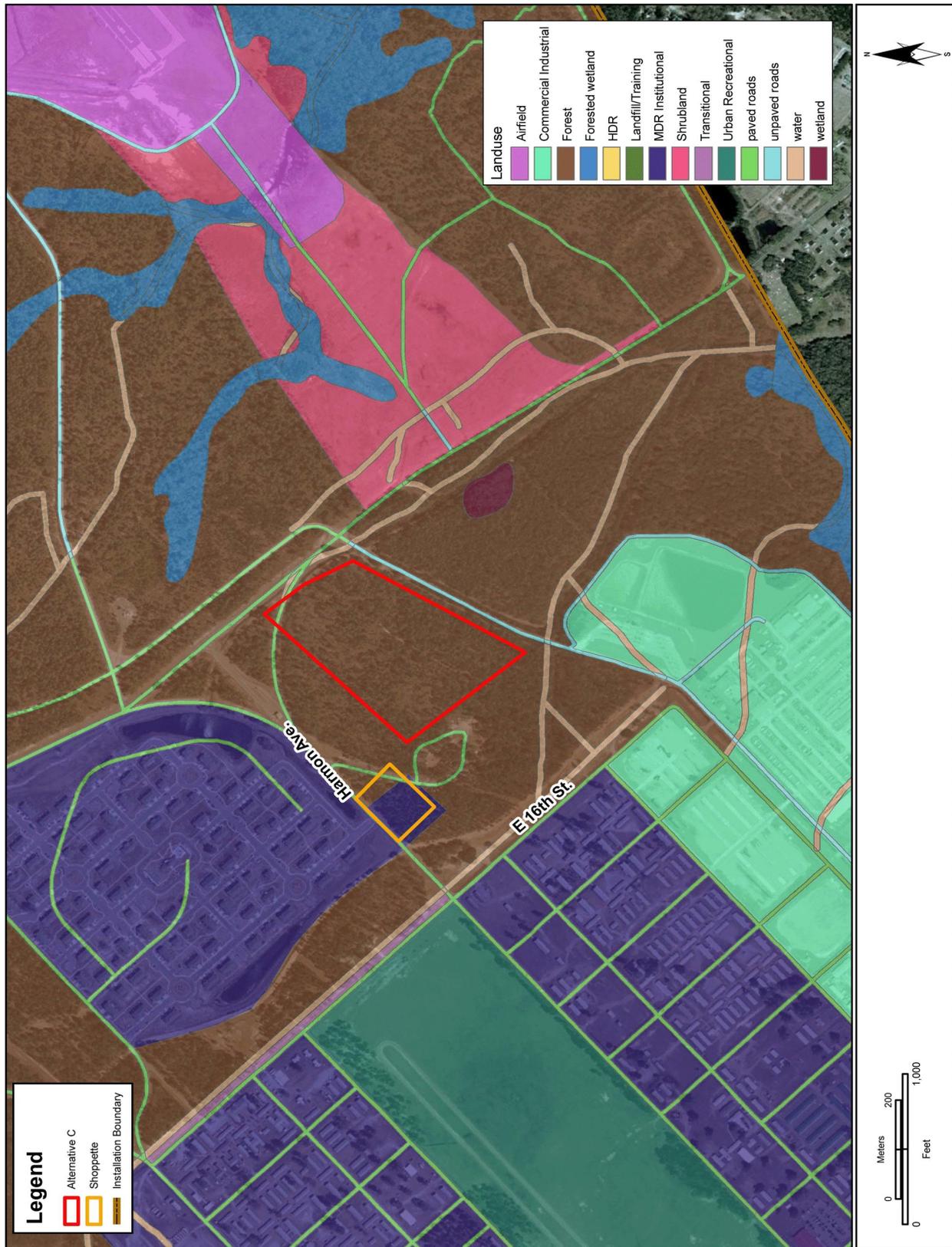


Figure 4-8 Land Uses in Vicinity of Alternative C

As no recreational resources currently exist on this parcel, construction of the school would not conflict with recreational pursuits. Additionally, although visual resources would be impacted from the conversion of a forested area to a building and parking lot, the construction of a building on this site would not be unique or out of character for the area due to the current high-density and mixed uses already occurring in the viewshed.

The area under Alternative C is within APZ 2 of WAAF and Noise Zone Level III as a result of the National Guard training site approximately 150 to 350 feet away. These are significant impacts, and as such disqualify this alternative from possible selection. Further discussion of the safety and noise impacts regarding placement of a school in an APZ is found in Sections 3.1.7 and 4.2.3.

In conclusion, while there would be minor direct impacts under Alternative C to visual resources and no impacts to recreation opportunities, there would be significant impacts to land use due to incompatible neighboring land use and the proximity of the airfield. Therefore, this alternative has been eliminated from further consideration.

Alternative D: Dirt Road Location. Although within the cantonment area perimeter, the current land use designation for the area under Alternative D has not yet been transferred from training to cantonment. Historically, this area was used as training area A-20, and the AR-350-19 process must be finalized in order to verify that redesignation to cantonment for Family services is safe and appropriate. The area under Alternative D is classified as forested/forested wetland immediately surrounded by trees on all sides (Figure 4-9). Beyond the adjacent margin of forest the Alternative D site neighbors HDR sites to the northeast and southwest.

The housing areas near to the proposed Alternative D location are a compatible and desirable neighbor to an elementary school.

Land use classification of the proposed elementary school under Alternative D would require a change from forested to Family housing. The site is currently woodlands. Except for the loss of 22 acres of wooded areas, recreational activities would not be adversely impacted.

Visual resources would be impacted from the conversion of a forested area to a building and parking lot. However, the construction of a building on this site would not be unique in the area as housing areas already occur within the view shed.

In summary, the Alternative D location would create minor impacts to land use, visual resources, and recreation resources.



Figure 4-9 Land Uses in Vicinity of Alternative D

Alternative E: National Guard Location. The current land use designation for the area under Alternative D is cantonment and it is classified as forested. It is immediately flanked by the National Guard motorpool to the south and a tank trail to the north, with forest land to the west and north (Figure 4-10). Just across the tank trail and beyond the adjacent margin of forest further north, the Alternative D site is in the vicinity of a housing community.

Land use classification of the proposed elementary school under Alternative E would require a change from forested to Family housing. While the housing development at the northern boundary of the proposed Alternative E location is a compatible and desirable neighbor to an elementary school, the industrial area to the south may cause safety or noise impacts to school operations. However, these potential impacts may be mitigated through fencing off the school property, siting the school building to the northeast of the property away from the industrial area, and using parking areas and other landscape features at the south of the area as a buffer between the two potentially incompatible uses. Additionally, school building walls will attenuate noise from industrial activities and classroom disruption would be minimized.

There are no recreation activities currently occurring at the Alternative E location.

Visual resources would be impacted from the conversion of a forested area to a building and parking lot. However, the construction of a building on this site would not be unique in the area as training and industrial buildings and housing areas already occur within the viewshed.

In summary, similar to Alternative A, the Alternative E location would create minor impacts to land use and visual resources and no impacts to recreation resources.

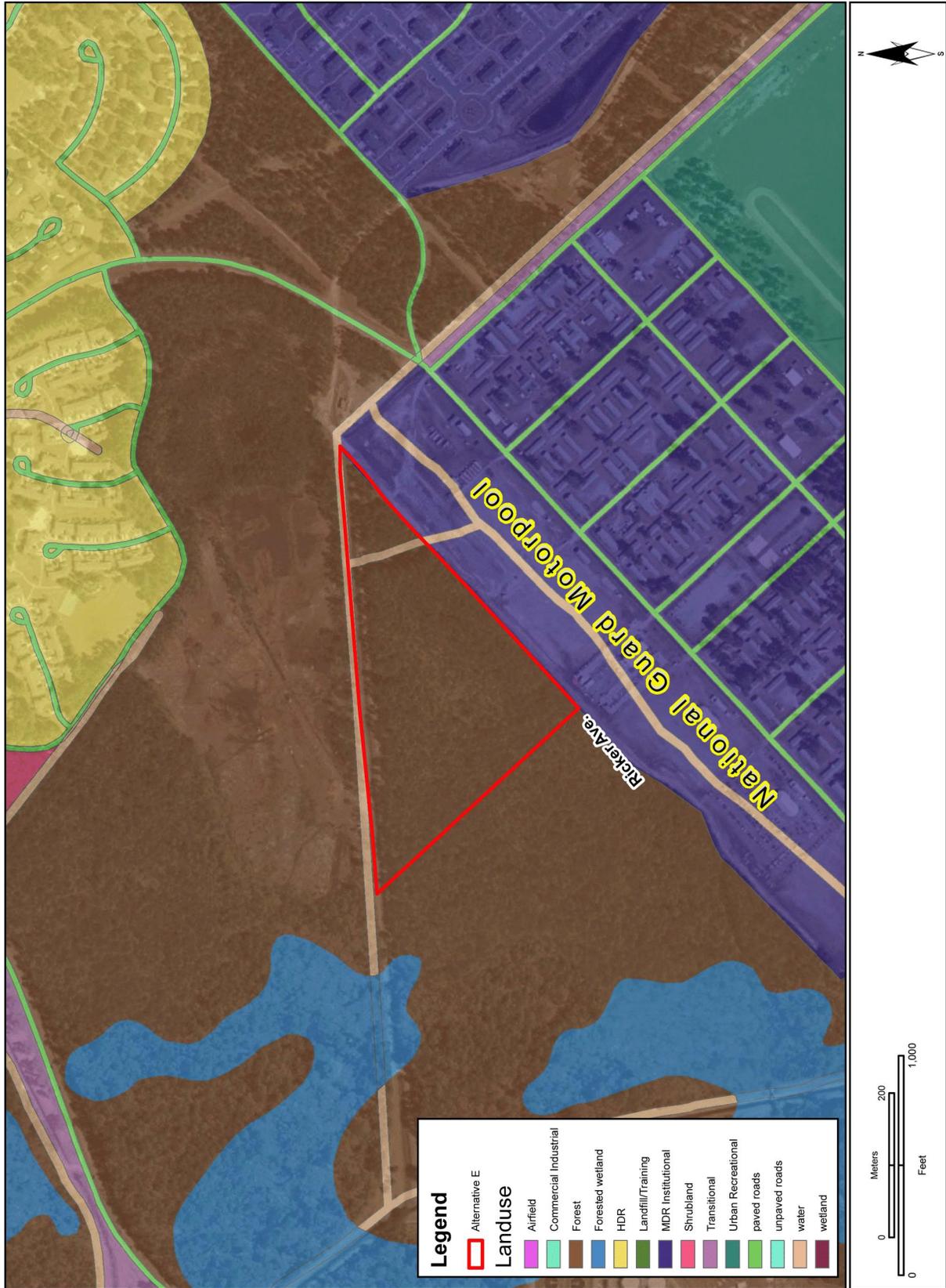


Figure 4-10 Land Uses in Vicinity of Alternative E

No Action. Under the no-action alternative, the Army would not construct an additional elementary school on Installation property. Land use, recreation, and visual resources would remain unchanged.

4.2.2 Cultural Resources

For cultural resources, the threshold of significance for impacts includes any disturbance that cannot be mitigated and affects the integrity of a historic property (an eligible cultural resource). The threshold also applies to any cultural resource that has not yet been evaluated for its eligibility to the NRHP or disturbs a resource that has importance to a Native American Tribe having an ancestral affiliation with the Fort Stewart area under the American Indian Religious Freedom Act, Executive Order 13007, and the Native American Graves Protection and Repatriation Act.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may be the result of physically altering, damaging, or destroying all or part of a resource, altering characteristics of the surrounding environment by introducing visual or audible elements that are out of character for the period the resource represents, or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts can be assessed by identifying the type and location of the proposed action and by determining the exact locations of cultural resources that could be affected. Indirect impacts are those that may occur as a result of the completed project, such as increased vehicular or pedestrian traffic in the vicinity of the resource.

Alternatives A, C, and E. The locations at Alternatives A, C, and E have not been surveyed for cultural resources and thus would need to be evaluated to ascertain whether historical, archaeological, or traditional resources would be impacted. Without available survey data, there is the potential that eligible cultural sites may be found at any one of these three locations. In accordance with DoD policy, Fort Stewart will notify the appropriate Tribes if any of these sites are determined to have an ancestral affiliation with any Native American Tribes. If during this process concerns are expressed, Fort Stewart will work with the Tribes to reduce potential effects to traditional resources. With these conditions, no impacts to traditional cultural properties are expected to occur.

Alternative B: 15th Street Location. The location at Alternative B has been surveyed, and no eligible archaeological, historical, or architectural resources have been identified within the area proposed for construction; therefore, no impacts to cultural resources would occur. No traditional resources or properties are known to occur in the footprint of Alternative B; however, in accordance with DoD policy, Fort Stewart will notify the appropriate Tribes if the site is determined to have an ancestral affiliation with any Native American Tribes. If during this process concerns are expressed, Fort Stewart and Liberty County will work with the Tribes to reduce potential effects to traditional resources. With these conditions, no impacts to traditional cultural properties are expected to occur.

Alternative D: Dirt Road Location. One archaeological site has been identified within the boundaries of Alternative D, but this site has been determined to be ineligible for listing under the NRHP (Maggioni 2009). The impacts from construction to cultural resources for Alternative D are considered minor since

this site has been determined to be ineligible for listing under the NHRP and is therefore not a protected site.

No Action Alternative. Under the no-action alternative, construction-related ground disturbance would not occur. Therefore, no impacts to cultural resources would occur as a result of those activities.

4.2.3 Noise

The threshold for significance under noise analysis is the determination if noise (either during construction or ultimate operation of the school) would adversely impact the human and/or natural environment. To characterize construction activity noise levels, U.S. Environmental Protection Agency data were used (Figure 4-11) (USEPA 1971). Based on the USEPA criteria, construction noise resulting in an hourly equivalent sound level of 75 dBA at a sensitive receptor (e.g., school, hospital, residence) would represent a significant impact. Noise from construction activity varies with the types of equipment used and the duration of use. During operation, heavy equipment and other construction noise that generate noise levels ranging typically from 70 to 90 dBA at a distance of 50 feet. Commonly, use of heavy equipment occurs sporadically throughout the daytime hours.

Under any action alternative location, the greatest noise levels would be generated during the earth moving/site clearing phase and could reach a maximum of over 70 dBA, 50 feet from any of the proposed locations. Therefore, noise impacts due to construction activities would be minimal to negligible for the following reasons:

- Heavy equipment that would generate the highest noise levels would not be used consistently enough to exceed the hourly equivalent noise level of 75 dBA for more than 1 hour.
- Construction activities would be expected to occur between 7:30 a.m. and 4:30 p.m. and pose little impact to any neighboring communities.

In general, construction noise would be intermittent and short-term in duration, and no long-term (recurring) adverse noise impacts would result from implementation of any of the action alternatives.

As described in Section 3.1.6, all the proposed potential elementary school sites in this EA are found under Noise Zone II, where the DNL is between 65 and 75 dBA or 62 and 70 dBC. Exposure to noise within this area is normally incompatible with noise-sensitive land uses such as schools and use of the land within the zone should normally be limited to activities such as industrial, manufacturing, transportation, and resource production (e.g., industrial parks, factories, and highways). The Federal Interagency Committee on Urban Noise (FICUN) suggests that educational services be sited in areas that experience 65-dB or less of DNL noise levels (FICON 1992).

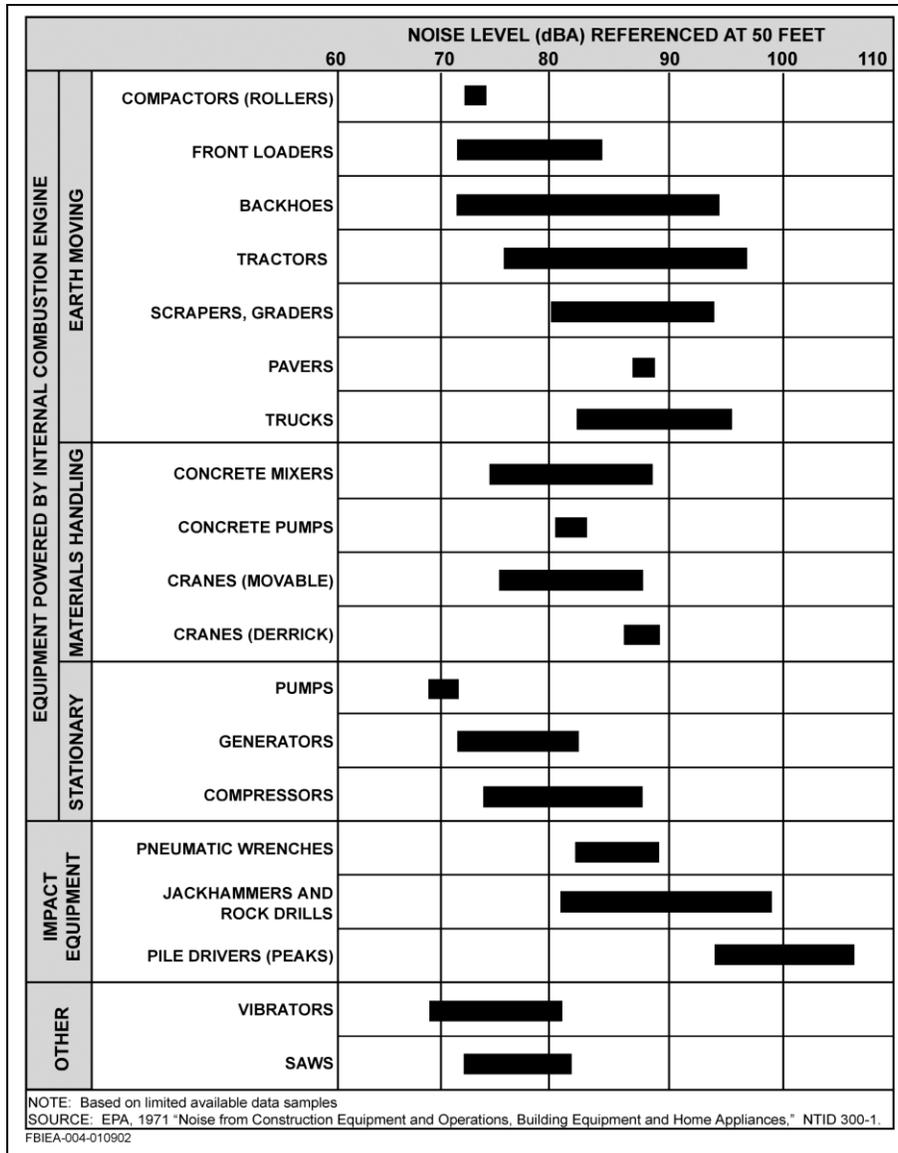


Figure 4-11 Typical Construction Equipment Noise Levels

Alternatives A, B, D, and E. Under all of the alternatives, the proposed school sites are located within areas that experience noise levels in excess of 65 dB DNL. However, these noise levels are associated with military training and would not occur on a daily or even hourly basis and are intermittent. In addition, noise levels would be attenuated inside the school by anywhere from 17 to 25 dB due to walls and insulation materials (USEPA 1972). These noise levels then would fall well below the 65-dB threshold indicated by FICUN.

Alternatives A, B and E are located in proximity to training and/or industrial activities and tank trails that may cause noise disturbances to school operations, and Alternative E is situated adjacent to the National Guard motorpool. While training, motorpool activities, and/or traffic may be heard by students and be

potentially disruptive to nearby classrooms, activities are not likely to raise noise impacts above unacceptable levels. Additionally, noise levels would be attenuated by the building.

Children would not be exposed to health risks due to noise by any of the proposed action alternatives and no impacts are anticipated.

Alternative C: Southern Oaks. The noise impacts associated with Alternative C are identical to those described for the other action alternatives with an additional potential noise-related impact due to the proximity of this site to WAAF and proximity to a National Guard training site located approximately 150-350 feet to the south. The proximity of WAAF Runway 33, about 3,500 feet east of the proposed alternative location, could result in increased noise impacts from aircraft overflight. While the current use of WAAF is limited—most Army aviation traffic use Hunter Army Airfield to the east—there are plans to upgrade the runways and facilities available at WAAF. These upgrades are expected to return the usefulness of WAAF facilities in order to service fixed- and rotary-wing aircraft operated by both civilian and military operations. With this development and the projected increase in civilian and military use, there could be potential moderate to significant effects on noise if the school were established at this site.

The National Guard training site utilizes blank ammunition rounds (5.56 mm) and grenade and small arms simulators for training that would cause these facilities to be located within Noise Zone III (> 104dB). While the facilities could be constructed with noise attenuating materials, this would only help with the blank rounds use and would not do anything to prevent noise annoyance to children playing outside on the school grounds. Even though these are DoD facilities, the U. S. Army Center for Health Promotion and Preventative Medicine very strongly discouraged the placement of child and youth facilities at this location (Fort Stewart 2009b).

4.3 Public Health and Safety

In terms of public health, none of the alternatives would impede the ability of local facilities (police, fire, and hospitals) to provide services, nor would the alternatives introduce any increase in the population that would over-tax local facilities; therefore, no impacts to public health would occur under any alternative, and public health is not analyzed further.

Under Alternatives A, C, and E no impacts are anticipated to public safety during construction (Section 3.1.8). Impacts to safety are also not anticipated for Alternatives B and D so long as the AR-350-19 process has been finalized that officially assesses and clears the sites for land use transfer from training area designation to cantonment (Section 4.2.2). For all alternatives, prescribed industrial safety standards would be required during construction. Only authorized personnel would be allowed within the footprint for construction; in addition, all workers would adhere to safety standards established by OSHA. There are no specific aspects of construction under any of the action alternatives that would create any unique or extraordinary safety issues. All of the proposed alternative construction locations are located outside of the explosive safety quantity distance clear zones and the inhabited building distance clear zones.

Other safety concerns are associated with the continued operation of the elementary school, including proximity to ACPs, airfields, training areas, and high-use roadways.

The following analysis describes potential safety issues at the school once it becomes operational.

Alternatives A and D. The locations described in Alternatives A and D have no foreseeable impacts to public health or safety associated with the continued operation of the elementary school.

Alternative B: 15th Street. Alternative B is situated approximately 0.2 miles from ACP Gate 7, which is a commercial ACP that accommodates POVs as well as trucks, cargo, and other large equipment. As a commercial ACP, Gate 7 is equipped with a Mobile Vehicle and Cargo Inspection System (MVACIS). An MVACIS is a portable vehicles and cargo imager that conducts non-intrusive inspections of freight containers, trucks, cargo containers, rail heads, and passenger vehicles. Operators view the images on a video monitor and can identify voids, false walls or ceilings, and other secret compartments typically associated with the transportation of drugs, explosives, and weapons. If explosives or hazardous materials are identified, an area of up to 1.3 miles needs to be evacuated to ensure safety.

The MVACIS unit at ACP Gate 7 is planned to be relocated to a new commercial ACP being constructed at the intersection of Georgia Highway 119 and Fort Stewart Road S14. When the MVACIS is relocated, Gate 7 is expected to become a general ACP.

Alternative B currently falls within the Gate 7 MVACIS evacuation arc. Implementation of Alternative B could subject the school inhabitants to potential safety issues due to the safety evacuation zone associated with the MVACIS. While the potential of such an incident occurring is minimal, the distance of the proposed school location from ACP Gate 7 requires consideration of these impacts. (The effects of MVACIS proximity to development projects in the area are further addressed in Chapter 5, Cumulative Effects.) As soon as the gate is closed to commercial traffic and the MVACIS is moved to another location, or if it is not moved and the arc distance is mitigated through some other method (e.g., berming), then this alternative would have no impacts to public safety.

Alternative C: Southern Oaks. The proximity of WAAF, about 3,500 feet from the proposed Alternative C location, could result in safety risks from aircraft overflight. This proximity puts Alternative C inside APZ 2, and places of assembly such as schools are incompatible with this land use. With the redevelopment of WAFF facilities and the upgrade and extension of Runway 33, there could be potential moderate effects to safety if the school were established at this site. The future planned construction of a 1,500-foot extension of the WAAF runway would create a potentially significant safety impact to the elementary school at the Alternative C location.

Alternative E: National Guard Location. A National Guard motorpool is currently adjacent to Alternative E. While the two activities are generally incompatible neighbors due to training and motorpool activities and/or increased traffic, each area will be appropriately fenced and access controlled in order to prohibit movement between the two areas. Therefore, no impact to safety is expected under Alternative E.

No Action. Implementation of the no-action alternative would have no impact on safety at Fort Stewart since no new elementary school would be built on Installation property.

CHAPTER 5

CUMULATIVE EFFECTS

5.0 CUMULATIVE EFFECTS

A cumulative effects analysis within an EA should consider the potential environmental consequences resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Assessing cumulative effects involves defining the scope of the other actions and their interrelationship with the proposed action if they overlap in space and time. Cumulative effects can result from individually minor, but collectively significant actions taking place over a period of time.

Cumulative effects are most likely to arise when a proposed action is related to other actions that could occur in the same location or at a similar time. Actions geographically overlapping or close to the proposed action would likely have more potential for a relationship than those farther away. Similarly, actions coinciding in time with the proposed action would have a greater potential for cumulative effects

5.1 Region of Influence

The scope of the cumulative effects analysis (or region of influence [ROI]) involves both the geographic extent of the effects and the time in which the effects could occur. The ROI for the purposes of this EA consists of the developed cantonment area, specifically those areas within Fort Stewart that are adjacent to the five proposed alternative sites (Figure 2-1). Actions outside Installation boundaries are not considered since it would be unlikely that they would interact with the proposed action. The time frame for most construction-related cumulative effects, such as effects to surface water quality and soils, starts in 2010 when construction begins and would end when school operations would begin—about a 14 month timeframe. Some effects, such as resource consumption, noise disturbance, and wetlands loss, would be ongoing as the school will be a permanent and operational structure.

Projects presented in Sections 5.1.1 and 5.1.2 may occur within the next four years, since they have the potential of occurring within the same time period as, or shortly after, the construction of the new Fort Stewart elementary school. Although many projects are occurring at Fort Stewart, this EA focuses only on the projects that are occurring within the ROI and does not discuss projects taking place outside of the greater cantonment area boundaries.

5.1.1 Past and Present Actions

Fort Stewart is an active military Installation that undergoes continuous changes in mission and in training requirements. This process of change is consistent with the United States defense policy that the Army must be ready to respond to threats to American interests throughout the world. Several recent mission and training requirements have resulted in facility construction and upgrades on the Installation. Most of these changes and possible future changes derive from the: 1) Army Campaign Plan (Army 2004); 2) Army Restructure and Transformation (Army 2002); 3) Army Modular Force initiative (Army 2002); 4) reshaping of the domestic military infrastructure to support the return of units currently based overseas as part of the Global Defense Posture and Realignment (Commission on Review 2005); and 5) discretionary stationing actions (activations, inactivations, realignments, and relocations) authorized by

Army Regulation 5-10, Stationing (Army 2001). For example, the Chief of Staff of the Army directed reorganization of the 3rd Infantry Division from three brigades into four smaller, self-contained units of action comprised of complete, battle-ready combat forces (Brigade Combat Teams [BCT]). To create one of the BCTs, Fort Stewart accommodated approximately 2,000 additional Soldiers, providing both temporary and eventually permanent facilities (barracks, administrative buildings, and motorpools) as well as training ranges (Fort Stewart 2004)

5.1.2 Reasonably Foreseeable Actions

In accordance with CEQ's guidance, elements of the projects/actions listed below are identified as having possible effects on the same sensitive environmental receptors as described in this document (Chapter 4, Environmental Consequences). This list of reasonably foreseeable actions focuses on those projects that are relevant and useful in analyzing whether or not the reasonably foreseeable effects of the elementary school construction and operation may have a continuing, additive, and thereby significant relationship to other effects in the ROI.

The Record of Decision (ROD) for Army Growth and Force Structure Realignment identified Fort Stewart as a candidate for the permanent stationing of a light (or infantry) BCT (Army 2007). In addition to establishing this new light brigade, the Grow the Army ROD determined that the existing heavy 4th BCT will be converted into a light brigade. The Wetlands Cumulative Impact Assessment: New Infantry Brigade Combat Team Fort Stewart, Georgia specifically evaluates cumulative impacts of these actions (Fort Stewart 2008c).

Planned construction projects on the Installation and within the ROI for the proposed action over the next four years include (Figure 5-1):

- Facilities, equipment, and runway upgrades, including runway expansion, construction of civilian access road and stormwater management improvements at WAAF;
- New Army and Air Force Exchange Service shopping center (Harmon Avenue Shoppette);
- A new Liberty County Middle School on Fort Stewart;
- Motorpool consolidation and 3rd Sustainment Brigade improvement activities;
- Construction of a commercial vehicle access control point and relocation of the MVACIS from ACP Gate 7;
- Hero Road
- CDC
- IBCT Complex
- Pet Boarding facility expansion
- Highway 144 bypass
- Highway 144 widening
- Unmanned Aerial Systems facilities
- B-5 Cantonment Area expansion

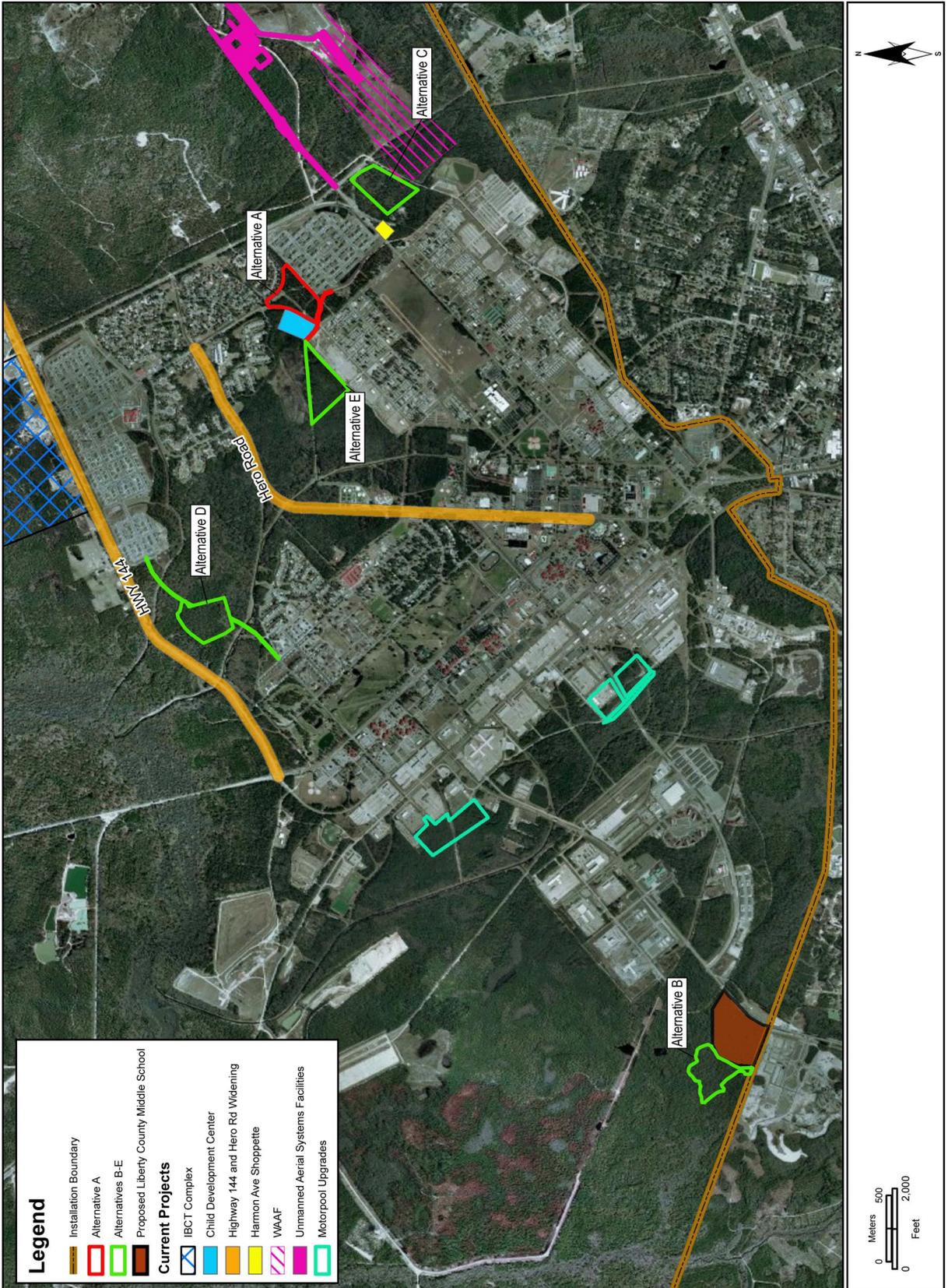


Figure 5-1 Projects within the ROI of the Proposed Action

Foreseeable/ongoing actions outside Installation boundaries that may interact with similar resources as the proposed action include the Independence Community subdivision adjacent to 15th Street and ACP Gate 7 (near Alternative B). The Independence Community will include approximately 7,480 dwelling units, a town center and other commercial units, recreational areas, and pedestrian walkways (<http://www.independence-community.com/master-plan.html>). Tract A, which is the planned unit development closest to Gate 7, will be adjacent to the planned Liberty County Middle School and will be one of the highest density residential areas within Independence with over 900 units (Horse Creek Partners and Thomas & Hutton Engineering Company 2009). Construction has begun in Tract A and 8 townhouses have been completed.

This list of proposed projects is intended to be comprehensive, but during the course of implementing the elementary school, unexpected and currently unidentified projects may arise. Additionally, the listed projects may be modified, locations moved, or new projects added. Of course, any future projects or alterations of existing projects will be evaluated and the appropriate NEPA evaluation undertaken. The evaluation could result in projects that are categorically excluded, require an environmental assessment, or would be of such an extent that an EIS may be called for.

5.2 Cumulative Effects

Resources are analyzed in this section for the potential to be cumulatively impacted by the proposed action when considered incrementally with past, present, and reasonably foreseeable activities.

Noise and cultural resources were found to carry minor-to-negligible potential impacts from the proposed action, but may have the potential for minor cumulative effects. Under each alternative there is minor potential for direct and indirect impacts related to noise from construction and then school operations, which may seem more disruptive as the population and associated daytime activity in and around the cantonment area increases. As discussed in Sections 4.2.3 and 4.3, Alternative C is expected to have substantial noise and safety-related impacts through the future runway extension at WAAF. With regard to cultural resources, no cultural resources would be impacted at the Alternative B site, and the potential cultural resource site that was surveyed/ identified at Alternative D is ineligible for listing in the NHRP. Alternatives A, C, and E have not been surveyed for archaeological resources, so there is a potential for impacts to cultural resources to occur at these three alternative locations. However, if cultural resources were found to occur at these locations they would be managed in accordance with Fort Stewart policy and there would be no significant negative cumulative effect to cultural resources as it is Fort Stewart policy to avoid, protect, or mitigate impacts to culturally significant areas.

The proposed action was found to have no-to-negligible effects on ground water quality, water use and supply, and wastewater; air quality; hazardous and toxic materials and solid waste; utilities; transportation; recreation and visual resources, provisions for the handicapped; socioeconomics or environmental justice, and protection of children (Section 3.1). These negligible effects are also not expected to become cumulatively significant when considered with other past, present, or reasonably foreseeable actions.

Additionally, the action alternatives would not present major impacts when considered cumulatively with the other projects listed above because the alternatives are not in close proximity to the project locations, and the effects from this proposed action are not large enough to negatively impact similar and sensitive resources.

The alternatives presented in this EA have the potential for minor direct or indirect effects to water resources (wetlands, surface water quality, stormwater, and floodplains), soils, biological resources, land use, noise, and safety.

Water Resources. There is the potential for adverse impacts related to water resources primarily through the discharge of stormwater into local surface water systems. Stormwater volume will increase as additional impervious areas are added to the Fort Stewart footprint (the school building, access roads, sidewalks, parking lots, and portions of the playground/sports facilities, etc.). Also, the proposed construction of roadways and buildings, when combined with other earth-moving activities in the main cantonment area, has the potential to further increase turbidity and degrade surface water quality. Alternative D is approximately 3,200 feet from Taylor Creek, described as impaired on the GaEPD 303(d) list, and small creeks and streams that are hydrologically connected to Taylor Creek exist onsite. Although further impairment is possible, it is not likely that the proposed action will further reduce DO content, and all reasonable measures will be taken to avoid impacts to this stream complex, including the implementation of construction and stormwater management BMPs. Fort Stewart will implement the principals of LID in the final planning, design, and permitting of the proposed action in order to simulate pre-development hydrology in the post-development landscape. Measures to minimize adverse impacts in the form of BMPs (identified as part of the SWPPP for construction activities) would also limit those impacts both in the short-term as well as the long-term.

The cumulative impacts analysis for wetlands on the Installation determined that past, present, and reasonably foreseeable actions could potentially affect a total of 19,680 acres of wetlands on Fort Stewart (out of the 91,960 total acres on-Post). This overall disturbance is considered a significant cumulative impact, and its ongoing mitigation is effected through the hydrologic restoration and protection of the bottomland wetlands complex and meandering blackwater stream at the Canoochee Creek Reservoir (FSGA 1999).

Alternative B has the potential to impact 0.71 acres of surveyed wetlands and potentially 3.5 NWI-identified wetland acres. Alternative D and its associated access road have the potential to impact 3.13 acres of NWI wetlands. If there are any unavoidable wetland impacts associated with the proposed action identified as part of the USACE 404(b) permit process, these wetland impacts would be offset through use of the Fort Stewart Mitigation Bank (USEPA 2009 and Fort Stewart 2001b). When considering impacts of past, present, and future actions on Fort Stewart wetland resources, it was determined that no significant adverse incremental impacts to wetlands would occur through the proposed action.

Surface water, stormwater, and floodplains may also experience minor impacts through the proposed action. Construction and operation actions are all expected to be mitigated to the point that effects on

these resources will be minimal to negligible. There is minor potential for a cumulative increase in stormwater and sedimentation impacts from the rise in cantonment construction activity to accommodate the growing Fort Stewart population. These impacts will remain cumulatively minor if local, state, and Federal regulations are met and LID BMPs are applied for all new projects. Impacts to stormwater may be reduced if all new projects prioritize reduction of impervious surface and LID BMPs in design plans.

Additionally, the isolated, site-specific nature of construction activities means that any impacts that do occur will be local to the site of impact and are not expected to migrate and mingle with any past, present, and future actions in the region.

Soils. The cumulative impacts to soils from construction projects occurring presently and in the reasonably foreseeable future would be additive to those of this action and would include soil compaction as well as disturbed and modified soil layers. Exposed soils would become more susceptible to erosion. Soil productivity (i.e., the capacity of the soil to produce vegetative biomass) would also decline in disturbed areas and be completely eliminated for those areas within the footprint of paved or other hardened areas and new structures. This project proposes to introduce approximately 9.5 acres of additional hardened area to an already built-up and populated cantonment area; however, well over 70 percent of the entire Fort Stewart area is still in its natural, relatively undisturbed state. When incrementally considering impacts of past, present, and future actions, it was determined that no adverse cumulative impacts to soils would occur.

Biological resources. No significant adverse impacts on native vegetation and wildlife would be expected from the elementary school construction under any of the alternatives. When considered cumulatively with the anticipated growth at the Installation, this incremental habitat loss could present adverse impacts if it continues to occur across the Installation. Off-Post development of Independence Community and other subdivisions adjacent to Gate 7 (near Alternative B) would remove potential foraging habitat for protected species, further fragment forest resources, and decrease habitat options for local wildlife.

However, the intent to locate the school adjacent to already developed areas and consolidate student and Family services into distinct, walkable neighborhoods would help to keep the populated cantonment area from sprawling into currently undisturbed habitat.

Land Use and Visual Resources. When land use is evaluated in association with past, present, and reasonably foreseeable projects, it is not anticipated that there would be significant cumulative impacts to these resources from the proposed action. When considered cumulatively with the anticipated growth at the Installation, the incremental changes to land use could eventually present adverse impacts to training areas and on-Post recreation resources if land use conversion (from training to built environment) continues to occur across the Installation. Visual resources are expected to experience a minor cumulative impact as a result of this action; when considered with other past and future development in the cantonment area infilling forested parcels with buildings tends to reduce the local, overall visual quality experienced in that area.

Safety. If commercial vehicle access and its associated MVACIS at ACP Gate 7 and near to Alternative B is not moved or mitigated, there would be the potential for an adverse safety impact because the evacuation arc associated with this device would include the area proposed for development of the elementary school under Alternative B (Figure 5-2). The proposed Liberty County Middle School site and the off-Post Independence Community subdivision are also located within the MVACIS evacuation arc. Overall, approximately 4,400 dwelling units in Independence are projected for all tracts that may be within the current maximum evacuation arc. As this portion of the Installation becomes more developed, it is becoming incrementally more important that the commercial vehicle entrance, and thereby the need for the MVACIS equipment, be moved to a more remote area of Fort Stewart. An EA to relocate the MVACIS was signed by Fort Stewart on 4 January 2010, and the decision to move this device is expected to be implemented in FY10 or FY11 (Fort Stewart 2009d)

For Alternative C, the future WAAF runway located across Fort Stewart Road 47 will be extended an additional 1,500 feet, which means the safety clear zone and APZs for the runway would be extended as well (see Sections 4.2 and 4.3). Therefore, proximity to WAAF could pose a serious safety risk to the elementary school facilities, and the cumulative effect of the future runway extension would involve an evaluation of mitigation for this impact with likely mission-affecting results. With the potentially significant impact associated with safety and the very strong recommendation by the U. S. Army Center for Health Promotion and Preventative Medicine discouraging the placement of child and youth facilities at this location, Alternative C has been eliminated for further consideration as a viable option for the proposed action.

No Action Alternative. If the no-action Alternative were selected and a new elementary school not constructed, there would be no associated incremental, cumulative increase in stormwater runoff or risks to child safety; no additional wetlands, soils, and vegetation impacts; no further decrease in water or visual quality; and no new changes to land use patterns. However, similar impacts to these resources would still be observed in other areas of the Installation, especially the greater cantonment area, as population growth dictates the need for increased availability of on-Post amenities and military training resources.

Additionally, the other three on-Post elementary schools would see a continued rise in student population as they are stretched to accommodate current and future overflow issues. Quality of educational services in over-crowded classrooms would diminish, and overall quality of life for military Families at Fort Stewart would decline.

5.3 Irreversible and Irretrievable Commitment of Resources

NEPA requires the environmental analysis include identification of any irreversible and irretrievable commitment of resources that would be involved in the proposed action should it be implemented. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and

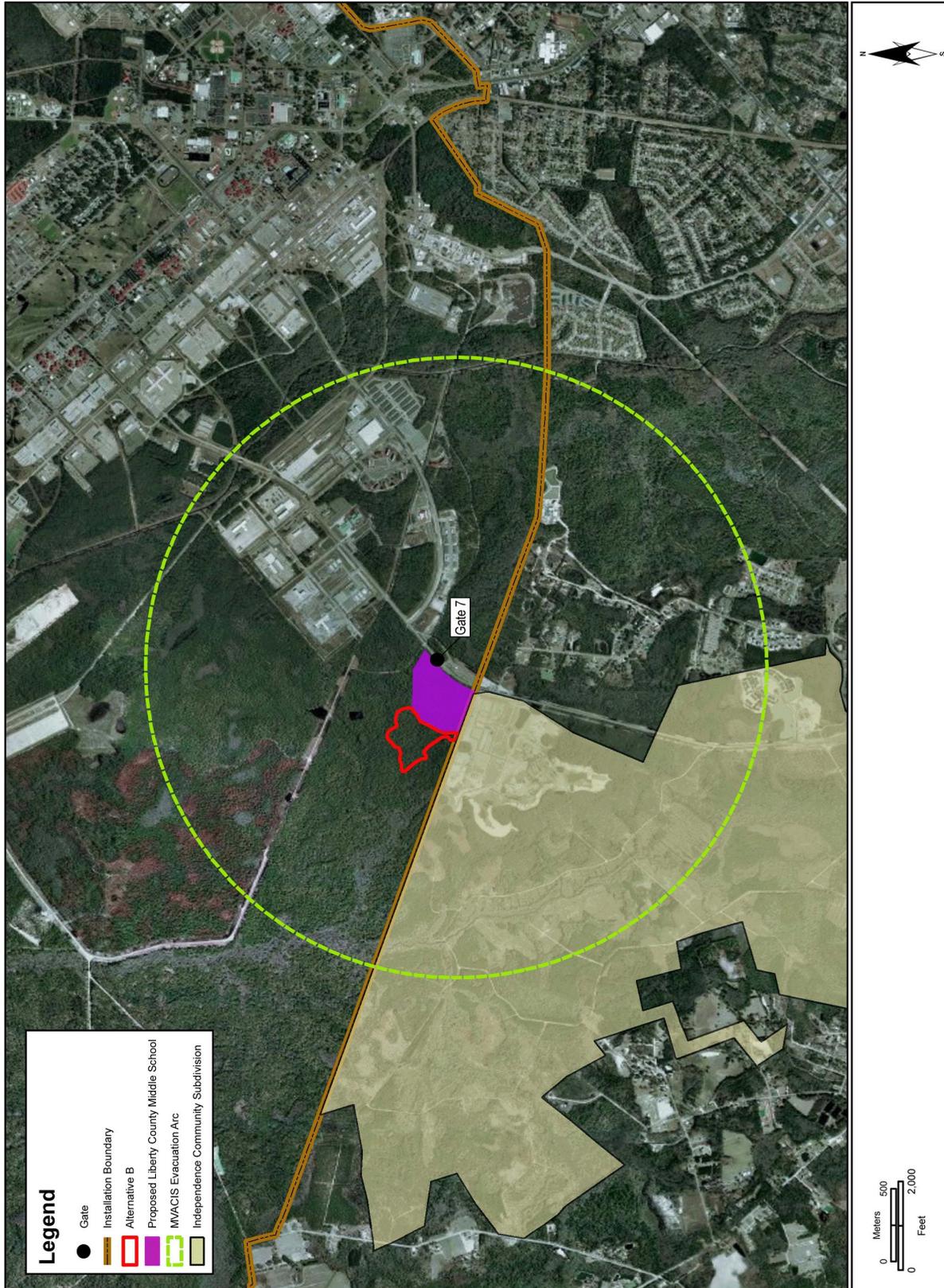


Figure 5-2 MVACIS Evacuation Arc for Alternative B

the effects this use could have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable timeframe. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural resource).

For the proposed action at Fort Stewart, most resource commitments are neither irreversible nor irretrievable. Most environmental consequences are short-term and temporary, such as soil disturbance from construction, or longer lasting but negligible, such as wetlands disturbance with mitigation and the addition of new impervious surfaces. The Fort Stewart elementary school construction proposal would require consumption of limited amounts of materials typically associated with construction (wood, metal, asphalt, and fuel). However, the amount of these materials used is not expected to significantly decrease the availability of these resources.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

6.0 CONCLUSIONS AND RECOMMENDATIONS

The no-action alternative would not meet the purpose of and need for constructing an elementary school at Fort Stewart. The need to meet current and future growth projections at Fort Stewart and continue to provide excellence in education to the families of Fort Stewart would be met by the action alternatives. The environmental consequences of the proposed action alternatives and no-action alternative for the relevant environmental resource categories are presented in Table 6-1.

Following an evaluation and comparison of impacts, Alternative A would result in the least impacts to the human and natural environment and thus is the preferred alternative for locating the elementary school. (Although, the area still requires survey to ensure the absence of cultural resources and thus impacts to these resources are possible.)

Alternative site B, although within proximity to training and industrial zones, could be implemented with little impact to the human and natural environment. This alternative will become a viable option when the Gate 7 commercial vehicle entrance and supporting MVACIS equipment are relocated (or the evacuation arc mitigated) and if the proposed action is implemented in such a manner that results in no net losses to wetlands. Additionally, although within the cantonment perimeter, Alternative B would require official landuse designation change from training to Family housing through AR-350-19 to ensure the absence of EOD and other munitions constituents of concern.

Alternative site C was found not to be an acceptable alternative due to safety and noise impacts associated with its proximity to the WAAF runway extension and APZ 2. This alternative is also within proximity of training and industrial zones. This site has also not been surveyed for cultural resources, so there is potential for Alternative C to present impacts to cultural resources as well.

Road access and school design may potentially impact wetlands in Alternative D; thus, Alternative D may also be a viable option, but wetlands would need to be delineated, avoided, and associated mitigations employed. Alternative D also would require additional planning and construction mitigation measures as it is located within the 100-year floodplain. Additionally, although within the cantonment perimeter, Alternative D would require the completion of the official landuse designation change from training to Family housing through AR-350-19 to ensure the absence of EOD and other munitions constituents of concern.

Alternative E is next to the National Guard motorpool, which may lead to possible noise impacts and other incompatibility issues. Alternative E has also not been surveyed for cultural resources so there is a potential for impacts to cultural resources at this location.

None of the alternatives would contribute significantly to cumulative degradation of any resources that may also be impacted by other Fort Stewart projects currently planned to occur or that have occurred within geographical proximity to the proposed action.

In summary, if the mitigation measures are applied and Alternative C is eliminated as described above, an Environmental Impact Statement is not required for any of the alternatives.

In addition, through this analysis it is recommended that Alternative A is best able to support the required criteria for the proposed action (size, location within cantonment perimeter, community support facilities, vehicular and pedestrian circulation, existing utilities, no-to-negligible wetland and other environmental concerns, and avoidance of training and noise impacts). The remaining alternatives are not as well-suited to the required criteria as Alternative A but (excepting Alternative C) are viable options.

Table 6-1 Alternative Impacts Comparison

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Size (Acres)	<ul style="list-style-type: none"> • 20 – plus 2 from National Guard • Tank trail relocation 	<ul style="list-style-type: none"> • 22 	<ul style="list-style-type: none"> • 22 • Plus access road 	<ul style="list-style-type: none"> • 22 • Plus less than 2.5 for access road 	<ul style="list-style-type: none"> • 22 • Plus access road 	N/A	N/A
Water Resources							
Surface Water Quality	<ul style="list-style-type: none"> • Minor potential increase in sedimentation impacts during construction if local, state, and Federal regulations are not met • No impacts from school operation due to LID BMPs • Potential for sedimentation and pollution impacts through continued use of tank trail along drainage 	<ul style="list-style-type: none"> • Minor potential increase in sedimentation impacts during construction if local, state, and Federal regulations are not met • No impacts from school operation due to LID BMPs 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in sedimentation impacts from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts remain cumulatively minor if local, state, and Federal regulations are met and LID BMPs are applied for all new projects
Stormwater	<ul style="list-style-type: none"> • Stormwater systems would not be impacted through construction or operation. • Estimated net increase of approximately 9.5 acres of impervious surface 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Stormwater systems would not be impacted through construction or operation. • Estimated net increase of greater than 9.5 acres of impervious surface 	<ul style="list-style-type: none"> • Same as Alternative C 	<ul style="list-style-type: none"> • Same as Alternative C 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in stormwater impacts from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts may be reduced if all new projects prioritize reduction of impervious surface and LID BMPs in design plans

Table 6-1 Alternative Impacts Comparison

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Wetlands	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor (0.71 acres of projected wetlands impacts based upon existing delineations) wetland impacts from facility construction if management practices and mitigation measures not applied 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor (3.13 acres of projected wetland impacts using NWI wetland mapping) wetland impacts from facility and access road construction if management practices and mitigation measures not applied. A field-based wetland delineation has not been performed for this location 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • The overall cumulative effects of development on Fort Stewart have been significant to wetlands resources but remediated through Cannoochee Creek Restoration Mitigation Bank. • The proposed action does not significantly contribute to wetlands losses in the region
Floodplains	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Located within 100-year floodplain with a potential for future flooding 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts
Biological Resources	<ul style="list-style-type: none"> • Minor impacts to vegetation and wildlife due to loss of vegetation and habitat and increased fragmentation • No impacts to protected species 	<ul style="list-style-type: none"> • Minor impacts to vegetation and wildlife due to loss of vegetation and habitat and increased fragmentation • No impacts to protected species 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Incremental loss of wooded area and habitat, as well as continued forest fragmentation, as rise in cantonment construction activity accommodates growing Fort Stewart population • Focus on infilling cantonment perimeter will reduce cumulative habitat loss and fragmentation

Table 6-1 Alternative Impacts Comparison

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Soils	<ul style="list-style-type: none"> • Potential short-term minor impacts to soils due to land disturbance during construction • If local, state, and Federal BMPs and LID practices are met then no impacts would result from construction or operation • Potential for erosion impacts through continued use of tank trail along drainage 	<ul style="list-style-type: none"> • Potential short-term minor impacts to soils due to land disturbance during construction • If local, state, and Federal BMPs and LID practices are met then no impacts would result from construction or operation 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • Similar to Alternative B, but slightly greater impact due to increased disturbance for access road 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Minor potential for cumulative increase in soil disturbance, compaction, hard-covering, erosion and loss of productivity from rise in cantonment construction activity to accommodate growing Fort Stewart population • Impacts may be reduced if all new projects prioritize reduction of impervious surface and LID BMPs in design plans
Human Environment							
Hazardous and Toxic Materials and Waste	<ul style="list-style-type: none"> • Negligible impacts for construction and operation due to strict adherence to applicable regulations for handling, storing, and disposing hazardous and toxic materials and waste, and because such materials, if used, will be used in minute quantities. 	<ul style="list-style-type: none"> • Same as Alternative A • Potential short-term minor impact due to the possibility that EOC and other munitions constituents of concern may be discovered as training area D-1 is officially transferred to cantonment designation through AR-350-19 process 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Same as Alternative A • Potential short-term minor impact due to the possibility that EOC and other munitions constituents of concern may be discovered as training area A-20 is officially transferred to cantonment designation through AR-350-19 process 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • No impact 	<ul style="list-style-type: none"> • No impact

Table 6-1 Alternative Impacts Comparison

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Land Use, Recreation, and Visual Resources	<ul style="list-style-type: none"> • Minor impact from redesignation of land use from forested to Family housing • No impact to recreational opportunities • Minor impact to visual resources 	<ul style="list-style-type: none"> • Minor impact from redesignation of land use from forested to Family housing • Minor impact to recreational opportunities • Minor impact to visual resources • Possible conflict with nearby training area and requires transfer from Training Area D-1 designation to cantonment area through the AR-350-19 process 	<ul style="list-style-type: none"> • Significant adverse impact from redesignation of land use from forested to Family housing due to proximity of WAAF runway extension and APZ 2. • No impact to recreational opportunities • Minor impact to visual resources • Possible conflict with nearby training area 	<ul style="list-style-type: none"> • Similar to Alternative A • Lands currently designated as part of Training Area A-20 and must complete AR-350-19 process to be re-classified as cantonment area. 	<ul style="list-style-type: none"> • Similar to Alternative B 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Potential impacts to mission through continued loss of training areas to accommodate rise in Installation population • Continual infilling of forested parcels with buildings may cumulatively reduce the overall visual quality of the cantonment as construction occurs
Cultural Resources	<ul style="list-style-type: none"> • Survey would need to be conducted to ascertain whether historical, archaeological or traditional resources are impacted. 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • Minor impacts due to potential impact of known but ineligible site for the NHRP 	<ul style="list-style-type: none"> • Same as Alternative A 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts from Alternatives B and D • If cultural resources were found to occur at Alternatives A, C, or E they would be managed in accordance with Fort Stewart policy; thereby, there would be minor-to-negligible impacts to cultural resources from rise in cantonment construction activity to accommodate growing Fort Stewart population

Table 6-1 Alternative Impacts Comparison

<i>Resource</i>	<i>Alternative A Austin Road</i>	<i>Alternative B 15th Street</i>	<i>Alternative C Southern Oaks</i>	<i>Alternative D Dirt Road</i>	<i>Alternative E National Guard</i>	<i>Alternative F No-Action</i>	<i>Cumulative Impacts</i>
Noise	<ul style="list-style-type: none"> • Minor impacts from short-term, intermittent, construction noise • Potential continued disturbance from adjacent tank trail 	<ul style="list-style-type: none"> • Minor impacts from short-term, intermittent, construction noise • Potential continued disturbance from nearby training activities 	<ul style="list-style-type: none"> • Same as Alternative B • Potential moderate to significant adverse impact from proximity of WAAF runway extension and APZ 2. 	<ul style="list-style-type: none"> • Minor impacts from short-term, intermittent, construction noise. 	<ul style="list-style-type: none"> • Same as Alternative B 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Under each alternative there is negligible-to-minor potential for noise impacts related to construction and school operations, which may seem more disruptive as the population and associated daytime activity in and around the cantonment area increases.
Public Health and Safety	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • Potential adverse impacts to health and safety until cleared through the AR-350-19 process transferring this location from training to cantonment • Moderate impacts due to proximity to evacuation arc associated with MVACIS 	<ul style="list-style-type: none"> • No impacts to health • Significant adverse impact from proximity of WAAF runway extension and APZ 2 	<ul style="list-style-type: none"> • Potential adverse impacts to health and safety until cleared through the AR-350-19 process transferring this location from training to cantonment • 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No impacts 	<ul style="list-style-type: none"> • No significant cumulative impacts

CHAPTER 7

REFERENCES

7.0 REFERENCES CITED

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CHAPTER 8
LIST OF PREPARERS AND CONTRIBUTORS

8.0 LIST OF PREPARERS AND CONTRIBUTORS

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Years of Experience: 2

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B.S. Environmental Science, University of North Carolina, Wilmington, 2007

Years of Experience: 2

APPENDIX A
LIST OF ACRONYMS

APPENDIX A

ACRONYMS AND ABBREVIATIONS

ACP	Access Control Point	ICRMP	Integrated Cultural Resources Management Plan
APZ	Accident Potential Zone	IMA	Installation Management Agency
AR	Army Regulation	IMP	Integrated Management Practices
BMP	Best Management Practice	INRMP	Integrated Natural Resources Management Plan
CDC	Child Development Center	LEED	Leadership in Energy and Environmental Design
CEQ	Council on Environmental Quality	LID	Low Impact Development
CFR	Code of Federal Regulations	LUPZ	Land Use Planning Zone
CRM	Cultural Resources Management	mgd	Million Gallons per Day
CWA	Clean Water Act	MVACIS	Mobile Vehicle and Cargo Inspection System
dB	Decibel	NEPA	National Environmental Policy Act
dBA	A-Weighted Decibel	NGTC	National Guard Training Center
dBC	C-Weighted Decibel	NHPA	National Historic Preservation Act
DNL	Day-Night Average Sound Level	NOI	Notice of Intent
DO	Dissolved Oxygen	NPDES	National Pollutant Discharge Elimination System
DoD	Department of Defense	NPS	National Park Service
DRMO	Defense Reutilization and Marketing Office	NRCS	Natural Resources Conservation Service
EA	Environmental Assessment	NRHP	National Register of Historic Places
EIS	Environmental Impact Statement	NWI	National Wetlands Inventory
EMC	Electric Membership Association	OSHA	Occupational Safety and Health Administration
ENRD	Environmental and Natural Resources Division	RCW	Red-cockaded woodpecker
EOC	Explosives of Concern	SHPO	State Historic Preservation Office
ESCA	Erosion and Sedimentation Control Act	SWPPP	Stormwater Pollution Prevention Plan
ESPCP	Erosion Sedimentation Pollution Control Plan	TMDL	Total Maximum Daily Load
FICON	Federal Interagency Committee on Noise	USEPA	U.S. Environmental Protection Agency
FICUN	Federal Interagency Committee on Urban Noise	USFWS	U.S. Fish & Wildlife Service
FNSI	Finding of No Significant Impact	WAAF	Wright Army Airfield
FY	Fiscal Year		
FYDP	Future Years Defense Plan		
GA DNR	Georgia Department of Natural Resources		
GAEPD	Georgia Environmental Protection Division		
GASWCC	Georgia Soil and Water Conservation Commission		
GDE	Georgia Department of Education		
GHG	Greenhouse Gas		
HAAF	Hunter Army Airfield		
HDR	High Density Residential		
HMU	Habitat Management Unit		

APPENDIX B
AGENCY CORRESPONDENCE



OFFICE OF PLANNING AND BUDGET

Sonny Perdue
Governor

Trey Childress
Director

GEORGIA STATE CLEARINGHOUSE MEMORANDUM EXECUTIVE ORDER 12372 REVIEW PROCESS

TO: Katrina Epps
DPW-Environmental Div.
Dept. of the Army

FROM: Barbara Jackson
Georgia State Clearinghouse

DATE: April 20, 2010

SUBJECT: GA 100224003 -- EA/Draft FONSI: Establishment of a FY 2010 Dept. of Defense Elementary School at Fort Stewart, GA (on 22 acre parcel at Austin Road)

Enclosed comments were received from the reviewing agency after the review period and after the project had been closed out. Although the reviewing agency may have already responded to you directly, I have gone ahead and sent you a copy of their comments for your files. We will retain a copy with our files also.

Thank you.

/bj

cc: Amber Franks

Encl.

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., SE, Suite 1154, Atlanta, Georgia 30334-9000

Chris Clark, Commissioner

Environmental Protection Division

F. Allen Barnes, Director

Land Protection Branch

Mark Smith, Branch Chief

Phone: 404/656-7802 FAX: 404/651-9425

March 24, 2010

BY FAX

Ms. Barbara Jackson
Georgia State Clearinghouse
270 Washington Street, SW, Eighth Floor
Atlanta, Georgia 30334

RE: Comments on the *Environmental Assessment and Draft Finding of No Significant Impact for the establishment of a Department of Defense Elementary School at Fort Stewart, GA*, State ID No. GA100224003, received February 26, 2010

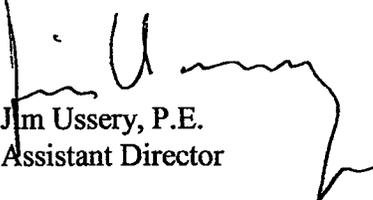
Dear Ms. Jackson:

The Georgia Environmental Protection Division (EPD) has completed its review of the above-referenced document and has the following comments.

According to the EA, to allow for the establishment of the school at the Alternative A location (preferred location), an unpaved tank trail in the vicinity of that location will have to be rerouted to an area along a drainage system. If the new tank trail will be constructed along (as opposed to crossing over) an intermittent or perennial stream and it will encroach within 25 feet of the stream, the construction of the tank trail will require a stream buffer variance from EPD. To address post-construction and maintenance water quality issues, we would recommend that the tank trail be constructed according to the "Georgia Better Back Roads Field Manual," prepared by the Georgia Resource Conservation and Development Council and funded by EPD. This document can be found on <http://www.tworiversrcd.org> website.

Should you have any questions concerning this correspondence, please contact Amy Potter at (404) 656-2833.

Sincerely,



Jim Ussery, P.E.
Assistant Director

File: Fort Stewart (R)

S:\RDRIVE\AMY\DoD Unit\NEPA\stewart\EA & FONSI for est of DoD Elem school.doc

RECEIVED

APR 16 2010

GEORGIA
STATE CLEARINGHOUSE

CC: Amber Franks



OFFICE OF PLANNING AND BUDGET

Sonny Perdue
Governor

Trey Childress
Director

GEORGIA STATE CLEARINGHOUSE MEMORANDUM EXECUTIVE ORDER 12372 REVIEW PROCESS

TO: Katrina Epps
DPW-Environmental Div.
Dept. of the Army

FROM: Barbara Jackson *bj*
Georgia State Clearinghouse

DATE: 3/26/2010

PROJECT: EA/Draft FONSI: Establishment of a FY 2010 Dept. of Defense Elementary School
at Fort Stewart, GA (on 22 acre parcel at Austin Road)

STATE ID: GA100224003

The applicant/sponsor is advised that DNR's Environmental Protection Division did not comment within the review period but plan to submit their comments soon.

The applicant/sponsor is advised to note additional comments from DNR's Historic Preservation Division.

Provided that there are no impending issues from DNR/EPD, the State level review of the above-referenced proposal has been completed, and the proposal found to be consistent with those state or regional goals, policies, plans, fiscal resources, criteria for Developments of Regional Impact (DRI), environmental impacts, federal executive orders, acts and/or rules and regulations with which the state is concerned.

/bj

Enc.: Coastal RC of Georgia, Mar. 5, 2010
GA DOE, Mar. 24, 2010
DNR/HPD, Mar. 17, 2010

Form NCC
Oct. 2008

D Remote ID: R page of

**GEORGIA STATE CLEARINGHOUSE MEMORANDUM
EXECUTIVE ORDER 12372 REVIEW PROCESS**

TO: Barbara Jackson
Georgia State Clearinghouse
270 Washington Street, SW, Eighth Floor
Atlanta, Georgia 30334

FROM: MS. TRICIA REYNOLDS
COASTAL RC OF GEORGIA

APPLICANT: Dept. of the Army - Fort Stewart, GA

PROJECT: EA/Draft FONSI: Establishment of a FY2010 Dept. of Defense Elementary
School on Fort Stewart, GA (on 22 acre parcel at Austin Road)

STATE ID: GA100224003

FEDERAL ID:

DATE: March 5, 2010

- This notice is considered to be consistent with those state or regional goals, policies, plans, fiscal resources, criteria for developments of regional impact, environmental impacts, federal executive orders, acts and/or rules and regulations with which this organization is concerned.

This notice is not consistent with:

- The goals, plans, policies, or fiscal resources with which this organization is concerned. (Line through inappropriate word or words and prepare a statement that explains the rationale for the inconsistency. Additional pages may be used for outlining the inconsistencies).
- The criteria for developments of regional impact, federal executive orders, acts and/or rules and regulations administered by this agency. Negative environmental impacts or provision for protection of the environment should be pointed out. (Additional pages may be used for outlining the inconsistencies).
- This notice does not impact upon the activities of the organization.

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MAR 05 2010

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STATE CLEARINGHOUSE**

Form SC-3
Sep. 2009

D Remote ID: R page of

**GEORGIA STATE CLEARINGHOUSE MEMORANDUM
EXECUTIVE ORDER 12372 REVIEW PROCESS**

TO: Barbara Jackson
Georgia State Clearinghouse
270 Washington Street, SW, Eighth Floor
Atlanta, Georgia 30334

FROM: MR. RANDY TROWELL
GA DEPT. OF EDUCATION

APPLICANT: Dept. of the Army - Fort Stewart, GA

PROJECT: EA/Draft FONSI: Establishment of a FY 2010 Dept. of Defense Elementary
School at Fort Stewart, GA (on 22 acre parcel at Austin Road)

STATE ID: GA100224003

FEDERAL ID:

DATE:

This notice is considered to be consistent with those state or regional goals, policies, plans, fiscal resources, criteria for developments of regional impact, environmental impacts, federal executive orders, acts and/or rules and regulations with which this organization is concerned.

This notice is not consistent with:

The goals, plans, policies, or fiscal resources with which this organization is concerned. (Line through inappropriate word or words and prepare a statement that explains the rationale for the inconsistency. (Additional pages may be used for outlining the inconsistencies. Be sure to put the GA State ID number on all pages).

The criteria for developments of regional impact, federal executive orders, acts and/or rules and regulations administered by your agency. Negative environmental impacts or provision for protection of the environment should be pointed out. (Additional pages may be used for outlining the inconsistencies. Be sure to put the GA State ID number on all pages).

This notice does not impact upon the activities of the organization.

**NOTE: Should you decide to FAX
this form (and any attached pages),
it is not necessary to mail the
originals to us. [770-344-3568]**

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MAR 24 2010
GEORGIA
STATE CLEARINGHOUSE

Form SC-3
Sep. 2009



HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

March 15, 2010

Barbara Jackson
Georgia State Clearinghouse
270 Washington Street, SW, Eighth Floor
Atlanta, Georgia 30334

**RE: Ft. Stewart: Construct Elementary School, Austin Road
Liberty County, Georgia
GA-100224-003**

Dear Ms. Jackson:

The Historic Preservation Division (HPD) has reviewed the information provided regarding the above-referenced project. Our comments are offered to assist the U.S. Department of the Army and Fort Stewart in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended.

Based on the information provided, which includes the *Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the Establishment of a Department of Defense Elementary School at Fort Stewart, Georgia*, HPD concurs with the recommendation that if Alternatives A, C, or E are selected as the preferred alternative, then these three project tracts will need to be surveyed for the presence of historic properties. HPD understands that Alternative B has been surveyed for historic properties and none were identified, and that one archaeological site found to be ineligible for the National Register of Historic Places (NRHP) was identified at Alternative D. Therefore, it appears no archaeological resources or historic structures that are listed in or eligible for listing in the NRHP will be affected by the proposed new school construction for Alternatives B and D, as defined in 36 CFR Part 800.4(d)(1).

Please refer to project number GA-100224-003 in any future correspondence regarding this undertaking. If we may be of further assistance, please do not hesitate to contact me at (404) 651-6624, or Jackie Tyson, Environmental Review Historian, at (404) 651-6777.

Sincerely,

Elizabeth Shirk
Environmental Review Coordinator

ES:jht

RECEIVED

MAR 17 2010

**GEORGIA
STATE CLEARINGHOUSE**

APPENDIX C
NOTICE OF AVAILABILITY AND
AFFIDAVIT OF PUBLICATION

**NOTICE OF
AVAILABILITY**

**ENVIRONMENTAL
ASSESSMENT AND
DRAFT FINDING OF
NO SIGNIFICANT
IMPACT**

For the Establishment of
a Fiscal Year 2010
Department of Defense
Elementary School at
Fort Stewart, Georgia

The Army proposes to
construct and operate an
additional elementary
school within the
Installation boundary.
The school would be
constructed and operated
by the Department of
Defense to accommodate
450 children between
5 and 11 years of age
(grades kindergarten
through 6) that comprise
of existing overflow and
anticipated increases in
the on-Post student
population. Construction
of the school would begin
in summer 2010 with a
completion date in 2011.

The Environmental
Assessment addresses
the potential impacts to
environmental and
socioeconomic resources.
The Environmental
Assessment, resulting in
a Draft Finding of No
Significant Impact,
indicates that no
significant adverse
impacts would result
from the proposed
action. A copy of the
Environmental
Assessment and Draft
Finding of No Significant
Impact will be available
for public review from
February 26 through
March 27, 2010, at the
public libraries and Post
library listed below. All
public review comments
must be received no
later than March 27,
2010.

1LT George P. Hays
Library, Building 411,
316 Lindquist Rd.,
Fort Stewart, GA
Mon. - Thurs., 10:30 A.M.
to 9:00 P.M.
Fri. closed
Sat.-Sun. 11:30 A.M.
to 6:00 P.M.

Liberty County Public
Library, 236 Memorial
Drive, Hinesville, GA
Mon. - Thurs.,
9:00 A.M. to 9:00 P.M.
Fri. - Sat.,
9:00 A.M. to 6:00 P.M.
Sun.,
2:00 P.M. to 6:00 P.M.

Mall Branch Library,
7 Mall Annex,
Savannah, GA

Mon. and Wed.,
9:00 A.M. to 8:00 P.M.
Tues., Thurs. and Sat.
9:00 A.M. to 6:00 P.M.
Fri. and Sun. closed

Southwest Chatham
Branch Library,
14097 Abercorn Street,
Savannah, GA
Mon. closed
Tues. and Thurs.,
9:00 A.M. to 8:00 P.M.
Wed., Fri.-Sun.,
9:00 A.M. to 6:00 P.M.

Request all comments be
mailed to the following
address:

Chief, Environmental
Division
(Mr. Thomas C. Fry)
Directorate
of Public Works
1550 Frank Cochran
Drive, Bldg. 1137
Fort Stewart, GA
31314-4927

AFFIDAVIT OF PUBLICATION
SAVANNAH MORNING NEWS

STATE OF GEORGIA
COUNTY OF CHATHAM

Personally appeared before me, Alaina Fincher, to me known, who being sworn, deposes and says:

That she is the Obituary/Legal Clerk for Southeastern Newspaper Corporation, a Georgia corporation, doing business in Chatham County, GA, under the trade name of Savannah Morning News, a daily newspaper published in said county;

That he is authorized to make affidavits of publication on behalf of said published corporation;

That said newspaper is of general circulation in said county and in the area adjacent thereto;

That he has reviewed the regular editions of the Savannah Morning News, published on:

Feb 25, 2010 _____, 2010,

_____, 2010, _____, 2010,
and finds that the following advertisement, to-wit:

Appeared in each of said editions.
Sworn to and subscribed before me

This 26 day of Feb, 2010

Al Fincher
(Deponent)

Eugene J Cronk
Notary Public, Chatham County, Ga.

EUGENE J. CRONK
Notary Public, Chatham County, GA
My Commission Expire January 25, 2014

