Draft

Supplemental Environmental Assessment for Construction of a New Entry Control Complex

Homestead Air Reserve Base Miami-Dade County, Florida

Prepared for

482nd Fighter Wing
Air Force Reserve Command

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Executive Summary

This Supplemental Environmental Assessment (SEA) evaluates the resource impacts that would result from the construction of a new entry control complex at Homestead Air Reserve Base (HARB), Florida. This SEA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, as codified in Title 32, Code of Federal Regulations (CFR), Part 989 (Secretary of the Air Force 2003).

Purpose and Need for Action

The purpose of the Proposed Action is to provide a new permanent entry control complex (ECC) for HARB that would accommodate the current mission/tenants and anticipated future increases in gate traffic. The Old Main Gate on Southwest (SW) 127th Avenue (also Coral Sea Boulevard) was closed when it was determined to be highly vulnerable to antiterrorism/force protection (AT/FP) concerns due to the proximity of base lodging. The current HARB entry gate on Westover Street, known as the Westover Gate, serves as the only fully operational gate for the base. This gate was not designed to handle the current volume of base traffic, the configuration is constricted and the design is inadequate to maintain acceptable traffic flows through the gate. The new ECC would minimize congestion and related traffic hazards and delays.

Proposed Action and Alternatives

This SEA evaluates the impacts associated with the current Preferred Alternative for the Proposed Action (2015). In 2010, an Environmental Assessment (EA) was completed that analyzed the former Preferred Alternative for the Proposed Action and three action alternatives. The 2010 EA Preferred Alternative was never implemented and, as a result, the current Preferred Alternative (2015 SEA) to implement the Proposed Action was subsequently developed. It is important to note that the 2010 EA and the 2015 SEA analyze the same Proposed Action, but the Preferred Alternative to implement the Proposed Action has changed based on revisions in project details, and the two Preferred Alternatives should be distinguished from one another. The impacts associated with the SEA Preferred Alternative and the SEA No Action Alternative are evaluated as part of this SEA. In addition, alternatives previously evaluated in detail as part of the 2010 EA were revaluated for those resources where baseline conditions had changed substantially in the past 5 years. The 2010 EA (http://www.homestead.afrc.af.mil/shared/media/document/AFD-100513-043.pdf) is incorporated by reference in this 2015 SEA document (HARB 2010).

The specific tasks included in the 2015 SEA Proposed Action are land acquisitions from Miami-Dade County, the construction of a proposed new ECC, and a road realignment. HARB would acquire from Miami-Dade Country an approximately 27-acre parcel (North Gate parcel) that formerly contained a housing area for the Homestead Air Force Base (HAFB). The project area for the 2015 SEA consists of the proposed construction limits, which includes the North Gate parcel and portions of the neighboring Base Exchange (BX) parcel along St. Nazaire Boulevard, SW 127th Avenue, and SW 288th Street. The neighboring BX parcel is also one of the assets of HARB. Under the 2015 Preferred Alternative, the ECC would consist of a Main Gatehouse, Visitor Center/Pass and Identification (ID) Office, optional Guard Booth, optional Commercial Vehicle Inspection Office (CVIO), Overwatch, Entry Canopy, Personnel Shelter, Sentry Booth, pavements, security cabling, vehicle barrier systems, landscaping, stormwater management features, associated infrastructure, and the realignment of SW 288th Street (Mason & Hanger 2015a).

The No Action Alternative represents the status quo; that is, the baseline conditions. The baseline conditions are those that are compared to the Preferred Alternative (2015 SEA). Under the No Action Alternative, there would be no new construction or improvements to the current entry gate and the installation's need for a gate complex providing increased capacity would remain unmet.

Summary of Environmental Consequences

This SEA contains the results of a systematic evaluation of the potential environmental consequences associated with the Preferred Alternative and the No Action Alternative, including potential direct, indirect, and cumulative impacts. For this SEA, five resource categories were addressed to identify potential impacts: traffic, socioeconomics, environmental justice (EJ), threatened and endangered species (T&E), and hazardous materials and waste management. Consistent with CEQ regulations, the cumulative impacts of past, present, and reasonably foreseeable future actions were considered, regardless of whether the actions were initiated by government entities or private parties.

Transportation. A limited traffic analysis was conducted in November 2014 at three intersections. Two sets of traffic counts were collected: one on a weekday morning and one on a weekend morning. The Level of Service (LOS) criteria (A through F) were used to evaluate the existing conditions. Levels A through D are considered acceptable. The results of the study indicate that the current LOS for the existing conditions near HARB are a level of C or better during both the weekday and weekend sample periods. Information from the traffic study was extrapolated to predict the LOS after implementation of the SEA Preferred Alternative. Results indicated that the LOS in the vicinity of HARB would be a level of B or higher, showing an improvement over the existing conditions. Therefore, beneficial impacts to traffic are anticipated as a result of the SEA Preferred Alternative, including improved pedestrian access, better roadway operation, and increased capacity for vehicles to idle out of the flow of traffic as drivers wait for access to HARB. During construction, some temporary, minor, adverse impacts could occur from public transportation delays or traffic rerouting.

Adverse impacts to transportation under the No Action Alternative would continue to occur due to congestion on SW 288th Street and Westover Street caused by the constricted location of the Westover Gate. Minor adverse impacts could also occur from public transportation delays caused by traffic congestion.

Socioeconomics. Socioeconomics includes both population and employment and earnings considerations. The Preferred Alternative would have no direct effects on population and no direct impact on the local housing demand. Minor short-term benefits to the local economy would occur from construction-related jobs and wages during construction of the Preferred Alternative, but no permanent jobs would be created. There may be temporary or minor adverse impacts to employment and earnings for the 1st National Bank of South Florida and the Homestead Job Corps as a result of the roadway realignment and Metrobus route changes, although the impacts are expected to be temporary and minor. Socioeconomic impacts of the three alternatives considered in the 2010 EA would be comparable to those of the SEA Preferred Alternative. There would be no significant adverse or beneficial impacts to socioeconomics under the No Action Alternative.

EJ. No significant human health impacts or environmental impact to minority or low income populations would occur as a result of the Preferred Alternative. Impacts to school children from the construction traffic would be temporary and moderate and would be minimized by avoiding peak school pick-up and drop-off times. Impacts to residents of the Verde Gardens Apartments housing development are not anticipated to be disproportionately high or adverse because the Preferred Alternative would not result in housing relocations, changes in employment opportunities, significant health or safety hazards, significant increase in air emissions, or significant increases in traffic. The majority of students at the Homestead Job Corps are minorities, an EJ community of concern; therefore, potential impacts to EJ could occur under the SEA Preferred Alternative as a result of construction activities that could impact students who walk to school. However, changes to pedestrian traffic would be minor and impacts to walking access would be negligible. No significant impacts to Metrobus Route 70 used by Job Corps students are anticipated. EJ impacts of the three alternatives considered in the 2010 EA would be comparable to those of the 2015 SEA Preferred Alternative. Under the No Action Alternative, no adverse impacts to EJ would occur.

Biological Resources. A survey was conducted in 2014 to determine whether the federally endangered *Galactia smallii* (Small's milkpea) and federal candidate *Linum arenicola* (sand flax) occurred in the project area and to obtain baseline location and density data for the species. Sand flax did not occur in the project area and would not be impacted by a new ECC. Small's milkpea was identified in four areas in varying densities. Designs for Alternative 1 (2010 EA) would not impact any of the four identified Small's milkpea populations. The designs for Alternatives 2 and 3 (2010 EA) would disturb and have adverse impacts on two of the four populations in the project area. No direct impacts would to occur to Small's milkpea as a result of the Preferred Alternative (2015 SEA). The project design and construction activities would include avoidance and protection of the Small's milkpea populations mapped on the parcel. Some minor direct impacts could occur to the state-protected plants that may occur within the boundary of the subject property. State-protected species co-occurring with the protected Small's milkpea populations would be protected, while those occurring outside the Small's milkpea populations would be identified and protected prior to construction, if possible. The federally endangered Florida bonneted bat is known to occur in the area. A bat survey was conducted and the results indicated that the North Gate parcel and the neighboring BX parcel do not contain roosting or foraging habitat for the Florida bonneted bat (Smart-Sciences 2015). Therefore, no impacts would occur to the Florida bonneted bat as a result of the 2015 Preferred Alternative. Impacts to the Florida bonneted bat from Alternatives 1, 2, and 3 (2010 EA) would likely be similar to those from the Preferred Alternative (2015 SEA). No adverse impacts to threatened, endangered, or special concern species would occur under the No Action Alternative.

Hazardous Materials and Waste Management. A temporary increase in hazardous materials management on the North Gate parcel would likely follow implementation of the 2015 SEA Preferred Alternative from the potential excavation and removal of utilities lined with asbestos-containing material (ACM) or the use of construction equipment that utilizes various potentially hazardous materials. Buried utilities located along the realigned road would be removed to place the road foundation and could generate small quantities of hazardous wastes, particularly if transit piping is present. The existing utility lines are former water supply lines that were abandoned in place. However, the small footprint of the Preferred Alternative would not likely yield significant impacts to hazardous materials and hazardous waste management. Materials such as fuels, lubricants, and solvents may be temporarily stored onsite where, even though unlikely, they could leak or be spilled. It is not anticipated that construction or operation of the proposed facilities under any alternative would generate hazardous waste; however, all base contractors would be required to follow HARB's HAZMAT and spill prevention plans and protocols. Under the No Action Alternative, no adverse hazardous materials impacts are anticipated.

Cumulative Effects and Irreversible and Irretrievable Commitment of Resources. There would be no significant cumulative impacts to the human or natural environment from the implementation of the Preferred Alternative. A 20-Year Forecast Design Analysis was conducted in 2014 for the 2015 SEA. The results of the study suggest that the SEA Preferred Alternative would not likely result in any long-term, significant, direct adverse cumulative impacts to local traffic from the combined volume of construction vehicles and privately-owned vehicles during the construction phases. Additional vehicle traffic that may occur as a result of construction of the ECC would not result in significant long-term cumulative impacts to local transportation and traffic because, despite some rerouting, once construction is completed, traffic flow patterns would largely not be disrupted and delays entering HARB that add to congestion on the surface streets would be eliminated. Minor potential impacts to EJ populations from the Preferred Alternative could add cumulatively to similar impacts from the various recently completed residential and commercial projects in the vicinity; however, the potential cumulative effects are anticipated to not be significant because impacts from the types of development in the area do not typically result in housing relocations, significant health or safety hazards, or significant noise impacts. Beneficial impacts to the area, including minority and low-income populations, could include a potential increase in available housing and job opportunities. Impacts to biological plant and wildlife resources from the Preferred Alternative would not be expected to add measurable incremental impacts that would combine with other projects in the vicinity because the habitat that would be converted for the ECC is highly disturbed, of poor quality, and largely

overrun with exotic invasive species. It is not anticipated that there would be any cumulative impacts to the federally-endangered Small's milkpea plant or the endangered Florida bonneted bat as a result of the 2015 Preferred Alternative. No cumulative impacts on the use of hazardous materials and disposal of hazardous waste when combined with other commercial and residential projects in the area or when combined with minor renovation projects at HARB are anticipated as a result of the Preferred Alternative

The No Action Alternative could result in long-term adverse cumulative impacts to traffic because no improvements would be made to the current, baseline conditions. A new ECC would not be constructed and, in the long-term, there would be no solution to HARB's requirement for an entry that accommodates its current size and traffic needs.

Implementation of the 2015 SEA Preferred Alternative would involve irreversible and irretrievable commitments of natural resources, labor, materials, and fiscal resources beyond those that would occur under the No Action Alternative. However, the North Gate parcel was previously utilized as base housing, and this history of development minimizes irreversible and irretrievable commitments of natural resources since the North Gate parcel is already heavily disturbed from previous construction and demolition projects. Labor and materials, such as fossil fuels and building materials, would be expended during construction of a new ECC. Additionally, labor and natural resources would be used in the fabrication and preparation of construction materials. The resources generally would not be retrievable; however, they are not in short supply and their commitment would not have an adverse effect on their availability. In addition, fiscal resources would be committed, as the proposed new ECC and associated road re-route would require an irretrievable expenditure of federal funds.

Contents

Chapter **Page**

Executive Summary ..... **iii**
Purpose and Need for Action iii
Proposed Action and Alternatives iii
Summary of Environmental Consequences iv

Acronyms and Abbreviations ..... **ix**

1 Purpose and Need for Action **1-1**
1.1 Introduction 1-1
1.2 Background 1-1
1.3 Purpose and Need 1-7

2 Description of Proposed Action and Alternatives **2-1**
2.1 Preferred Alternative (2015 SEA) 2-1
2.2 Methodology for Alternative Identification 2-5
2.3 No Action Alternative 2-5
2.4 Other Alternatives 2-6
2.4.1 Alternative 1 (2010 EA) 2-6
2.4.2 Alternative 2 (2010 EA) 2-6
2.4.3 Alternative 3 (2010 EA) 2-6
2.5 Alternatives Eliminated from Consideration 2-7
2.6 Public Agency Involvement, Environmental Compliance, and Permit Requirements 2-7
2.6.1 Public and Agency Involvement 2-7
2.6.2 Regulatory Compliance and Permit Requirements 2-11
2.7 Comparison of Alternatives 2-13

3 Affected Environment **3-1**
3.1 Transportation 3-1
3.1.1 Existing Conditions 3-1
3.1.2 Traffic Study 3-7
3.2 Socioeconomics 3-8
3.2.1 Existing Conditions 3-8
3.3 Environmental Justice 3-11
3.3.1 Existing Conditions 3-12
3.4 Biological Resources 3-14
3.4.1 Existing Conditions 3-14
3.5 Hazardous Materials and Waste Management 3-22
3.5.1 Existing Conditions 3-25

4 Environmental Consequences **4-1**
4.1 Transportation 4-1
4.1.1 Discussion of Impacts 4-1
4.2 Socioeconomics 4-6
4.2.1 Discussion of Impacts 4-6
4.3 Environmental Justice 4-8
4.3.1 Discussion of Impacts 4-8
4.4 Biological Resources 4-9
4.4.1 Discussion of Impacts 4-9

4.5 Hazardous Materials and Waste Management 4-10
4.5.1 Discussion of Impacts 4-10

5 Cumulative Impacts and Irreversible and Irretrievable Commitment of Resources 5-1
5.1 Cumulative Effects 5-1
5.1.1 Definition of Cumulative Effects 5-1
5.1.2 Past, Present and Reasonably Foreseeable Actions 5-1
5.1.3 Analysis of Cumulative Impacts 5-5
5.2 Irreversible and Irretrievable Commitment of Resources 5-6

6 List of Preparers 6-1

7 References 7-1

Tables

2-1 Comparison of Alternatives 2-13
3-1 Level of Service Criteria (Unsignalized Intersection) 3-8
3-2 Population Estimates by Race and Ethnicity (2010 Census) 3-9
3-3 Labor and Employment (2011–2013) 3-10
3-4 Federal and State Protected Species with Potential to Occur on the Subject Property 3-17
3-5 State Protected Plants with Potential to Occur in the Subject Property 3-22

Figures

1-1 Proposed Project Location 1-3
1-2 Proposed Action 1-5
2-1 2015 SEA Preferred Alternative 2-3
2-2 Alternatives Eliminated from Consideration 2-9
3-1 Selected Private Entities Near the Proposed Project Site 3-3
3-2 Public Transit Bus Stops 3-5
3-3 Small's milkpea Populations 3-23
4-1 Construction Access and Traffic Detour Routes 4-3
5-1 Past, Present, and Foreseeable Projects 5-3

Appendix

A HARB ECC Alternatives Analysis
B Agency and Public Correspondence

Acronyms and Abbreviations

ACM	asbestos-containing material
ACS	American Community Survey
ADA	Americans with Disability Act
AFCEC	Air Force Civic Engineer Center
AFCEE	Air Force Center for Environmental Excellence
AFI	Air Force Instruction
AFRC	Air Force Reserve Command
AFRPA	Air Force Real Property Agency
AGR	Active Guard Reserve
ARS	Air Reserve Station
ART	Air Reserve Technicians
AST	aboveground storage tank
AT/FP	antiterrorism/force protection
BMP	best management practice
BRAC	Base Realignment and Closure
BX	Base Exchange
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CVIO	Commercial Vehicle Inspection Office
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DERM	Miami-Dade County Department of Environmental Resources Management
DOL	U.S. Department of Labor
EA	Environmental Assessment
EBS	Environmental Baseline Survey
ECC	entry control complex
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EJ	environmental justice
EO	Executive Order

EPA	U.S. Environmental Protection Agency
ERP	Environmental Resource Permitting
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAC	Florida Administrative Code
FANG	Florida Air National Guard
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FFWCC	Florida Fish and Wildlife Conservation Commission
FONSI	Finding of No Significant Impact
FS	Florida Statute
FWRIR	Florida Water Resource Implementation Rule
GED	General Educational Development
GPS	Global Positioning System
gsf	gross square foot
HAC	Chapman Partnership Homeless Assistance Center
HAFB	Homestead Air Force Base
HARB	Homestead Air Reserve Base
ID	identification
IICEP	Interagency/Intergovernmental Coordination for Environmental Planning
IRC	Institute for Regional Conservation
IRP	Installation Restoration Program
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
MPH	Miles per hour
MSG/CEV	Mission Support Group/Environmental Flight
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated Biphenyl
pCi/L	picocuries per liter
POV	privately owned vehicle
RCRA	Resource Conservation and Recovery Act

1	SDWA	Safe Drinking Water Act
2	SEA	Supplemental Environmental Assessment
3	SFWMD	South Florida Water Management District
4	SHPO	State Historic Preservation Officer
5	SOCSOUTH	U.S. Army Special Operations Command South
6	SW	southwest
7	SWDA	Solid Waste Disposal Act
8	SWPPP	stormwater pollution prevention plan
9	T&E	threatened and endangered species
10	TFI	Total Force Initiative
11	TMC	Turning Movement Count
12	TSCA	Toxic Substances Control Act
13	USACE	U.S. Army Corps of Engineers
14	USAF	U.S. Air Force
15	USC	United States Code
16	USCB	U.S. Census Bureau
17	USCBP	U.S. Customs and Border Protection
18	USCG	U.S. Coast Guard
19	USFWS	U.S. Fish and Wildlife Service
20	UST	underground storage tank
21	UTA	Unit Training Assembly
22	UTDF	Universal Traffic Data Format
23	VSI	visual site inspection

SECTION 1

Purpose and Need for Action

1.1 Introduction

This Supplemental Environmental Assessment (SEA) is being developed to evaluate the impacts of constructing a new entry control complex (ECC) at Homestead Air Reserve Base (HARB), Florida. The ECC would consist of a Main Gatehouse, Visitor Center/Pass and Identification (ID) Inspection Office, optional Commercial Vehicle Inspection Office (CVIO), optional Guard Booth, Overwatch, Entry Canopy, Personnel Shelter, Sentry Booth, pavements, signage, parking, security cabling, vehicle barrier systems, landscaping, and all associated infrastructure (Mason & Hanger 2015a). The project also includes the realignment of Southwest (SW) 288th Street in order to provide sufficient acreage for the design of the ECC. For the realignment of SW 288th Street, a new roundabout would be constructed at the intersection of the realigned SW 288th Street, SW 127 Avenue, St. Nazaire Boulevard, and the entrance to the proposed ECC (Mason & Hanger 2015a). This SEA was prepared to evaluate the potential environmental consequences of the Proposed Action and alternatives, in accordance with provisions of Title 32, Code of Federal Regulations (CFR), Part 989, 40 CFR Parts 1500 through 1508 (Council on Environmental Quality [CEQ] National Environmental Policy Act [NEPA] implementing regulations), and Air Force Instruction (AFI) 32-7061 (Secretary of the Air Force 2003), the Environmental Impact Analysis Process (EIAP).

An Environmental Assessment (EA) was prepared in May 2010 for a new ECC at HARB (HARB 2010). The Proposed Action in the 2010 EA was never implemented. This 2015 SEA addresses a new alternative identified after 2010 and updates the 2010 EA analysis, as appropriate. The 2010 EA is incorporated by reference in the SEA. The 2010 EA Preferred Alternative was never implemented and, as a result, the current Preferred Alternative (2015 SEA) to implement the Proposed Action was subsequently developed. It is important to note that the 2010 EA and the 2015 SEA analyze the same Proposed Action, but the Preferred Alternative to implement the Proposed Action has changed based on revisions in project details. The Preferred Alternative for the Proposed Action evaluated in the SEA would be implemented in an area previously analyzed in the 2010 EA for construction of the ECC, but the layout of the traffic and ECC infrastructure is a configuration not previously analyzed. Because this area has been previously evaluated, information and analyses presented in the 2010 EA (http://www.homestead.afrc.af.mil/shared/media/document/AFD-100513-043.pdf) that remain valid are incorporated into the 2015 SEA by reference and will not be re-evaluated.

1.2 Background

HARB is located in southern Miami-Dade County, approximately 25 miles south of Miami and approximately 8 miles east of the center of the City of Homestead (Figure 1-1). The general project vicinity is shown in Figure 1-2. HARB is located within unincorporated Miami-Dade County, just outside the city limits of Homestead. The only fully operational entry gate for HARB is on Westover Street and is referred to as the Westover Gate. The site for the proposed ECC is referred to in this 2015 SEA as the North Gate parcel and is located on the northwest corner of the intersection of SW 288th Street and SW 127th Avenue, just north of HARB's current northern boundary.

The North Gate parcel, which is entirely within unincorporated Miami-Dade County, originally contained housing for Homestead Air Force Base (HAFB). In 1992, Hurricane Andrew hit HAFB, destroying 97 percent of the base facilities, including the military housing on the North Gate parcel. In 1994, a portion of former HAFB was realigned to Homestead Air Reserve Station (ARS) under the Defense Base Realignment and Closure (BRAC) Commission. During BRAC, the North Gate parcel was transferred to Miami-Dade County. The Homestead ARS became HARB in 2003. U.S. Air Force (USAF) retained approximately 1,943 acres for HARB, and the remaining acres were divided into parcels and transferred to other entities (USAF 1993).

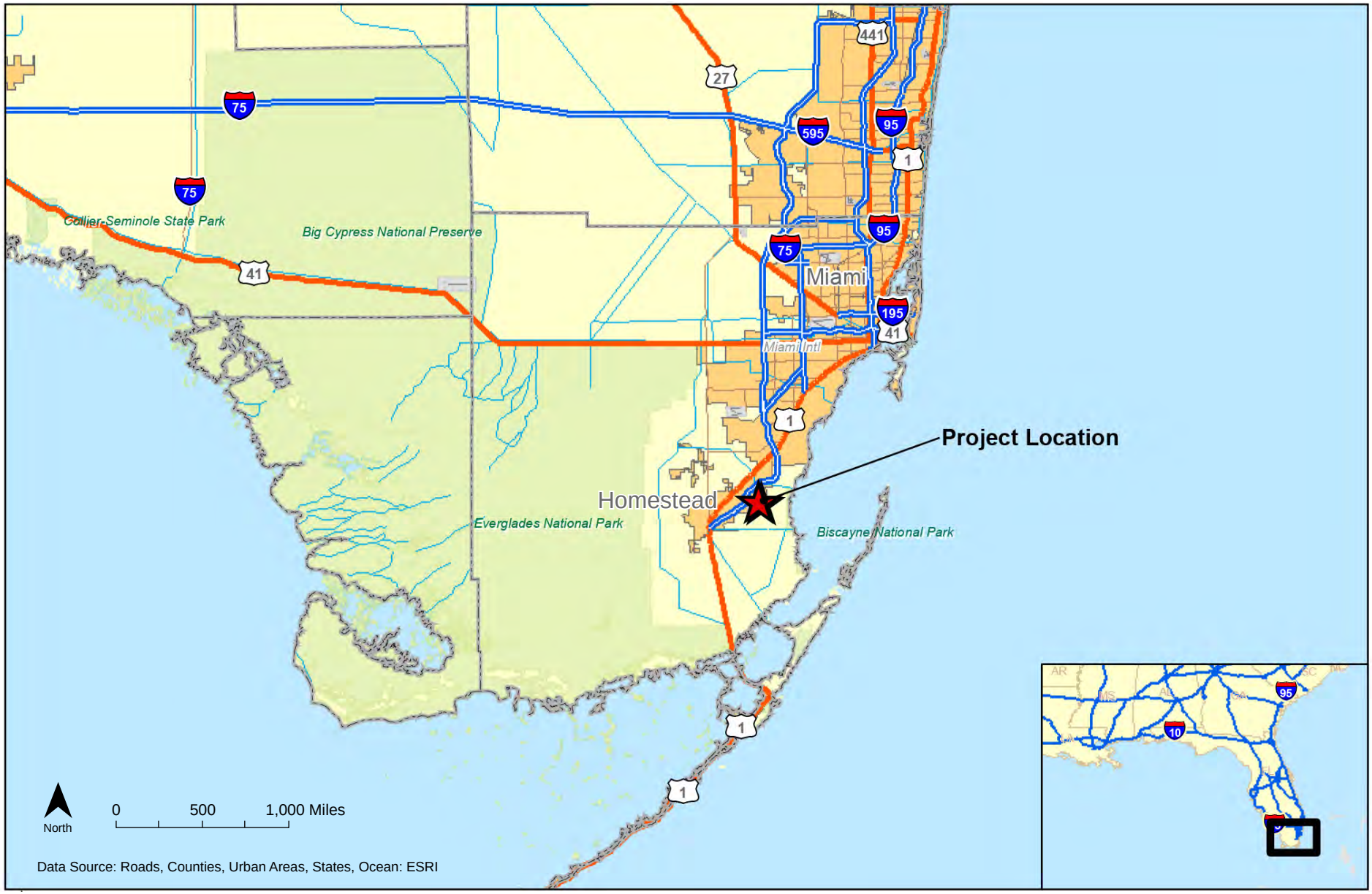

Figure 1-1
Proposed Project Location
HARB ECC SEA

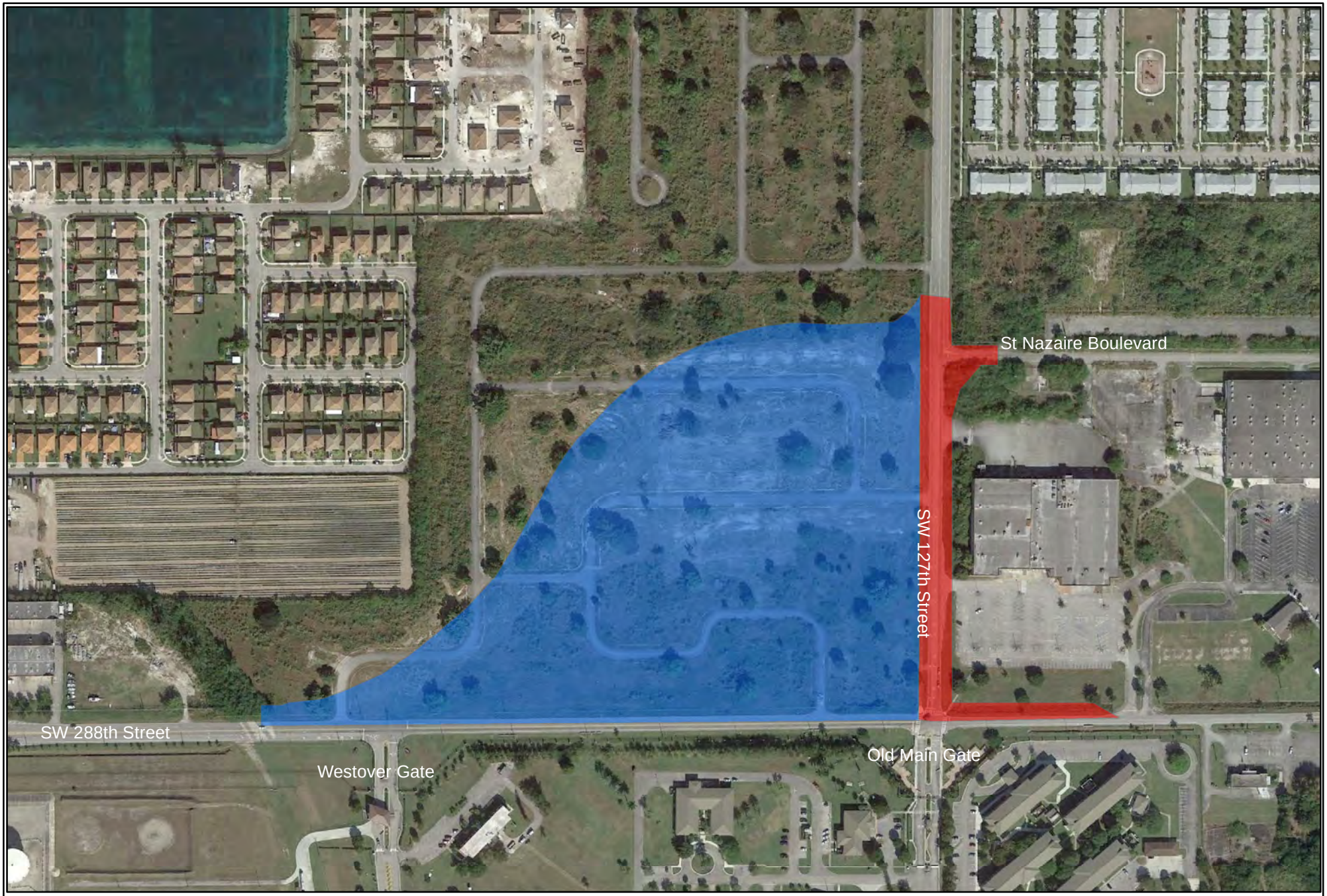

Figure 1-2
Proposed Action
HARB ECC SEA

Currently, the North Gate parcel is vacant and encompasses approximately 27 acres of land. Further information on Miami-Dade County and the history of HARB was provided in the 2010 EA, which is incorporated into this 2015 SEA by reference (HARB 2010).

The surface roads in the vicinity of the Proposed Action have historically been identified by both numbers and names; some of the roads have multiple names. Additionally, names of roads and sections of roads have changed over the last several decades. Historically, when HAFB was still in existence, SW 288th Street (which runs east-west) was referred to as Bougainville Boulevard east of its intersection with SW 132nd Avenue, which runs north-south. SW 132nd Avenue was referred to as Pine Island Road. West of the intersection of SW 288th Street with SW 132nd Avenue, SW 288th Street was referred to as Biscayne Drive. Also, during this time, a segment of SW 127th Avenue (which runs north-south) was referred to as Coral Sea Boulevard between SW 280th Street (which runs east-west and was also referred to as Waldin Drive east of SW 127th Avenue) and SW 288th Street. The northern segment of SW 127th Avenue has also been known as Burr Road and SW 137th Avenue has been known as both Speedway Boulevard and Tallahassee Road. Currently, in the years after BRAC, the name SW 288th Street is used east of SW 132nd Avenue all the way to SW 127th Avenue. The name Coral Sea Boulevard is only used south of SW 288th Street; north of SW 288th Street it continues to be referred to as SW 127th Avenue.

For the purposes of this 2015 SEA and to clearly communicate the traffic flow changes as a result of the 2015 SEA Preferred Alternative, only the numbered street names will be used where possible in the vicinity of the project area. SW 288th Street is used to reference the entire length of the road instead of Bougainville Boulevard and Biscayne Drive; SW 127th Avenue is used instead of Burr Road or Coral Sea Boulevard; SW 280th Street is used instead of Waldin Drive; SW 132th Avenue is used instead of Pine Island Road; and SW 137th Avenue is used instead of Speedway Boulevard or Tallahassee Road. Accordingly, SW 288th Street is defined in this 2015 SEA as the east-west road along the northern boundary of HARB. SW 127th Avenue is defined as the north-south road that formerly led to the HARB Old Main Gate. The other existing surface roads that do not have number street names within the vicinity of the North Gate parcel are identified by the following names throughout this 2015 SEA: Ramey Avenue, Westover Street, and St. Nazaire Boulevard. The proposed new road that would extend diagonally through the North Gate parcel from SW 288th Street to St. Nazaire Boulevard, is a new alignment of the existing SW 288th Street and is referred to in this 2015 SEA as future Biscayne Drive.

1.3 Purpose and Need

The purpose of the Proposed Action is to provide a new permanent ECC for HARB that would accommodate HARB's current mission and the requirements of tenant or support agreements, and that would also accommodate HARB's future mission and any associated future increases in traffic. At present, there are two entry control points to HARB. Both entry points are along SW 288th Street (Figure 1-2), but only one of the entry points is fully operational. The Old Main Gate at SW 127th Avenue (Figure 1-2) was closed because it was determined to be highly vulnerable from a security standpoint. In addition to antiterrorism/force protection (AT/FP) concerns due to the proximity of the gate to base lodging, this location was susceptible to a vehicle traveling south on SW 127th Avenue that might barrel directly through the gate. For these reasons, the Old Main Gate is used only during special occasions when the base experiences heavy volumes of traffic and on USAF Reserve Unit Training Assembly (UTA) weekends.

The Westover Gate on Westover Street was originally designed as a secondary entry gate for contractors. The Westover Gate now serves as the only fully operational gate for base entry and exit. This gate was not designed to handle the full volume of base traffic and it is inadequate to maintain acceptable traffic flows through the gate and on SW 288th Street.

Under the Total Force Initiative (TFI), the projected training needs at HARB will double. TFI will result in an additional 300 to 400 personnel training at the base (Office of the Undersecretary of Defense, 2012). The U.S. Army Special Operations Command South (SOCSOUTH), which accesses its facility through the existing

HARB Westover Gate entry, has seen an increase in its mission and assigned personnel since the 2010 EA and is expected to continue to increase into the future. In addition to SOCSOUTH, several other onsite and adjacent site organizations would use the proposed HARB ECC, including the following:

- Florida Air National Guard (FANG), Detachment 1, 125th Fighter Wing
- Defense Energy Support Center Americas East
- Federal Bureau of Investigation
- U.S. Customs and Border Protection (USCBP) (support agreement, not a tenant)
- U.S. Coast Guard (USCG) Maritime Safety and Security Team (support agreement, not a tenant)
- USAF Reserve weather reconnaissance mission
- Army Golden Knights
- U.S. Army Corps of Engineers (USACE)
- Army and Air Force Exchange
- 50th Regional Support Group

Some of the organizations have tenant agreements with HARB, while others have support agreements with HARB. To be considered an official tenant, HARB must own the land on which the facility is situated (Andrejko 2015b). The FANG, 125th Fighter Wing, the largest unit in the Florida National Guard, has a tenant agreement with HARB. The unit at HARB provides "rapid response to invasions of the sovereign airspace of the United States and responds with appropriate defense measures against all hostile actions directed at the people and property of the United States" (Florida National Guard 2012a). The 50th Regional Support Command is another unit of the Florida National Guard located adjacent to HARB. "Soldiers from the 50th Regional Support Group play an important role in Florida's response to emergencies, providing logistics support to hurricane and disaster response throughout the state when called on by the governor" (Florida National Guard 2012b).

The existing Westover Gate is insufficient for the current level of traffic at HARB and cannot be modified to accommodate the traffic associated with increased personnel in the future because the gate's existing configuration is constricted and does not allow for sufficient design changes to be made to accommodate current and future traffic flows.

The proposed new ECC and road realignment are required to accommodate the current volume of traffic entering and exiting the base, maintain acceptable traffic flow on surface streets outside HARB, and be capable of accommodating increased traffic volume should future growth occur within the surrounding community. While accommodating higher traffic volumes, the Proposed Action would minimize congestion and related traffic hazards and delays.

SECTION 2

Description of Proposed Action and Alternatives

The 2015 SEA Preferred Alternative for the Proposed Action includes the construction of a new ECC for HARB consisting of a Main Gatehouse, Visitor Center/Pass and ID Inspection Office, CVIO, Guard Booth, Entry Canopy, Overwatch, associated parking lots, signage, vehicle barrier systems, landscaping, infrastructure, and realignment of SW 288th Street to form future Biscayne Drive. Infrastructure improvements would include water, drainage, sanitary sewer, stormwater management features, utilities, and roadways, including the proposed roundabout at the intersection of the proposed ECC entrance, future Biscayne Drive, SW 127th Avenue, and St. Nazaire Boulevard. The proposed ECC at HARB would be built as a replacement for the existing Westover Gate on Westover Street to better accommodate current and future capacity needs. The purpose and need for the new gate and road realignment were identified in Section 1.3. Section 2.1 describes the Preferred Alternative (2015 SEA), which has been developed since completion of the 2010 EA. Section 2.3 describes the No Action Alternative. Section 2.4 summarizes the three action alternatives considered in the 2010 EA that are re-evaluated in this 2015 SEA.

Under all action alternatives, HARB would acquire the approximately 27-acre North Gate site from Miami-Dade County (Figure 1-2). The project area consists of the proposed construction limits, which includes the North Gate parcel and portions of the neighboring Base Exchange (BX) parcel along St. Nazaire Boulevard, SW 127th Avenue, and SW 288th Street. The neighboring BX parcel is also one of the assets of HARB.

All alternatives would require the permanent closure of portions of SW 127th Avenue and SW 288th Street to accommodate the construction and operation of future Biscayne Drive. The road closures would affect vehicles traveling to destinations along SW 288th Street to the east of SW 127th Avenue. Motorists would be routed from SW 288th Street via the future Biscayne Drive, east onto St. Nazaire Boulevard, and south onto Ramey Avenue back to SW 288th Street. This change in traffic flow would not be expected to add significant travel time for drivers. However, St. Nazaire Boulevard might need to be upgraded to accommodate the increased traffic flow once road closures are in effect.

All considered alternatives include the following common construction components:

- Temporary construction equipment and material staging areas would be established adjacent to the construction footprint and the areas would be returned to their original condition upon completion of construction.
- Future Biscayne Drive would be created as a diagonal connection from SW 288th Street to SW 127th Avenue at the intersection of SW 127th Avenue and St. Nazaire Boulevard. This would keep through-traffic outside the proposed new HARB boundaries.
- Construction would be phased such that vehicular access to SW 288th Street east of the current HARB entry would be maintained until future Biscayne Drive is operational.
- Existing pavement on abandoned roadways on the North Gate parcel would be left in place where not affected by construction and road realignment.
- Stormwater management features would be constructed around the proposed ECC.
- Perimeter fencing around the new ECC would be constructed.
- Minor landscaping would be installed around the new ECC infrastructure.

2.1 Preferred Alternative (2015 SEA)

The SEA Preferred Alternative has been developed since completion of the 2010 EA. The following description of the Preferred Alternative is taken from the HARB ECC Final 100 percent Submittal Design

Analysis (Mason & Hanger 2015a). The Preferred Alternative (2015 SEA) would consist of a Visitor Center/Pass and ID Inspection Office (1,906 gross square feet [gsf]), Main Gatehouse (prefabricated building, 328 gsf), Guard Booth (prefabricated building, 61 gsf), CVIO (prefabricated building, 152 gsf), Overwatch (prefabricated building, 54 gsf), an Entry Canopy (approximately 48 feet by 26 feet to cover a portion of the Main Gatehouse, all of the Guard Booth, and both lanes of traffic), pavements, security cabling, vehicle barrier systems, landscaping, and all associated infrastructure. The Visitor Center/Pass and ID Inspection Office would be outside the security checkpoint to allow for more efficient entry into the installation. The Main Gatehouse, the Guard Booth, the CVIO and the Overwatch would provide shelter and ballistic protection for personnel. For security purposes, the components of the proposed ECC would allow efficient visual inspection of vehicles and would ensure that appropriate personnel could maintain visual contact with the entry.

The proposed SEA Preferred Alternative also would include the realignment of the existing SW 288th Street to form Biscayne Drive, to provide sufficient space to accommodate the proposed ECC. To minimize AT/FP concerns at the Old Main Gate entrance (corner of SW 288th Street and SW 127th Avenue), the perimeter security fence would be constructed on the north side of SW 288th Street. The North Gate parcel site, which would include the proposed ECC and the realignment of SW 288th Street to form future Biscayne Drive, is approximately 27 acres. Approximately 20 percent of the 27-acre North Gate parcel would be used for the future Biscayne Drive. The remaining 80 percent of the parcel would be used for the ECC, which would consist of three zones: the approach zone, the access control zone and the response zone. Each of the three zones for the proposed ECC requires either significant area or sufficient roadway distance to provide adequate security. As the area for the proposed ECC is limited, traffic calming measures and site planning are required to provide adequate queuing length, sorting length, inspection areas, and a response area. In addition, an area for truck inspections would be required. All utilities would be available near the project area. Abandoned utilities are throughout the site, but would be demolished prior to construction. Five stormwater infiltration areas would be constructed as part of the proposed ECC. The proposed layout of the Preferred Alternative is provided in Figure 2-1.

Before construction starts, demolition of the abandoned infrastructure for the former base housing within the North Gate parcel would occur. This demolition would primarily consist of clearing and grubbing, removal of existing pavements, and removal of abandoned utilities. Existing grade levels are approximately as desired for the new construction. Extensive re-grading is not anticipated, except for the construction of storm drainage facilities. Some fill material may be required to raise building finished floor elevations, which would alleviate flooding concerns. The existing SW 288th Street is in relatively good condition. Most of the existing roadway would be reused as part of the proposed ECC design. The existing road will be milled and resurfaced and any failures in the existing roadbed would be corrected (Mason & Hanger 2015a).

Construction contractors would coordinate with Miami-Dade County to identify appropriate construction haul routes, to identify appropriate timing for construction-related traffic, and to implement appropriate traffic controls during construction. Contractor access to the North Gate parcel would be via SW 127th Avenue and SW 288th Street (Andrejko 2015c).

The traffic flow design would include one roundabout, which would be at the intersection of future Biscayne Drive, SW 127th Avenue, St. Nazaire Boulevard, and the entrance to the proposed ECC. This roundabout would be designed to accommodate peak traffic flow with minimal delays. To reduce the number of vehicles entering the roundabout, slip lanes would be provided from future Biscayne Drive to the entrance of the proposed ECC and from south SW 127th Avenue to future Biscayne Drive. The roundabout and slip lanes would be designed to accommodate a truck with a 42.5-foot semi-trailer (53-foot total length).

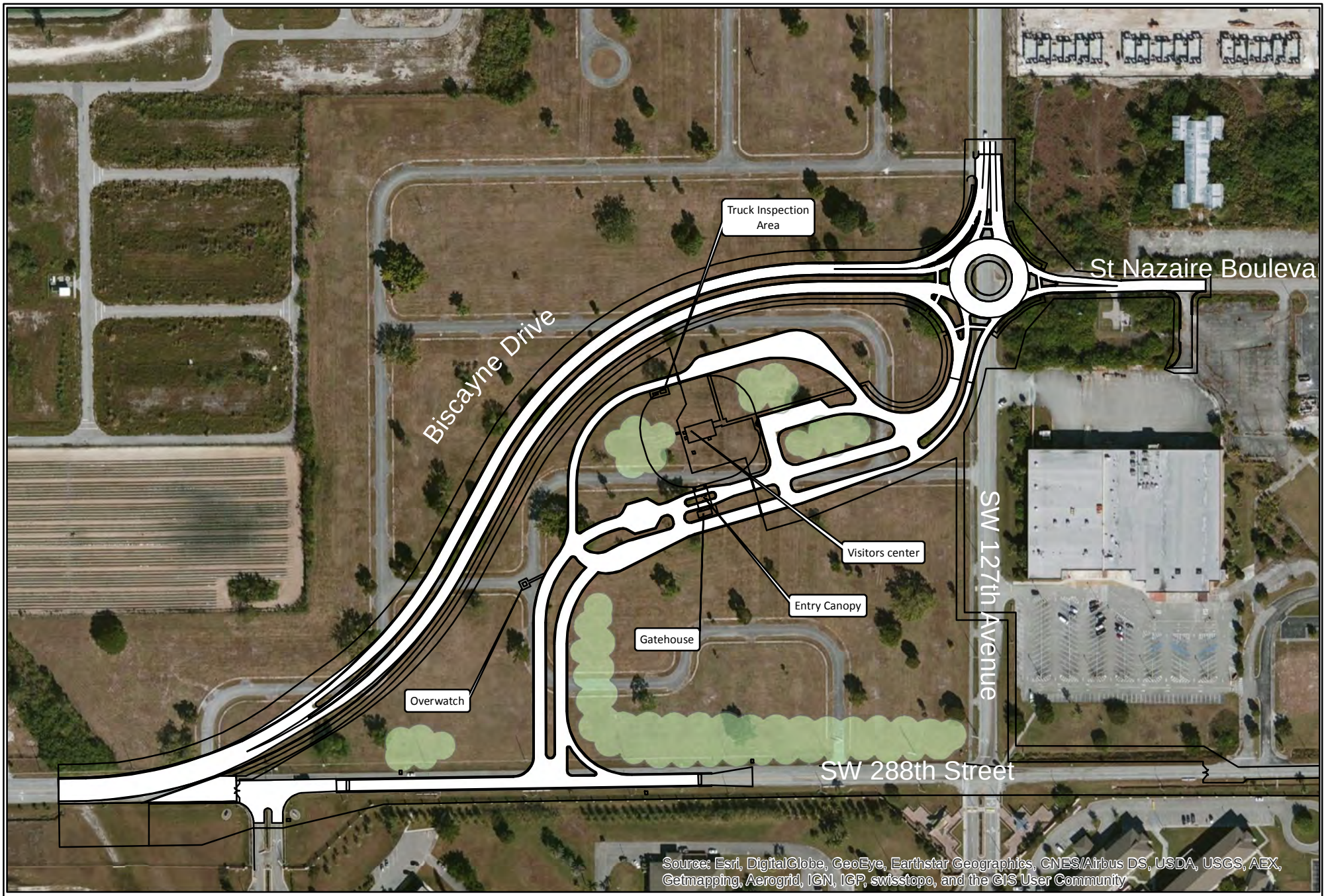

Figure 2-1
2015 SEA Preferred Alternative
HARB ECC SEA

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A truck apron would be provided at the interior of the roundabout. Existing SW 127th Avenue at the southern entrance to the former BX parking lot down to SW 288th Street would be demolished as part of the Preferred Alternative, as would the northern portion of the road between the proposed ECC roundabout and the entrance to the rear parking area on the BX parcel. A portion of SW 127th Avenue would remain, between the front and rear parking lot entrances within the BX parcel, to facilitate movement between the two parking areas. Primary access to the rear parking area on the BX parcel would be along St. Nazaire Boulevard, while primary access to the front parking area on the BX parcel would remain along SW 288th Street.

For AT/FP setbacks, the Visitor Center/Pass and ID Office is considered an "inhabited building." Because it would be located outside a controlled perimeter, AT/FP requirements specify a minimum stand-off distance between the building and the privately owned vehicle (POV) parking lot and roadways, based on the wall construction proposed for the building. New concrete sidewalks would be provided from the POV parking lot to the Visitor Center/Pass and ID Office, and from the truck parking area and CVIO to the Visitor Center/Pass and ID Office. Proposed sidewalks would be a minimum of 6 feet wide. A 10-foot-wide shared use path would also be provided along the realigned SW 288th Street. The new Visitor Center/Pass and ID Office would require approximately 11 parking spaces, one of which would be an Americans with Disability Act (ADA)-accessible parking space. Parking for security officers at the CVIO would also be provided.

Stormwater runoff for the proposed ECC would be directed to five stormwater infiltration areas through surface drainage, stormwater culverts, open ditching, and drainage swales. Stormwater management for the proposed ECC will meet the requirements of the Energy Independence and Security Act of 2007 (EISA) Section 438. Along the future Biscayne Drive, a stormwater drainage system consisting of infiltration trenches meeting Miami-Dade County standards would be constructed that will collect and infiltrate the 10-year, 24-hour storm event. Because of the low elevation gradient, conventional closed drainage collection systems are not feasible. A site-specific erosion and sedimentation control methodology that would include, but not be limited to, temporary seeding, permanent sodding, mulching, hay bales, rip rap, and silt fencing would be implemented.

Potable water, firefighting water, and sanitary sewer service would be provided for both the Visitor Center/Pass and ID Office and the CVIO. Suitable xeriscape landscaping suitable for Miami-Dade County, and developed in coordination with the Miami-Dade County Agricultural Extension Office, would be provided around SW 288th Street and the proposed ECC. The site would not be permanently irrigated, but temporary irrigation would be installed to establish new landscaping.

2.2 Methodology for Alternative Identification

CEQ regulations require that all reasonable alternatives, including those beyond the Proposed Action and the No Action Alternative, be evaluated under NEPA. Alternatives may be eliminated from detailed analysis in a NEPA document based on being unfeasible and based on operational constraints, technical constraints, or substantially greater environmental impacts relative to other alternatives under consideration (Appendix A).

For this SEA, only the Preferred Alternative and the No Action Alternative are analyzed. Additional alternatives were considered and evaluated in the 2010 EA (HARB 2010). No other new alternatives that were feasible were identified for analysis in the SEA.

2.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. A new ECC would not be constructed and no modifications to traffic infrastructure and flow patterns on SW 288th Street would occur. The need to accommodate the volume of traffic related to the current and future mission and tenants would remain unmet. The No Action Alternative represents baseline conditions, which are used for

comparison to future conditions that would exist under the Proposed Action. The No Action Alternative also was used as the baseline for the previously evaluated alternatives (HARB 2010).

2.4 Other Alternatives

NEPA and USAF guidelines require that alternatives for implementing the Proposed Action be considered for evaluation. Three alternatives were analyzed in the 2010 EA. The alternatives are described in the following subsections. In addition to being evaluated against the No Action Alternative, the potential impacts of the Preferred Alternative are evaluated relative to the previously considered alternatives. As noted previously, no other new alternatives, beyond the Preferred Alternative, were identified. The following alternatives are re-evaluated in this 2015 SEA for the resource areas considered in detail.

2.4.1 Alternative 1 (2010 EA)

Alternative 1, located off-base on the North Gate parcel, was considered in the 2010 EA. Alternative 1 would consist of a four-way intersection of future Biscayne Drive, SW 127th Avenue, and St. Nazaire Boulevard; a new entry gate; an approximately 300-gsf covered gatehouse; canopies extending from the gatehouse over the guarded entry and inspection areas; an approximately 2,000-gsf Visitor Center/pass and ID Inspection Office; a dedicated CVIO; and approximately 0.3 acre of paved parking. The proposed road realignment would require construction of approximately 6 acres of roadway, including a traffic circle and future Biscayne Drive, which would be approximately 2,250 feet in length. Future Biscayne Drive would connect with SW 127th Avenue approximately 960 feet north of the current intersection with SW 288th Street. The alternative would include the closure of the direct connection between SW 127th Avenue and SW 288th Street to the east. This alternative and the analysis of impacts are incorporated by reference from the 2010 EA (HARB 2010).

2.4.2 Alternative 2 (2010 EA)

Alternative 2 was considered in the 2010 EA. Alternative 2 includes construction of a new entry gate complex and road realignment on the south half of the North Gate parcel located off-base. Early-stage design plans of Alternative 2 illustrate that the alternative would have a more compact, east-west-oriented footprint and the ECC would include two buildings, a combined covered gatehouse/CVIO, and a Visitor Center/Pass and ID Inspection Office totaling 0.1 acre. The design also includes a traffic circle, a single 0.3-acre parking lot, and a small drainage pond. A separate lane would be installed within the realignment that would allow large commercial vehicles to avoid navigating the traffic circle. Under Alternative 2, SW 288th Street would be re-routed through the North Gate parcel. The realigned segment of SW 288th Street would be less than 1,500 feet long and would have a permanent footprint of approximately 3.5 acres. Due to the permanent closure of portions of SW 127th Avenue and SW 288th Avenue included in the alternative, vehicles attempting to access locations east of the SW 288th Street and SW 127th Avenue intersection on SW 288th Street would be detoured onto St. Nazaire Boulevard and Ramey Avenue. This alternative and the analysis of impacts are incorporated by reference from the 2010 EA (HARB 2010).

2.4.3 Alternative 3 (2010 EA)

Alternative 3 was considered in the 2010 EA. Under Alternative 3, a new ECC and road re-route would be constructed on the off-base North Gate parcel. The ECC would consist of two structures (totaling 0.1 acre), a combined Gatehouse/CVIO building and canopy, and a Pass and ID Office, as well as a 0.3-acre parking lot and a small drainage pond. The required relocation of SW 288th Street would follow a similar path as the Alternative 1 design, a north-south-oriented alignment with a traffic circle, but would re-connect with SW 127th Avenue farther south, directly across from St. Nazaire Avenue. Initial designs of Alternative 3 indicate that a traffic circle would be located on the new portion of SW 288th Street; however, a separate lane would be designated for large commercial vehicles so that they could bypass the traffic circle to reach the CVIO. The road realignment would require the addition of 4.4 acres of paved roads on the 33-acre North Gate parcel. This alternative and the analysis of impacts are incorporated by reference from the 2010 EA (HARB 2010).

2.5 Alternatives Eliminated from Consideration

Additional alternatives were considered in the 2010 EA and dismissed from detailed consideration due to being infeasible included: an East Gate Site (located off-base), a West Gate Site (located on-base), and multiple variations on the alternatives that were analyzed in detail (HARB 2010). The East Gate Site and West Gate Site are shown on Figure 2-2. The alternatives and the justifications for excluding them from detailed analysis in the 2010 EA are incorporated by reference into this SEA and are also discussed in the detailed alternatives analysis for the proposed ECC, included in Appendix A.

2.6 Public Agency Involvement, Environmental Compliance, and Permit Requirements

This SEA was prepared in accordance with NEPA (Title 42, United States Code [USC], Sections 4321-4347 [42 USC 4321-4347]), the CEQ regulations for implementing NEPA (40 CFR 1500-1508), and the USAF EIAP promulgated in 32 CFR 989.

Compliance with NEPA requires that the planning and decision-making process for actions proposed by federal agencies include consideration of relevant environmental statutes and regulations. However, the NEPA process does not replace procedural or substantive requirements of other statutes and regulations. The NEPA analysis addresses the statutes and regulations within the analysis document to enable the decision maker to have a comprehensive view of major environmental issues and requirements associated with the considered action. According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively."

It is expected that the Proposed Action will comply with elements of multiple federal regulations in addition to NEPA. Applicable federal statutes include the Clean Water Act (CWA), the Clean Air Act (CAA), Coastal Zone Management Act (CZMA), Fish and Wildlife Coordination Act of 1958, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Safe Drinking Water Act (SDWA), Resource Conservation and Recovery Act (RCRA), Migratory Bird Treaty Act, Migratory Bird Conservation Act, and the Water Resource Development Act. The NEPA analysis also considers compliance with Executive Orders (EO) related to protection of wetlands, environmental justice (EJ), and management of floodplains and invasive species.

2.6.1 Public and Agency Involvement

Because of the time that has passed since completion of the 2010 EA, public and agency Involvement with regard to the Preferred Alternative was conducted (Appendix B).

The Florida Department of Transportation, the State Historic Preservation Officer (SHPO), the South Florida office of the U.S. Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FFWCC), and Miami-Dade County were contacted during development of the 2010 EA. Information provided at that time was incorporated into the EA. The agencies were contacted again to identify whether they have additional or new issues relevant to the Proposed Action. The agencies also were provided the opportunity to submit additional comments during the public and agency review period.

In addition, consultation letters and letters announcing the availability of the Draft SEA for review were sent directly to the Florida Department of Environmental Protection (FDEP), South Florida Regional Planning Council, the City of Homestead, and local tribal governments. Letters announcing the availability of the Draft SEA for review were sent to the Florida Turnpike Enterprise, Miami-Dade County Transit, the Homestead Job Corps, the Homestead Homeless Assistance Center, the Homestead Branch of the 1st National Bank of South Florida, the Air Quality Division of the Miami-Dade County Department of Environmental Resources Management (DERM), SOCSOUTH, USCBP, USCG, and the Verde Gardens Apartments government-subsidized housing development located northeast of the proposed ECC on the east side of SW 127th Avenue.

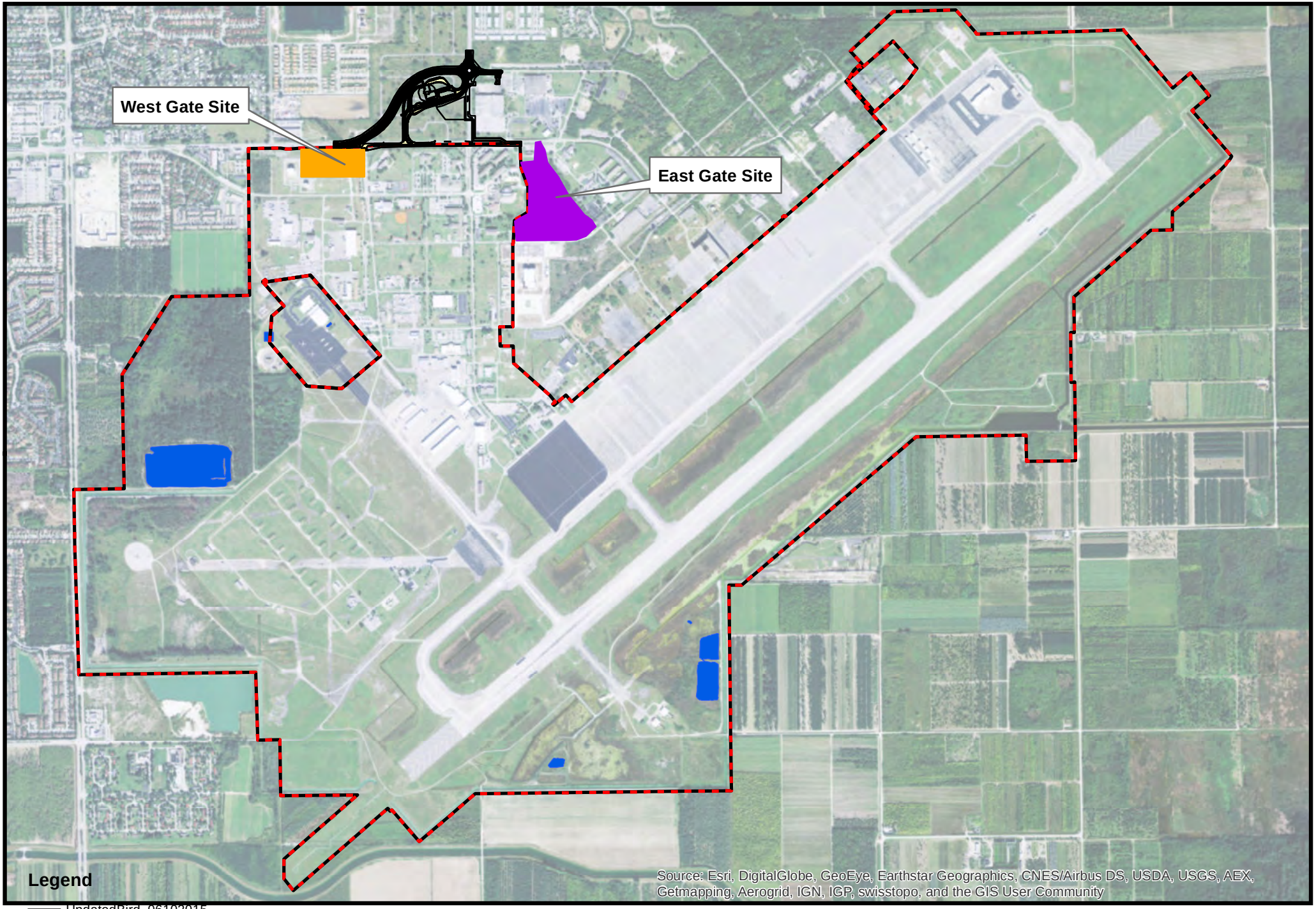


Figure 2-2
Alternatives Eliminated from Consideration
HARB ECC SEA

A notice of the availability of the Draft SEA for review was published in *The Miami Herald* and the *South Dade News Leader* to initiate the 30-day public review period for the Draft SEA. The Draft SEA also was submitted to the Florida State Clearinghouse for distribution to state agencies for a 60-day review. The Florida State Clearinghouse review meets USAF requirements for the Interagency/Intergovernmental Coordination for Environmental Planning (IICEP) process.

Public and agency comments received were considered in developing the Final SEA.

2.6.2 Regulatory Compliance and Permit Requirements

Detailed discussion of regulatory compliance and permitting requirements was provided in the 2010 EA (HARB 2010) and that discussion is incorporated by reference because it would be relevant to the Preferred Alternative. The issues are briefly summarized below.

USAF compliance with NEPA is specified in USAF Policy Directive 32-70, Environmental Quality, which is implemented in 32 CFR 989, EIAP. The regulation provides instructions on procedures to achieve and maintain compliance with NEPA and the CEQ regulations in conjunction with the USAF EIAP. This SEA is intended to provide analysis sufficient to identify the environmental impacts of the Proposed Action and to determine whether the impacts may have significant effects that would require the preparation of an Environmental Impact Statement (EIS). If the SEA determines that the environmental effects will not be significant, a Finding of No Significant Impact (FONSI) will be prepared.

The CAA establishes federal policy to protect and enhance the quality of air resources to protect human health and the environment. The CAA requires that adequate steps be implemented to control the release of air pollutants and prevent significant deterioration of air quality. The FDEP, Bureau of Air Management, delegates review authority for compliance with the CAA to the DERM Air Quality Management Division, who have been notified of the availability of the Draft SEA for review.

The CWA of 1977 (33 USC 1344) and the Water Quality Act of 1987 (33 USC 1251, as amended) establish federal policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters and, where attainable, to achieve a level of water quality that provides for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water. FDEP has indicated that nonpoint source stormwater discharges related to the Proposed Action or alternatives would require a National Pollutant Discharge Elimination System (NPDES) permit, including a stormwater pollution prevention plan (SWPPP) detailing site-specific best management practices (BMPs). Section 404 of the CWA requires specific permitting for dredging and/or filling of wetlands. This portion of the Act is administered by the USACE with U.S. Environmental Protection Agency (EPA) oversight. However, a USACE CWA Section 404 permit for dredge and fill activities within waters of the U.S. is not anticipated for the Proposed Action or alternatives.

Other laws and regulations applicable to water resources include:

- SDWA (42 USC 300f et seq.), which governs groundwater used as a potable water supply.
- State of Florida Water Resource Implementation Rule (FWRIR; Florida Statute [FS] 373.036), which provides policies and directives which dictate goals, objectives, and guidance for the development and review of programs, rules, and plans relating to water resources. The FWRIR gave broader responsibility to the Florida water districts that included environmental resource permitting (ERP).
- FS 62-302.700(9), which establishes the "Outstanding Florida Waters" program that designates waters that are of exceptional recreational or ecological significance. Examples in the area would include waters within Biscayne and Everglades National Parks. Water quality in bodies with this classification should be maintained and protected under all circumstances, other than temporary impacts allowed under Section 316 of the federal CWA.
- Florida Administrative Code (FAC), Chapter 62-520.410, which, like the SDWA, defines classes of aquifers designated for potable water use and sets standards for water quality.

The SEA Preferred Alternative or other alternatives would require an ERP. The ERP Program regulates activities involving construction, alteration, maintenance, removal, modification, and operational activities in uplands, wetlands, and other surface waters that, if present, would alter, divert, impede, or otherwise change the flow of surface waters. Implementation of the ERP Program involves several Florida statutes and rules of the FDEP, including certain rules of water management districts that have been adopted for use by the FDEP. ERP applications in Miami-Dade County are processed by the South Florida Water Management District (SFWMD). Issuance of the ERP also constitutes a water quality certification (or waiver) under Section 401 of the CWA and a finding of consistency with the Florida Coastal Zone Management Program under Section 307 of the CZMA. Modification of the existing HARB Surface Water Management General Permits (No. 13-00148-S) may be required from SFWMD prior to construction and operation of the required stormwater management system. A Class V permit would be required from the DERM if dewatering is performed during construction of the Proposed Action.

Hazardous materials and wastes are subject to regulation under the Solid Waste Disposal Act (SWDA), as amended by RCRA; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); The Toxic Substances Control Act (TSCA); the CWA; and the CAA. Regulations pertinent to renovation and demolition activities include federal regulations (40 CFR 763) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) relating to asbestos demolition and renovation.

The ESA of 1973 (16 USC 1531) requires that federal agencies, in consultation with USFWS and the National Marine Fisheries Service, use their authority to assist in carrying out federal programs for the conservation of threatened or endangered species. These agencies also ensure that any project that is funded, authorized, or constructed by the federal government is not likely to jeopardize the continued existence of such threatened or endangered species, or result in the destruction or adverse modification of their habitat. Animals with a state designation of endangered, threatened, or of special concern are granted legal protection by the State of Florida. USFWS and FFWCC were consulted with, as appropriate, regarding the potential for the Proposed Action to affect protected species or their habitats. Since completion of the 2010 EA, several plant and animal species in Miami-Dade County have been listed or are proposed for listing under the ESA. The federally endangered Small's milkpea (*Galactia smallii*) has been documented to occur on the proposed ECC property.

Actions that could affect cultural resources are regulated under Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation Regulations for compliance with Section 106, codified as 36 CFR 800. These regulations require that the effects of federal actions on cultural resources be considered and minimized. The SHPO regulates the preservation of cultural resources in Florida, and has concurred that no cultural resources would be affected by the Proposed Action.

Because the installation is within the Florida designated coastal zone, the CZMA (16 USC 1451-1464), as amended, requires HARB to provide a consistency determination to FDEP addressing the 23 Florida statutes that comprise the legislative framework of the Florida Coastal Management Plan. The consistency determination assures the proposed activity is consistent to the maximum extent practicable, with the Florida Coastal Management Plan. In addition, USAF has regulations regarding coastal zone consistency, which are addressed in AFI 32-7060, *Interagency Intergovernmental Coordination for Environmental Planning* (Secretary of the Air Force 1994a). DERM has determined that the Proposed Action does not occur in tidal waters, in wetlands, or in wetlands containing halophytic vegetation and, therefore, neither a Class I Coastal Construction Permit nor a Class IV Wetland Permit would be required for this project. DERM noted during development of the 2010 EA that other permits may be required from USACE, DERM, and SFWMD and recommended HARB contact and consult with the agencies directly.

2.7 Comparison of Alternatives

The comparison of alternatives is based on potential impacts to traffic, socioeconomics, EJ, threatened and endangered species, hazardous materials and waste management, and potential cumulative impacts to these resources.

Potential impacts to air quality, coastal zone resources, common biological resources (flora and fauna), cultural resources, land use, noise, physical resources, safety, utility infrastructure, and water resources were evaluated for construction of an ECC on the site in the 2010 EA. Impacts from the 2015 SEA Preferred Alternative would be comparable to those identified for Alternatives 1 and 2 in the 2010 EA and there have been no substantive changes in the intervening years that would warrant re-analysis of these resources or influence to decision to be made. Therefore, the analysis of impacts, including cumulative impacts, to air quality, coastal zone resources, common biological resources (flora and fauna), cultural resources, land use, noise, physical resources, safety, utility infrastructure, and water resources provided in the 2010 EA (HARB 2010) are incorporated by reference. Any measures or BMPs specified in the 2010 EA for these resources will be implemented, as appropriate, during implementation of the Proposed Action.

The environmental impacts of each alternative will be compared in this document to provide a basis for choice among the alternatives. The environmental resources potentially affected by the alternatives are discussed in Section 3. The expected consequences to the resources are discussed in Section 4. Table 2-1 summarizes the analysis provided in Section 3 and the analysis of resources incorporated by reference from the 2010 EA.

TABLE 2-1
Comparison of Alternatives

Resource Area	Preferred Alternative (2015)	Alternative 1 (2010)	Alternative 2 (2010)	Alternative 3 (2010)	No Action Alternative
Resource Areas Considered in Detail					
Traffic	Beneficial impacts, such as improved pedestrian access and roadway operation, increased vehicle storage, and minor temporary adverse impacts to public transportation and residents due to road closures during construction	Beneficial impacts such as reducing congestion and delays, minor adverse impacts due to road closures, significant adverse impacts to public transportation	Beneficial impacts such as reducing congestion and delays, minor adverse impacts due to road closures, significant adverse impacts to public transportation	Beneficial impacts such as reducing congestion and delays, minor adverse impacts due to road closures, significant adverse impacts to public transportation	No change in current conditions, long-term negative impacts from increased congestion.
Socioeconomics	No impacts to population or housing, short-term, minor benefits to the local economy from construction-related jobs, indirect adverse impacts to the local economy for road	No impacts to population or housing, short-term, minor benefits to the local economy from construction-related jobs, indirect adverse impacts to the local economy for road	No impacts to population or housing, short-term, minor benefits to the local economy from construction-related jobs, indirect adverse impacts to the local economy for road	No impacts to population or housing, short-term, minor benefits to the local economy from construction-related jobs, indirect adverse impacts to the local economy for road	No impacts

TABLE 2-1
Comparison of Alternatives

Resource Area	Preferred Alternative (2015)	Alternative 1 (2010)	Alternative 2 (2010)	Alternative 3 (2010)	No Action Alternative
	improvements, short-term, minor impacts to the 1st National Bank of South Florida, no adverse impacts to the Homestead Job Corps facility	improvements, short-term, minor impacts to the 1st National Bank of South Florida, no adverse impacts to the Homestead Job Corps facility	improvements, short-term, minor impacts to the 1st National Bank of South Florida, no adverse impacts to the Homestead Job Corps facility	improvements, short-term, minor impacts to the 1st National Bank of South Florida, no adverse impacts to the Homestead Job Corps facility	
Environmental Justice	No impact to human health of the natural environment, no adverse impacts to EJ populations, negligible impacts to walking access for resources such as existing bus stops	No impact to human health of the natural environment, no adverse impacts to EJ populations, negligible impacts to walking access for resources such as existing bus stops	No impact to human health of the natural environment, no adverse impacts to EJ populations, negligible impacts to walking access for resources such as existing bus stops	No impact to human health of the natural environment, no adverse impacts to EJ populations, negligible impacts to walking access for resources such as existing bus stops	No impacts
Threatened and Endangered Species	No direct impacts to federally endangered Small's milkpea plant, minor direct impacts to state protected plants during construction, negligible impacts to wildlife species during construction activities, no direct impacts to the Florida bonneted bat	No direct impact on the Small's milkpea plant, no impacts or negligible impacts to wildlife species, no direct impacts to the Florida bonneted bat	Adverse impacts to identified Small's milkpea plant populations, no impacts or negligible impacts to wildlife species, no direct impacts to the Florida bonneted bat	Adverse impacts to identified Small's milkpea plant populations, no impacts or negligible impacts to wildlife species, no direct impacts to the Florida bonneted bat	No impacts
Hazardous Materials and Waste Management	Short-term, minor direct impacts as a result of construction activities	Short-term, minor direct impacts as a result of construction activities	Short-term, minor direct impacts as a result of construction activities	Short-term, minor direct impacts as a result of construction activities	No impacts
Resource Areas Incorporated by Reference					
Air Quality	Short-term minor increase in fugitive dust and construction-related emissions; long-term reduction in vehicle emissions from improved traffic flow	Short-term minor increase in fugitive dust and construction-related emissions; long-term reduction in vehicle emissions from improved traffic flow	Short-term minor increase in fugitive dust and construction-related emissions; long-term reduction in vehicle emissions from improved traffic flow	Short-term minor increase in fugitive dust and construction-related emissions; long-term reduction in vehicle emissions from improved traffic flow	No short-term changes; long-term increase in vehicle emissions as a result of increased delays in traffic due to congestion.

TABLE 2-1
Comparison of Alternatives

Resource Area	Preferred Alternative (2015)	Alternative 1 (2010)	Alternative 2 (2010)	Alternative 3 (2010)	No Action Alternative
Coastal Zone Resources	No impacts	No impacts	No impacts	No impacts	No impacts
Common Biological Resources	Short-term minor negative impacts from displacement from construction and from loss of approximately 6.5 acres of low quality habitat, potential long-term benefit from elimination of seed source for exotic invasive plant species since dense growths of exotic plants allows the possibility for wildland fires	Short-term minor negative impacts from displacement from construction and from loss of approximately 6.5 acres of low quality habitat, potential long-term benefit from elimination of seed source for exotic invasive plant species since dense growths of exotic plants allows the possibility for wildland fires	Short-term minor negative impacts from displacement from construction and from loss of approximately 6.5 acres of low quality habitat, potential long-term benefit from elimination of seed source for exotic invasive plant species since dense growths of exotic plants allows the possibility for wildland fires	Short-term minor negative impacts from displacement from construction and from loss of approximately 6.5 acres of low quality habitat, potential long-term benefit from elimination of seed source for exotic invasive plant species since dense growths of exotic plants allows the possibility for wildland fires	No impacts
Cultural Resources	No impacts	No impacts	No impacts	No impacts	No impacts
Land Use	Minor beneficial impact on land use because from conversion of the North Gate parcel into functioning property with a substantial maintained green space/landscaped area	Minor beneficial impact on land use because from conversion of the North Gate parcel into functioning property with a substantial maintained green space/landscaped area	Minor beneficial impact on land use because from conversion of the North Gate parcel into functioning property with a substantial maintained green space/landscaped area	Minor beneficial impact on land use because from conversion of the North Gate parcel into functioning property with a substantial maintained green space/landscaped area	No impacts
Noise	Minor short-term construction related noise	Minor short-term construction related noise	Minor short-term construction related noise	Minor short-term construction related noise	No impacts
Physical Resources	No impacts	No impacts	No impacts	No impacts	No impacts
Safety	Improved safety as a result of meeting AT/FP requirements and separating commercial trucks from general traffic, minor potential for increased pedestrian safety risk due to	Improved safety as a result of meeting AT/FP requirements and separating commercial trucks from general traffic, minor potential for increased pedestrian safety risk due to	Improved safety as a result of meeting AT/FP requirements and separating commercial trucks from general traffic, minor potential for increased pedestrian safety risk due to	Improved safety as a result of meeting AT/FP requirements and separating commercial trucks from general traffic, minor potential for increased pedestrian safety risk due to	No change from current conditions, continued safety risk due to failing to meet AT/FP requirements and continued traffic safety risk from mixing commercial truck and general traffic

TABLE 2-1
Comparison of Alternatives

Resource Area	Preferred Alternative (2015)	Alternative 1 (2010)	Alternative 2 (2010)	Alternative 3 (2010)	No Action Alternative
	increased distance of travel from east side to west side of proposed ECC	increased distance of travel from east side to west side of proposed ECC	increased distance of travel from east side to west side of proposed ECC	increased distance of travel from east side to west side of proposed ECC	
Utility Infrastructure	Minor short-term impacts from utility relocation associated with construction, no long-term impacts	Minor short-term impacts from utility relocation associated with construction, no long-term impacts	Minor short-term impacts from utility relocation associated with construction, no long-term impacts	Minor short-term impacts from utility relocation associated with construction, no long-term impacts	No impacts
Water Resources	Potential for short-term saltwater intrusion to groundwater if pumping is needed to accommodate construction, no long-term groundwater impacts, no impacts to other water resources with use of appropriate stormwater BMPs during construction	Potential for short-term saltwater intrusion to groundwater if pumping is needed to accommodate construction, no long-term groundwater impacts, no impacts to other water resources with use of appropriate stormwater BMPs during construction	Potential for short-term saltwater intrusion to groundwater if pumping is needed to accommodate construction, potential for long-term benefit to groundwater from stormwater infiltration areas, no impacts to other water resources with use of appropriate stormwater BMPs during construction	Potential for short-term saltwater intrusion to groundwater if pumping is needed to accommodate construction, potential for long-term benefit to groundwater from stormwater infiltration areas, no impacts to other water resources with use of appropriate stormwater BMPs during construction	No impacts

1

SECTION 3

Affected Environment

Section 3 describes the existing conditions of the project area, which is defined as the North Gate parcel and portions of the neighboring BX parcel along St. Nazaire Boulevard, SW 127th Avenue, and SW 288th Street. The 2015 SEA Preferred Alternative involves several tasks. HARB would acquire the approximately 27-acre North Gate parcel from Miami-Dade County. The construction of the proposed HARB ECC and road realignment would occur on the acquired North Gate parcel. The existing conditions are described for those five resources that are relevant to the assessment of impacts from the Proposed Action and have experienced substantive changes in the intervening years since the 2010 EA. The comparison of alternatives for this SEA is based on potential impacts to:

- Transportation (traffic)
- Socioeconomics
- EJ
- Select biological resources including threatened and endangered species
- Hazardous materials and waste management
- Potential cumulative impacts

The effects of the Preferred Alternative and No Action Alternative on the baseline conditions of each environmental resource are evaluated in Chapter 4.

3.1 Transportation

HARB is located approximately 25 miles south of Miami in southern Miami-Dade County, approximately 8 miles east of the center of the city of Homestead. The purpose of this SEA is to evaluate alternatives for a new ECC facility at HARB that would accommodate the current mission/tenants and anticipated future increases in gate traffic.

3.1.1 Existing Conditions

3.1.1.1 Roadways

As noted earlier and in the 2010 EA, roads in the vicinity of HARB change names frequently. As a result, different maps use different road names for the same street (HARB 2010). For example, SW 288th Street becomes Bougainville Boulevard east of SW 127th Avenue; west of Westover Street, SW 288th Street is referred to as Biscayne Drive. Additionally, 127th Avenue becomes Coral Sea Boulevard south of SW 288th Street. For the purposes of the SEA and to maintain consistency within this document, the numbered street names will be used in the vicinity of the project site where possible: SW 288th Street will be used to reference the entire length of the road, including Bougainville Boulevard and Biscayne Drive, and SW 127th Avenue will be used to include Coral Sea Boulevard.

The North Gate parcel for the proposed HARB ECC is on the northwest corner of the intersection of SW 288th Street and SW 127th Avenue; SW 288th Street borders the southern boundary of the parcel, and SW 127th Avenue borders the eastern boundary of the parcel. The former Nevada Avenue, which functioned when HAFB was operational, makes a right angle turn northwest of the parcel. SW 132nd Avenue is perpendicular to SW 288th Street and is approximately 1,100 feet west of the North Gate parcel. Across SW 127 Avenue from the North Gate parcel is the BX parcel (which contains the former BX building, Building 920). This parcel is on the northeast corner of the intersection of SW 288th Street and SW 127th Avenue; SW 288th Street borders the southern boundary of the parcel, SW 127th Street borders the western boundary of the parcel, and St. Nazaire Boulevard borders the northern boundary of the parcel. The eastern boundary of the property is not defined by a road. Homestead Job Corp is located east of the BX parcel.

Ramey Avenue, which is approximately 800 feet east of the former BX building, connects St. Nazaire Boulevard to SW 288th Street.

The Westover Gate and the Old Main Gate are located on SW 288th Street. The Westover Gate that currently operates as the main entrance to HARB is located on Westover Street, which intersects SW 288th Street near the southwest corner of the North Gate parcel. The Old Main Gate is on SW 127th Avenue, southeast of the North Gate parcel. This section of SW 127th Avenue is barricaded and is not accessible to through traffic.

The North Gate parcel, which is Miami-Dade County property and was formerly a military housing area, contains several roads that remain from its historical use on the HAFB. The roads have no public rights-of-way and are not part of the maintained Miami-Dade County public road system. Other than the roads, the North Gate parcel is unoccupied land with no existing structures. After the military housing on the North Gate Parcel was destroyed by Hurricane Andrew in 1992, the property was transferred to Miami-Dade County during BRAC of the HAFB in 1993. The extant roads on the parcel would be built over as part of the 2015 SEA Preferred Alternative.

3.1.1.2 Public Transportation

Miami-Dade County Metrobus Route 70, which runs northbound and southbound, travels along SW 127th Avenue, St. Nazaire Boulevard, Ramey Avenue, SW 288th Street, and SW 132nd Avenue in the vicinity of the project area. Stops along the route provide access to amenities in the vicinity of the project site, including HARB, Verde Gardens Apartments, Homestead Job Corps, and 1st National Bank of South Florida (Figure 3-1) (Miami-Dade Transit 2015). Bus stops that could be impacted by the Proposed Action are depicted on Figure 3-2 and listed below:

1. HARB Stop near Old Main Gate, SW 288th Street and SW 127th Avenue
2. HARB Stop near Westover Gate, Westover Street and SW 288th Street
3. SW 288th Street and Ramey Avenue
4. Ramey Avenue and SW 285th Street

A HARB stop (1) is near the Old Main Gate at the intersection of SW 288th Street and SW 127th Avenue. The southbound stop is on the northeast corner of the intersection and the northbound stop is on the southwest corner of the intersection. A second HARB stop is near the Westover Gate with the southbound stop on the north side of SW 288th Street and the northbound stop (2) on the south side of SW 288th Street (southeast of the southbound stop). The Route 70 Metrobus has two stops near the intersection of SW 288th Street and Ramey Avenue (3). Both stops are on the west side of the intersection and on opposite sides of SW 288th Street. There also are Route 70 stops on Ramey Avenue south of St. Nazaire Avenue (4) near the northern entrance to of the Job Corps Campus. The bus stops are across from each other along Ramey Avenue. The next nearest Metrobus Route 70 stop is located west of the North Gate parcel on SW 132nd Avenue just south of SW 286th Street, but is approximately 0.22 mile from the project area (Miami-Dade Transit 2015).

Route 70 Metrobus operates from approximately 6 am to 10 pm Monday through Saturday and from approximately 6 am to 9 pm on Sundays. At peak rush hour during the week (early morning and late afternoon) the Metrobus Route 70 arrives and departs approximately every 25 minutes, with the frequency of buses dropping to approximately once per hours after 7 pm. On Saturdays and Sundays, Route 70 Metrobus runs approximately every hour (Miami-Dade Transit 2015).

3.1.1.3 Pedestrian Traffic

The project area includes an asphalt sidewalk on the west side of SW 127th Avenue that connects to sidewalks to the north and south. A segment of concrete sidewalk is on the east side of SW 127th Avenue.

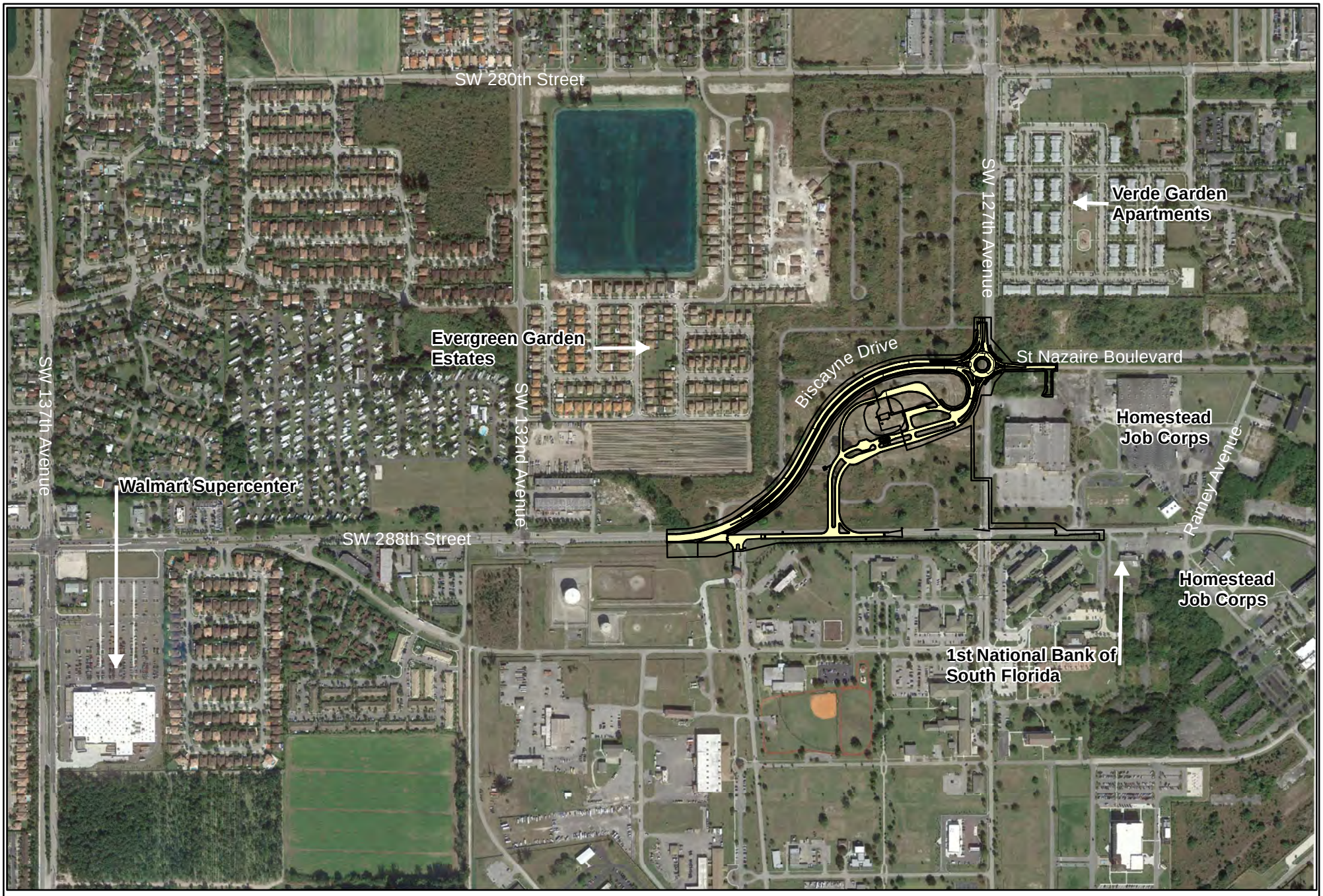
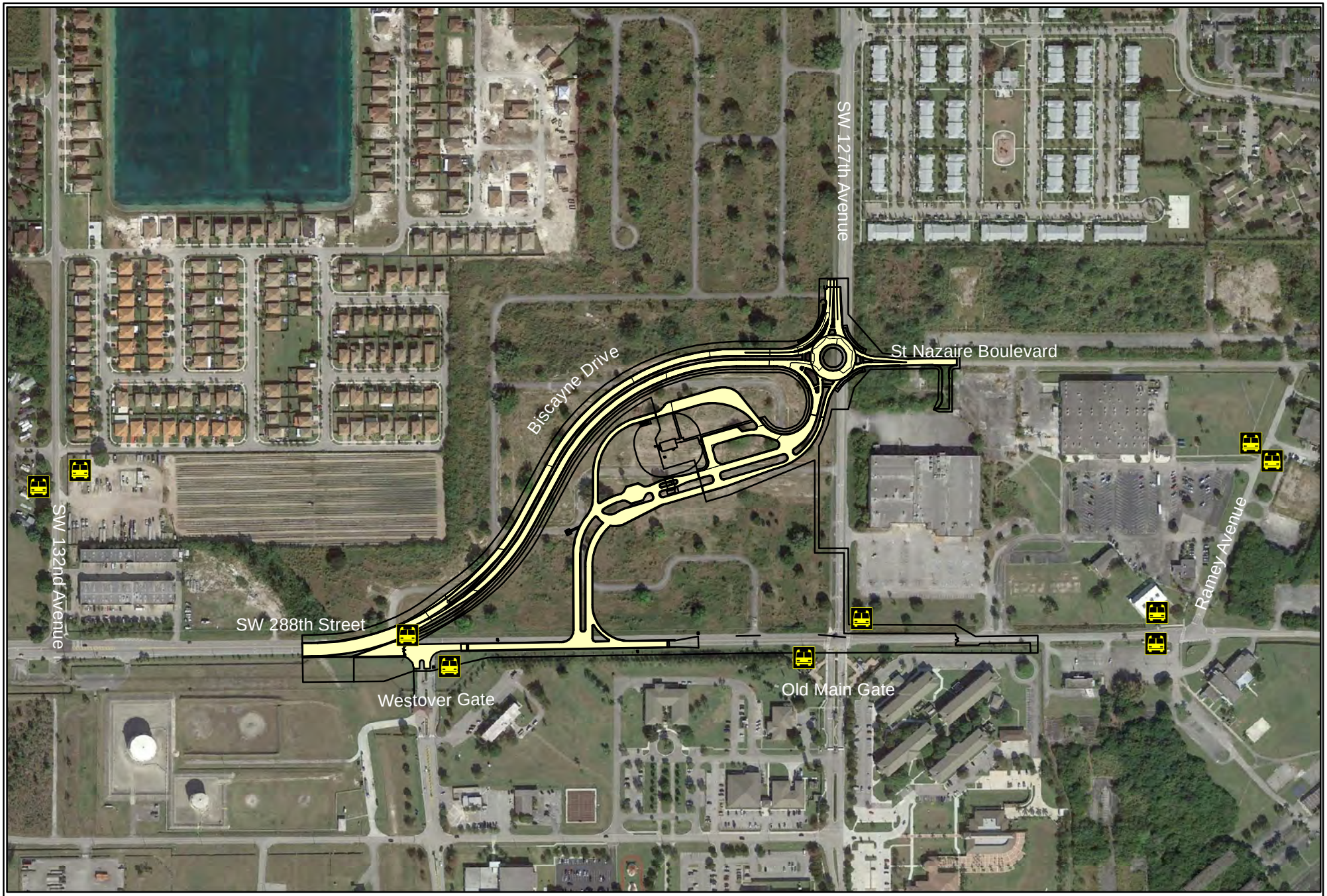


Figure 3-1
Selected Private Entities
Near the Proposed Project Site
HARB ECC SEA

CH2M HILL



Legend

Metrobus Route 70 Bus Stops

N

0 125 250 500 Feet

Figure 3-2
Public Transit Bus Stops
HARB ECC SEA

CH2M HILL

3.1.2 Traffic Study

A limited traffic analysis was conducted to evaluate the potential impacts to transportation from each alternative. Though the exact gate complex configuration and features presented from the Preferred Alternative is preliminary and subject to minor changes, a general analysis of traffic flow and intersection configuration provides quantitative data through which the impacts to transportation can be analyzed and compared. The operational analysis considered the project layout depicted in the Mason & Hanger preliminary layout plan (Mason & Hanger 2014). The analysis was based on turning movement traffic counts collected by Quality Counts, LLC during two periods:

- 7:00 am to 9:00 am, Thursday, November 6, 2014
- 5:30 am to 9:00 am, Saturday, November 8, 2014

No traffic counts were collected during the afternoon or evening. A technical memorandum was prepared by Tetra Tech that presented the methodology and results for the limited traffic study.

3.1.2.1 Traffic Study and Turning Movement Calculation Methodology

Traffic counts were collected at three intersections in the vicinity of the North Gate parcel and the BX parcel:

- SW 288th Street and Westover Street
- SW 288th Street and SW 127th Avenue
- SW 127th Avenue and St. Nazaire Boulevard

Turning Movement Counts (TMC) were conducted during a typical weekday morning peak period (7:00 am to 9:00 am) and during a typical weekend morning peak period during a UTA (5:30 am to 9:00 am). These times were chosen as they "are the periods when the greatest number of vehicles were observed on the adjacent roadway network and entering" HARB (Ramakers 2015). Based on interviews with HARB personnel, the evening peak hour was not analyzed since traffic in and out of the base is not as concentrated as it is during the morning peak hour. TMCs are conducted because they provide the necessary level of detail to accurately perform operational analyses of intersections under current and proposed conditions (Ramakers 2015). Based on the analysis, if acceptable operation is achieved during high-volume peak periods, then it is assumed that operation during lower-volume periods would also be acceptable (Ramakers 2015).

Quality Counts, LLC used Miovision™ cameras to collect traffic counts: because they are inconspicuous and record traffic counts without 'observer effect' that can bias counts when conspicuous devices (i.e. count boards, roadway tubes) are used (Ramakers 2015). After the data was collected, it was processed into Universal Traffic Data Format (UTDF) and formatted into a standard report. The formatted data was reviewed and analyzed to "determine the peak periods for each intersection" (Ramakers 2015). Information was also collected regarding the number of heavy vehicles/trucks that used the roads.

3.1.2.2 Traffic Analysis Existing Conditions

The current entrance to HARB, the Westover Gate, is located on Westover Street, just south of SW 288th Street. Forming the eastern border of the traffic study limits is SW 127th Avenue. The Old Main Gate is located at the intersection SW 127th Avenue and SW 288th Street. Currently, SW 127th Avenue is barricaded at the Old Main Gate where it enters HARBN, so there is no access onto the base at this location. SW 288th Street, SW 127th Avenue, and St. Nazaire Boulevard are Miami-Dade County two-lane roadways, with the posted speed limit on SW 288th Street and St. Nazaire Boulevard being 20 miles per hour (MPH), and 40 MPH on SW 127th Avenue.

Two of the intersections analyzed (SW 288th Street and Westover Street; SW 288th Street and SW 127 Avenue) are all-way stop controlled intersections. The third intersection analyzed (SW 127th Avenue and St. Nazaire Boulevard) is a two-way stop controlled, with the stop sign located on the St. Nazaire Boulevard approach (Ramakers 2015). The intersections were assessed using the LOS criteria for two-way and all-way stop controlled intersections, which are identified in the *2010 Highway Capacity Manual*. The Tetra Tech report states: "According to the most recent edition (2010 Edition) of the *Highway Capacity Manual*, level of

service is a qualitative measure describing operational conditions of a traffic stream or intersection. Level of service ranges from A to F, with LOS A being the best. LOS D is generally considered to be acceptable" (Ramakers 2015). Table 3-1 identifies LOS criteria A through F.

TABLE 3-1
Level of Service Criteria (Unsignalized Intersection)

Level of Service	Average Stopped Vehicle Delay (seconds)
A*	≤10
B	>10 and ≤15
C	>15 and ≤25
D*	>25 and ≤35
E	>35 and ≤50
F	>50

*LOS A is considered the best and D is considered acceptable in urban/suburban areas.

The results of the limited traffic study suggest that under the existing conditions "all approaches to all the study intersections operate as a LOS C or better during both the Weekday and Saturday AM peak period[s]" (Ramakers 2015).

3.2 Socioeconomics

The study area is located immediately north of the current main entrance for HARB. The socioeconomic conditions of Miami-Dade County, HARB, and the surrounding areas, including the City of Homestead, Florida City, Leisure City, and Naranja, are described in the following sections. Where appropriate, comparisons are made with conditions for the county as well as the State of Florida. The socioeconomic resources areas potentially affected by the Preferred Alternative include population, employment and earnings, and housing.

3.2.1 Existing Conditions

3.2.1.1 Population

Miami, with a population of 399,457, is the largest city in Miami-Dade County and is the county seat. Miami is approximately 25 miles northwest of HARB. According to the U.S. Census Bureau (USCB) data from 2010, Miami-Dade County had a population of 2,496,435 while estimates from 2013-2014 indicate a rise in population to 2,617,176 people (USCB 2010, USCB 2015). As of 2013-2014, Miami-Dade is the most populous county in the state and the seventh most populous county in the country (Miami-Dade County 2014).

According to the 2010 Census results, the populations of surrounding communities are: Homestead (60,512), Leisure City (22,655), Florida City (11,245), and Naranja (8,303) (USCB 2010). 2000 USCB data indicated the populations of these areas as: Homestead (31,909), Leisure City (22,152), Florida City (7,843), and Naranja (4,034) (HARB 2010). The 2006 USCB population estimate for the City of Homestead was 53,767, a 68 percent increase in 6 years, and the City of Homestead predicted in 2008 that its population would increase to 84,000 by 2011 due to an ongoing housing boom (HARB 2010). However, population growth slowed, increasing by only 10,312 between 2006 and 2013, for a current estimate of 64,079, (HARB 2010, USCB 2015).

There are 3,268 jobs at HARB, including 2,592 employees from the 482nd Fighter Wing. The Air Force Reserve Command (AFRC) identified 73 Active Guard Reserve (AGR) personnel, 175 active duty personnel; 233 civilians, 57 non-appropriated civilians, 78 contractors, 244 Air Reserve Technicians (ARTs), and 1,732

traditional reservists employed at the 482nd Fighter Wing (Norton 2015). In addition, 81 members of the USCG, 150 members of the 50th Regional Support Group, 348 SOCSOUTH personnel, 121 Customs and Border Protection personnel, 28 125th Fighter Wing personnel, and 21 miscellaneous tenant personnel are employed at HARB (Andrejko 2015a). Because reservists, civilians, and contractors do not reside on base, it is assumed that most of these employees are members of the surrounding communities.

Population by race and ethnicity for Florida, Miami-Dade County, and the City of Homestead are presented in Table 3-2. The most recent demographic information from the USCB is 2010. The USCB also provides estimates for the population from between 2013 and 2014 (USCB 2015). These numbers are included for the total populations for Florida, Miami-Dade County, and the City of Homestead to provide further context.

TABLE 3-2
Population Estimates by Race and Ethnicity (2010 Census)

	Florida	Miami-Dade County	City of Homestead
Total Population	18,801,310	2,496,435	60,512
Total Population (2013-2014 Estimates)	19,893,297	2,617,176	64,079
Race			
White	14,109,162	1,841,887	40,467
African American	2,999,862	472,976	12,316
American Indian and Alaska Native	71,458	5,000	245
Asian	454,821	37,669	724
Native Hawaiian or Other Pacific Islander	12,286	675	74
Two or more races	472,577	58,877	2,272
Ethnicity			
Not Hispanic or Latino	14,577,504	872,576	22,434
Hispanic or Latino	4,223,806	1,623,859	38,078

Source: (USCB 2010) Interactive Population Map (USCB 2015)

3.2.1.2 Employment and Earnings

Employment information for the state, county, and City of Homestead is provided in Table 3-3. The USCB's 3-Year American Community Survey (ACS) provides estimated population data for 2011 to 2013 (USCB 2011–2013). According to the ACS data, the percent of unemployed people over the age of 16 is higher in Homestead (9.3 percent) than it is in Miami-Dade County (7.1 percent) or in the rest of the state (6.6 percent). However, the percentage of people not in the workforce is lower in the City of Homestead (34.4 percent) than in the county (37.6 percent) or in the state (40.5 percent). A higher percentage of civilians are employed in Homestead (54.8 percent) than in the state (52.5 percent). However, a higher percentage of civilians are employed in the county (55.2 percent) than in Homestead.

The poverty level threshold for a family of five (three children) in 2013 was defined by the USCB as $27,801. According to the ACS, in 2013 the median household income for the State of Florida was $45,872 with 12.4 percent of families and 17 percent of all individuals living below the poverty level. Within Miami-Dade County, the median household income was $41,863 with 17.4 percent of families and 20.9 percent of all individuals living below the poverty level. Within the City of Homestead, the median household income was $39,727 with 28.6 percent of families and 32.6 percent of individuals living below the poverty level (USCB

2011–2013). A higher percentage of people live below the poverty level in Homestead when compared with the percentage of families and individuals that live below the poverty level in the county or state.

TABLE 3-3
Labor and Employment (2011–2013)

	Florida	Percent	Miami-Dade County	Percent	City of Homestead	Percent
Total Population Over 16	15,780,095	---	2,108,429	---	46,487	---
Composition*						
Civilian Employed	8,284,255	52.5	1,163,330	55.2	25,477	54.8
Armed Forces	53,053	0.3	2,203	0.1	710	1.5
Civilian Unemployed	1,045,466	6.6	150,372	7.1	4,304	9.3
Not in the workforce	6,397,321	40.5	792,524	37.6	15,996	34.4

Source: (USCB 2011–2013) 3-Year American Community Survey

* Population 16 years and over

Historically, the Homestead economy relied primarily on agricultural production, particularly of winter vegetables and tropical fruit (HARB 2010, South Dade Chamber of Commerce 2015). The economy is still supported by a strong agricultural industry: “Nearly half of the winter vegetables consumed in the United States are grown in tropical South Florida” (South Dade Chamber of Commerce 2015). The website for the South Dade Chamber of Commerce (formerly known as the Homestead/Florida City Chamber of Commerce) states: “Homestead’s active program of historic preservation keeps the past alive while preparing residents for the burgeoning industries, tourism and future population growth” (South Dade Chamber of Commerce 2015). This statement indicates that the economy has been expanding in recent years to include new industries, including agricultural and recreational tourism, large retail business (Homestead Miami Speedway, Walmart, Sedano’s, Home Depot, and Office Depot), and technology. The city is encouraging the growth of high-paying jobs in the biomedical field, film/entertainment business, financial services, information technology, international commerce, telecommunications, and service industries. The Chamber of Commerce website notes that “the area’s new industries offer big-city employment opportunities within a small-town environment” (South Dade Chamber of Commerce 2015).

Several businesses in the vicinity of the North Gate parcel would potentially be affected by the Preferred Alternative. These include: 1st National Bank of South Florida, the Homestead Job Corps, and Walmart Supercenter.

1st National Bank of South Florida

The 1st National Bank of South Florida, located at 12520 SW 288th Street, is identified as the Base Branch and serves the larger community (Figure 3-1). Situated east of HARB and south/southwest of the Homestead Job Corps near the intersection of Ramey Avenue and SW 288th Street, it is likely that the majority of patrons at the Base Branch are associated with one of these facilities. Although the branch has a 24 Hour walk-up and drive-thru ATM, the lobby hours are limited to Monday through Friday, 9 am to 1 pm (1st National Bank of South Florida 2015). The front parking lot and the drive-thru ATM machines are accessible via two points of access from SW 288th Street.

Homestead Job Corps

The Homestead Job Corps center is located northeast of the HARB and east/northeast of the BX parcel. The mailing address is 12350 St. Nazaire Boulevard and designates the north side of the Job Corps tract, which extends south to SW 288th Street (Figure 3-1). There are several parking lots associated with the Job Corps

center, including the west side parking lot that is accessible via St. Nazaire Boulevard and a rear parking lot that is accessible via Ramey Avenue from the eastern boundary of the Job Corps property. Administered by the U.S. Department of Labor (DOL), the Homestead Job Corps center is a "no-cost education and career technical training program…that helps young people ages 16 through 24 improve the quality of their lives through career technical and academic training" (DOL 2013). Students in training receive a basic, bi-weekly living allowance that increases with experience. Most students at the center live on campus in male and female dormitories. The Homestead center can accommodate 208 male students and 212 female students. Other onsite facilities include a cafeteria that provides three meals a day and a wellness center. In 2012, 90 percent of the students who graduated from the Job Corps program "found work, enrolled in higher education programs, or enlisted in the military" (DOL 2013).

Walmart Supercenter

Walmart Supercenter is approximately 0.9 mile west of the North Gate parcel, at 13600 SW 288th Street on the corner of SW 288th Street and SW 137th Avenue (Figure 3-1). Constructed in early 2014, the store is open 24 hours a day and contains a garden center, vision center, pharmacy, photo center, and tax preparation services.

3.2.1.3 Housing

The project area is near several new housing developments. The South Dade Chamber of Commerce notes that one factor of growth for the community has been "new housing developments [that] complement charming older neighborhoods" (South Dade Chamber of Commerce 2015). Since the completion of the 2010 EA, two housing subdivisions have developed or expanded in the project vicinity and have the potential for being affected by the Preferred Alternative: Evergreen Gardens Estates and Verde Gardens Apartments.

Evergreen Gardens Estates

The Evergreen Gardens Estates subdivision is located directly northwest of the North Gate parcel. The subdivision is bounded on the north by SW 284th Street, on the east by SW 129th Avenue, on the south by SW 286th Street, and on the west by SW 132th Avenue. Development of the subdivision has occurred in stages, with the first few houses built circa 2005 located on the southwest corner of the property. There were 108 houses within the subdivision in January 2014. Evergreen Gardens Estates consists primarily of one-story, ranch-style houses with associated off-street parking and backyards.

Verde Gardens Apartments

Verde Gardens Apartments, located at 12550 SW 282nd Street, is a new subdivision constructed circa 2011 and located directly north of the BX building and Homestead Job Corps facility (Figure 3-1). The subdivision, which was developed by Carrfour Supportive Housing, is a community housing facility for homeless families. The main entrance to the community is located on the corner of SW 280th Street and SW 127th Street. St. Nazaire Boulevard is adjacent to the southern boundary of the subdivision. The development includes 145 town homes, 22 acres of farmland for harvesting crops and raising animals, a farmers market, a kiddie park, and a mediation center (Andujar 2011). Within the townhome development there are 60 two-bedroom, two-bath units; 50 three-bedroom, two-bath units; and 35 four-bedroom, two-bath units. Households must have a child under 18 years of age, a household member with a disability, and a person that was homeless at one time to qualify for residence in the community (Andujar 2011). Each housing unit is Leadership in Energy and Environmental Design (LEED) certified and ADA accessible.

3.3 Environmental Justice

EJ must be considered for federal actions under the NEPA review process and in accordance with the USAF EIAP (32 CFR 989.33). EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (issued 11 February 1994), requires that each federal agency shall make achieving EJ part of its mission by identifying and addressing, as appropriate disproportionately high or

adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations (EPA 2014a). A Presidential Memorandum directed to the heads of all federal departments and agencies, which recognized the importance of utilizing existing federal statutes and regulations, accompanied the EO. The Memorandum states "each federal agency shall analyze the environmental effects, including human health, economic, and social effects of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA."

EJ analysis focuses on residents living within the areas where potentially adverse human health, environmental, or economic impacts could occur, which for the purposes of this SEA are those areas bordering HARB. Data collection efforts involving the identification of minority and low-income populations that might be affected by implementation of the Proposed Action of the alternatives are central to the identification and consideration of EJ issues. The 2011–2013 ACS 3-Year Estimates provided through the USCB Population Estimates Program reports the number of residents having minority and poverty status. Minority populations included in the census are identified as Black; American Indian, Eskimo, or Aleut; Asian or Pacific Islander; Hispanic; or Other. Poverty level is determined by the census using a set of money income thresholds that vary by family size and composition to determine poverty status. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level." For the purposes of this SEA, low-income populations are considered to be the percent of population for all ages for whom poverty status has been determined by the USCB. Data regarding the number of individuals having minority and poverty status on the state, county, or local level is included in Tables 3-1 and 3-2 and discussed further in Sections 3.2.1.1 and 3.2.1.2.

3.3.1 Existing Conditions

Three communities are located near the project site and have the potential of being adversely affected by the Preferred Alternative. These include: the Chapman Partnership Homeless Assistance Center (HAC), Homestead Job Corps, and Verde Gardens Apartments.

3.3.1.1 Homeless Assistance Center—Chapman Partnership (formerly Community Partnership for Homeless)

The Chapman Partnership is a nonprofit organization that operates two HACs in Miami-Dade County. The first HAC opened in Miami in 1995 and the second opened in Homestead in 1998. Both HACs "provide short-term residency, during which many services are provided to help these person regain and restore their lives" (Camillus House 2014). The Homestead facility, located northeast of the project area at 28205 SW 125th Avenue, includes medical and dental clinics, family dorms, conference rooms, cafeterias, classrooms, access to case managers, daycare centers, a basketball court, and a dog kennel. Between the Miami and Homestead facilities, Chapman Partnership provides 800 beds that serve approximately 5,000 men, women, and families each year. The community offers emergency housing, meals, health, dental, and psychiatric care, daycare, job training, job placement, and assistance with finding permanent housing. On average, single adults remain in the HACs for 89 days while families with children stay an average of 133 days. Chapman Partnership has aided more than 100,000 persons, 20,000 of which were children. The facility website states that 64 percent of people who complete the program are able to become self-sufficient (Chapman Partnership 2015).

3.3.1.2 Homestead Job Corps

The Homestead Job Corps center, located east and northeast of HARB at 12350 St. Nazaire Boulevard provides academic and technical training programs to disadvantaged youth between the ages of 16 and 24. The academic training includes basic reading and math, as well as courses in independent living, employability skills, and social skills. These courses are intended to prepare students to transition successfully into the workforce. Students can enroll in the General Educational Development (GED) or high school diploma program, the English Language Learning program, the Driver's Education program, or the Advanced Career Training Program. Additionally, the Job Corps center offers career technical training in a

number of vocation trades, including: auto collision repair and refinish; automobile technician; brick masonry; carpentry; computer technician; culinary arts; facilities maintenance; heating, ventilation and air conditioning technician; medical assistant; medical office support; nursing assistant/home health aide; office administration; pharmacy technician; security and protective services; or tile setting. Several of the career technical training areas provide a particular focus on green job training (DOL 2013).

A person is eligible for the Job Corps program if he or she "meets low-income criteria" (DOL 2015). The eligibility checklist provided on the Job Corps website states that "young people who are school dropouts, runaways, foster youth, parents, or homeless are welcome to apply" (DOL 2015). In 2011, 51 percent of the students enrolled in Job Corps programs around the country were African American (Halzack and Hicks 2013).

The Homestead facilities provides housing for up to 208 male students and 212 female students, and the majority of students live on campus. Job Corps pays students a living allowance while in training and the center offers three free meals per day. The bi-weekly allowance increases as students become more experienced in their area of training. Additionally, students have access to a wellness center that is open daily for basic medical, dental, optometrist, and 24-hour emergency services. Graduates of the program are provided with certain benefits including: a transition allowance of up to $1,000 to assist with transportation and housing, job placement assistance for up to 9 months, career counseling, and relocation counseling services (DOL 2013).

A normal day for students at the Homestead Job Corps center includes academic and hands-on career technical training, followed by recreation time. The evenings are spent eating dinner in the cafeteria, doing chores in the dormitories, and studying. The center provides a variety of recreational programs including arts and crafts, cultural and social events, intramural sports, movies and video games, outdoor activities, and sporting events. Field trips for the students to bowling alleys, movie theaters, area beaches, local special events, concerts, professional sports games, and other attractions are also sponsored by the center. Students can choose to participate in the Student Government Association through elections that are held twice annually or can serve on several Student Government Committees (DOL 2013).

The Job Corps program is self-paced and, depending on the type of training pursued, can take between 8 months and 2 years. It is recommended by the program that students participate in the training for at least one year "to gain the knowledge and social skills needed" for a new career (DOL 2013). Job Corps will provide transportation to students to and from their homes during their first visit to the facility, for program holidays (summer and winter), and when students return home after finishing or leaving the program. Other trips to and from the campus during students' recreational time must be arranged and paid for by the students. The Metrobus Route 70 stops at the Homestead Job Corps center, on Ramey Avenue, south of St. Nazaire Boulevard. Several other Metrobus stops are in the vicinity of the campus, on SW 288th Street and SW 127th Avenue.

3.3.1.3 Verde Gardens Apartments

Verde Gardens Apartments community is a "townhouse community dedicated to helping end South Florida's homelessness" (Sutta 2011). Administered by the Homeless Trust and Carrfour Supportive Housing, the community includes 145 townhomes for homeless families. Residents are able to receive training and work on a 22-acre organic farm adjacent to the facility. Small parcels of land are provided to residents interested in growing produce or raising livestock in order to provide food for their families and earn money by selling goods at the community's farmers market.

When the facility opened in 2011, Verde Gardens Apartments was "featured in *Time Magazine* as an example of innovative developments that combine housing for the formerly homeless within environmentally friendly communities in which residents are able to participate and benefit from unique agricultural programs (Andujar 2011). Several unit sizes are available depending on the number of household residents. Rents are determined at 30 percent of a resident's adjusted gross income and range from a maximum of $487 for a two-bedroom unit, $563 for a three-bedroom unit, and $627 for a four-

bedroom unit. In order to be eligible for the community households must include a child under 18 years of age, a person with a disability, and a formerly homeless person (Andujar 2011).

Staff from the statewide Citrus Health Network is available onsite for specific case management. They provide counseling and referral services and can designate programs for residents that require children to go to school or adults to find jobs (Andujar 2011). The farm and agricultural training program is managed by the Miami-based Earth Learning: this regional organization provides hands-on training to residents on how to grow their own fruit and vegetables and then allows them the opportunity to sell those products at their market (Andujar 2011). Seeds, tools, courses, and oversight are provided to residents if they choose to receive and farm a plot of land, which may be as small as 4 feet by 8 feet in area. The farm raises chickens and goats, and goods are sold weekly at the Homestead Farmers Market, which is open on Fridays from 2 pm to 8 pm and on Saturdays from 8 am to 1 pm. Verde Gardens Apartments also provides training on the farm for children, with the goal to eventually turn management of the farm entirely over to the residents, ensuring a self-sustaining community. Vocational and micro-enterprise training is also offered to families to advance the business skills of residents (Andujar 2011).

Funding for the project comes from U.S. Housing and Urban Development Supportive Housing Funds from the Miami-Dade County Homeless Trust, as well as the Miami-Dade County General Obligation funds, Miami-Dade HOME Funds, Homeless Housing Assistance Grant, City Foundation and other grants (Andujar 2011).

3.4 Biological Resources

Plants, animals, and other biota could be potentially affected by the Preferred Alternative. The biota of a particular area is collectively considered an ecological community. The community is used as an organizational concept in ecology (HARB 2010). The potential for threatened, endangered, or other rare species to occur within these communities is discussed below.

The 2010 EA cites the 2009 Integrated Natural Resource Management Plan and states that the natural hydrologic conditions, land surface conditions, and vegetation communities have been significantly altered and degraded through land use changes, land management practices, and exotic species proliferation. For these reasons, the base and adjacent areas cannot be meaningfully separated into natural vegetative communities (HARB 2010). However, HARB can be classified as located within the South Florida ecosystem. Recently, the USFWS has designated several critical habitat areas for multiple listed species in the vicinity of the proposed ECC on the North Gate parcel; however, no critical habitat has been designated on the North Gate parcel.

3.4.1 Existing Conditions

3.4.1.1 Terrestrial Communities

The major native upland habitats that occur in the Southern Florida region include dry prairie, pineland, and tropical hardwood hammock. Naturally occurring habitat types are rare in the HARB vicinity as most of the land is used for agriculture or developed, including developed open space (HARB 2010).

The North Gate parcel is not in active use, but still includes various roads from the former military family housing complex. No structures are present. The North Gate parcel is predominately overgrown with exotic and ornamental vegetation. However, certain areas had been mowed prior to the visual site inspection (VSI). During the VSI, various dumping of household materials was observed on the North Gate parcel. The North Gate parcel is surrounded by both developed property and unused land, including housing subdivisions, agricultural land, commercial, residential, and military property.

In the years after the completion of the 2010 EA, the project area has become significantly overgrown. Habitat in the area is limited and poor due to the dense growth of exotic species. Detailed descriptions of the terrestrial communities and biological resources found in the project area were provided in the 2010 EA

(HARB 2010). Summary information about the wildlife and plant species in the project area are provided below.

Wildlife Species

The 1993 Homestead Air Force Base Ecological Inventory identified over 260 species potentially occurring onsite. Of these species, 19 amphibians, 58 reptiles, 23 mammals, and 136 birds were either identified during field investigations or have the potential to occur at HARB (HAFB 1993)

Birds are frequently observed in the HARB area, and common species include the northern mockingbird (*Mimus polyglottos*), common grackle (*Quiscalus quiscula*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), red-shouldered hawk (*Butea lineatus*), and red-winged blackbird (*Agelaius phoeniceus*) (HAFB, 1993). Wading birds occur in the freshwater canals and wetlands on the former Air Force Base, and common species include the great blue heron (*Ardea herodias*), great egret (*Casmerodius albus*), cattle egret (*Bubulcus ibis*), white ibis (*Eudocimus albus*), and double-crested cormorant (*Phalacrocorax auritus*) (USAF 2009). The project area does not provide suitable habitat for wading birds, as it has no aquatic or wetland features.

The canals and lakes also provide habitat for a variety of fish, reptiles, and amphibians. Common fish species include largemouth bass (*Micropterus salmoides*), warmouth (*Lepomis gulosus*), bluegill (*L. macrochirus*), striped mullet (*Mugil cephalus*), Florida gar (*Lepisosteus platyrhincus)*, and common snook (*Centropomis undecimalis*). The Florida slider (*Trachemys scripta*), Florida soft shell turtle (*Apalone ferox*), snapping turtle (*Chelydra serpentina*), American alligator (*Alligator mississippiensis*), American crocodile (*Crocodylus acutus*), and exotic spectacled caiman (*Caiman crocodiles*) are common reptiles found on base. Other reptiles and amphibians include rough grass snake (*Opheodrys aestivus*), corn snake (*Elaphe guttata*), checkered garter snake (*Thamnophis marcianus*), Florida chorus frog (*Pseudacris nigrita verrucosa)*, tree frogs (*Hyla* sp.), and two-toed amphiuma (*Amphiuma means*). Raccoon (*Procyon lotor*), marsh rabbit (*Sylvilagus palustris*) foxes (*Urocyon cinereoargenteus* and *Vulpes vulpes*), coyotes (*Canis latrans*), and bobcats (*Lynx rufus*) are common mammals occurring in the area (HAFB 1993, USAF 2009).

Plant Species

The vegetation occurring in the North Gate parcel is a mix of native and exotic species. The area south of the former BX building parking lot is landscaped primarily with Bermuda grass (*Cynodon dactylon*) and is regularly maintained. However, the areas north, east, and west of the former BX building are overgrown. Brazilian pepper (*Schinus terebinthifolius*) and silk reed (*Neyraudia reynaudiana*), both introduced species, were pervasive in these areas of the subject property. Several thatch palms (*Thrinax radiata*) were also observed adjacent to the former BX building.

The North Gate parcel is heavily overgrown and habitat for native species is limited. Small's milkpea (*Galactia smallii*), which is federally endangered, was identified within the project area during a June 2014 survey (see Plant Survey section below) (Institute for Regional Conservation [IRC] 2014). During the survey, several State protected plants were also identified within or near the boundaries of the subject property, including pineland golden trumpet (*Angadenia berteroi*), white sunbonnets (*Chaptalia albicans*), Christmas berry (*Crossopetalum ilicifolium*), Blodgett's swallowwort (*Cynanchum blodgettii*), Bahama break (*Pteris bahamensis*), Havana green brier (*Smilax havanensis*), and southern fogfruit (*Phyla stoechadifolia*).

Prior to landscaping and urbanization, the area around HARB was predominantly native pine rocklands habitat. Pine rocklands are sensitive vegetation communities that occur only in southern Miami-Dade County, the Florida Keys, and parts of the Bahamas (Austin 1997). Small pine rocklands areas still exist within and around the North Gate parcel. Pine rockland species observed on the property during the VSI in December 2014 include Dade County slash pine (*Pinus elliottii* var. *densa*) Bahama brake, locustberry (*Byrsonima lucida*), pineland jacquemontia (*Jacquemontia curtissii*), Christmas berry, small Porter's sandmat (*Chamaesyce porteriana*), white-top sedge (*Dichromena floridensis*), West Indian lilac (*Tetrazygia bicolor*), and five-petaled leaf-flower (*Phyllanthus pentaphylus* var. *floridanus*) (FNAI 1998).

3.4.1.2 Wetland/Aquatic Communities

Wetlands and Floodplains

Wetlands generally are considered to be transitional zones between the terrestrial and aquatic environment and are characterized by physical, chemical, and biological features indicative of certain hydrological conditions. Currently, the USACE regulates wetlands under Section 404 of the Federal Water Pollution Control Act Amendments of 1972 to the CWA. Jurisdictional wetlands are defined by the USACE as "…*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and other areas."* (USACE 1987).

In 2012, an updated jurisdictional wetlands report was produced for HARB that updated the jurisdictional wetlands delineation completed in the early 2000s, evaluated the functional value of wetlands, and examined revisions to local, state, and federal wetland regulations. During the field assessment, 14 wetland areas were delineated on HARB. It was noted that these wetlands were primarily herbaceous, with a few forested wetlands that consisted mostly of exotic vegetation located in the southern sections of HARB (AECOM 2012). No wetlands occur within the area where the new ECC would be constructed.

Surface Water

Natural drainage on HARB is generally poor due to the relatively flat surface and the location of the water table, which is either at or near the land surface of HARB. Stormwater runoff is collected in an internal drainage system of canals, swales, ditches, and pipes, most of which eventually discharge into the Boundary Canal.

The Boundary Canal system consists of the Boundary Canal, the Flightline Canal, several associated drainage canals/ditches, and the stormwater reservoir. The Boundary Canal surrounds HARB property (Air Force Center for Environmental Excellence [AFCEE] 2001). A levee that runs along the outer bank of the Boundary Canal prevents runoff originating outside the base from entering the property except for a small portion at the northernmost end of the base at a point along SW 288th Street (AFCEE 2001). The Boundary Canal is divided into two major segments:

- The west-south Boundary Canal segment begins in the northwestern corner of HARB at SW 288th Street. The segment flows along the west and south perimeters of the base and leads to the stormwater reservoir at its western edge. The total length of the W-S segment is approximately 25,000 feet (4.9 miles, AFCEE 2001).
- The north-east Boundary Canal segment begins at the north end of the former Homestead AFB south of the former golf course at SW 280th Street. It flows east past Mystic Lake and along the north and east perimeters of the former base. The N-E segment leads to the stormwater reservoir at the northeast corner of the former base. The total length of the southeast segment is reported to be approximately 15,400 feet (2.9 miles, AFCEE 2001).

The stormwater reservoir is on the southeastern corner of the base and receives flow from the west-south and north-east segments of the Boundary Canal system. The reservoir is approximately 300 feet wide and 900 feet long (AFCEE 2001). Typical depths are estimated to range between 10 and 20 feet. Assuming an average depth of 12 feet, the reservoir volume is estimated to be 46.3-acre feet (AFCEE 2001).

All the lakes on HARB are man-made, created from limestone borrow pits many decades ago. The 14.5-acre Phantom Lake is just north of the Munitions Storage area along the western boundary of the base. A maintained unpaved road encircles the lake and provides access. The Twin Lakes, also referred to as the North and South Flight Line Lakes (7.7 and 8.0 acres, respectively), are southeast of the runway. Only the North Lake has a surface water connection to the Boundary Canal system.

A small drainage ditch was observed in the northeast area of the BX parcel. The ditch was partially filled in and highly disturbed. An overgrown drainage ditch was also observed on the same parcel along SW 127th Avenue, west of the former BX building. Another, larger drainage ditch was observed south of the former BX building along SW 288th Street. This ditch connects to the Boundary Canal system. None of the ditches on the BX parcel contains water except in immediate response to precipitation events.

Aquatic Communities

The canals and lakes also provide habitat for a variety of fish, reptiles, and amphibians. Common fish species include largemouth bass (*Micropterus salmoides*), warmouth (*Lepomis gulosus*), bluegill (*Lepomis macrochirus*), striped mullet (*Mugil cephalus*), Florida gar (*Lepisosteus platyrhincus*), and common snook (*Centropomis undecimalis*). The Florida slider (*Trachemys scripta*), Florida soft shell turtle (*Apalone ferox*), snapping turtle (*Chelydra serpentina*), American alligator (*Alligator mississippiensis*), American crocodile (*Crocodylus acutus*), and exotic spectacled caiman (*Caiman crocodilus*) are common reptiles found on base. Other reptiles and amphibians include rough grass snake (*Opheodrys aestivus*), corn snake (*Elaphe guttata*), checkered garter snake (*Thamnophis marcianus*), Florida chorus frog (*Pseudacris nigrita verrucosa*), tree frogs (*Hyla* sp.), and two-toed amphiuma (*Amphiuma means*). Raccoon (*Procyon lotor*) and marsh rabbit (*Sylvilagus palustris*) are common mammals occurring in the area (HAFB 1993, USAF 2009).

The ditches on the subject property do not contain water except during and immediately following precipitation events. These ditches do not provide aquatic habitat.

3.4.1.3 Threatened and Endangered Species

Sensitive species include those with federal endangered or threatened status; species proposed for listing as federal endangered or threatened; and state endangered, threatened, and species of special concern. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered in the future throughout all or a significant portion of its range because of habitat loss, anthropogenic effects, or other causes.

Wildlife Species

The American alligator and the American crocodile are the only federally protected species known to occur in the drainage canals of the former HAFB. However, neither species was observed in the drainage ditch on the BX parcel and there are no ditches on the North Gate parcel. The recently listed Florida bonneted bat (*Eumops floridanus*) is known to occur in the area and could occur on the North Gate and BX parcels. The eastern indigo snake (*Drymarchon corais couperi*), and the Audubon's crested caracara (*Polyborus plancus audubonii*) are federally threatened species that have the potential to occur within the project area. Five additional species are considered federally endangered. Seven State protected species have been identified as potentially occurring in the general area of the project. One of the State protected species, the Florida burrowing owl (*Athene cunicularia floridana*), is known to occur near the HARB runway in the area of the control tower, but not on the North Gate or the BX parcels (USAF 2009). Federal and State protected species with the potential to occur within the subject property are listed in Table 3-4 and described below.

TABLE 3-4
Federal and State Protected Species with Potential to Occur on the Subject Property

Common Name	Scientific Name	Status*	Preferred Habitat
American Alligator	*Alligator mississippiensis*	FT (S/A)	Drainage canals
Florida bonneted bat	*Eumops floridanus*	FE	Tropical hardwoods, pinelands, mangrove habitats, golf courses, and neighborhoods
Southeastern American kestrel	*Falco sparverius paulus*	ST	Pine flatwoods
Florida burrowing owl	*Athene cunicularia floridana*	SSC	Grasslands and other open areas

TABLE 3-4
Federal and State Protected Species with Potential to Occur on the Subject Property

Common Name	Scientific Name	Status*	Preferred Habitat
Florida pine snake	*Pituophis melanoleucus mugitus*	SSC	Habitats with open canopies and dry sandy soils, sand hills, pastures, sand pine scrub, and scrubby flatwoods
Rim rock crowned snake	*Tantilla ooltica*	ST	Pine flatwoods and tropical hammocks
Tricolored heron	*Egretta tricolor*	ST	Wetland marsh areas
White ibis	*Eudocimus albus*	ST	Wetland marsh areas
Least tern	*Sterna antillarum*	ST	Open, flat beach with coarse sand or shell or spoil islands, parking lots, bridge or building construction sites, temporary landfills
Bartram's hairstreak butterfly	*Strymon acis bartrami*	FE	Pine rocklands that contain pineland croton, known to occur in the Remnant Pine Rockland area
Florida leafwing butterfly	*Anaea troglodyta floridalis*	FE	Pine rocklands that contain pineland croton, known to occur in the Remnant Pine Rockland area
Eastern indigo snake	*Drymarchon corais couperi*	FT	Pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats
American crocodile	*Crocodylus acutus*	FT	Inland ponds and creeks, in areas where there is access to deep water (>1 meter)
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	FE	Freshwater marshes and shallow, vegetated edges of natural or man-made lakes
Wood stork	*Mycteria americana*	FE	Shallow wetland areas where fish are plentiful
Audubon's crested caracara	*Polyborus plancus audubonii*	FT	Open country, dry prairie with scattered cabbage palms, wetter prairies, and occasionally in improved pastures and wooded areas with limited areas of open grassland.
West Indian manatee	*Trichechus manatus*	FE	Coastal and inland waterways

* FT = Federally Threatened, FE = Federally Endangered, ST = State Threatened, SSC = State Species of Special Concern, T (S/A) = Federally threatened due to similarity of appearance

Source: FFWCC 2013, CH2M HILL 2014

American Alligator

The American alligator has responded favorably to protection efforts but was reclassified as threatened due to similarity of appearance to the American crocodile in 1985. Species listed as threatened due to similarity of appearance are not biologically endangered or threatened and are not subject to Section 7 consultation. In 1987, the State of Florida introduced managed harvests of alligators and their eggs to create conservation incentives by enhancing the economic value of wild alligator (LaRoe et al. 1995). The canals and lakes on HARB provide habitat for American alligators and they occur there. A Caiman Removal Feasibility Study was conducted at HARB in 2012 (AMEC 2012). The study identified a total of 16 American alligators and two American crocodiles. The American alligators were observed in the Boundary Canal, Phantom Lake, Twin

Lakes, and in the Military Canal stormwater reservoir. The American crocodiles were observed in Twin Lakes. The North Gate parcel and the BX parcel lack water-filled canals or other aquatic habitat and the American alligator would not occur in the project area for the ECC.

Florida Bonneted Bat

This federally endangered bat species is confined to a small range in south Florida. It prefers old trees with suitable cavities, and also roosts in Spanish tile roofs. The Florida bonneted bat may colonize newly installed bat houses of appropriate design. The Florida bonneted bat has been observed in the Homestead area near HARB. A bat survey was conducted on the North Gate parcel and the BX parcel. The results of the survey are detailed in the following subsections.

Southeastern American Kestrel

The southeastern American kestrel (*Falco sparverius paulus*) is State listed as threatened and federally protected under the Migratory Bird Species Act. Its preferred habitat includes open pine forests and clearings (USAF 2009). This bird commonly occurs on HARB during the winter months as part of migration pattern (HARB 2010). The North Gate parcel could provide poor quality habitat for this species, but the density of exotic vegetation makes use of the area unlikely. The BX parcel does not provide suitable habitat for this species.

Florida Burrowing Owl

The Florida burrowing owl (*Athene cunicularia floridana*) is listed by the State of Florida as a species of special concern. It is also federally protected under the U.S. Migratory Bird Treaty Act, even though the Florida population is non-migratory. Burrowing owl is a small, ground-dwelling brown and white owl with long legs and no ear tufts. They nest in loose colonies in burrows abandoned by other animals, or they dig their own if soils conditions allow. Their diet consists of invertebrates and small mammals. Several groups of owls have perennial nesting sites near the HARB runway and administration buildings (HARB 2010). The North Gate parcel could provide suitable habitat for this species. However, the current habitat quality onsite is poor and suitable burrows are unlikely. The BX parcel does not provide suitable habitat for this species.

Florida Pine Snake

The Florida pine snake (*Pituophis melanoleucus mugitus)*, a State species of special concern, is generally associated with gopher tortoise burrows; however, no gopher tortoises have been found on HARB (USAF 2009). The Florida pine snake is not common anywhere, but could be found in dry sandy soils. It is found most often in open pine-turkey oak woodlands and abandoned fields, and also in scrub, sandhills, and longleaf pine forest (HARB 2010). The North Gate parcel could provide poor quality habitat for this species. However, the soil disturbance from historical use as a housing area with paved roads makes any use by the Florida pine snake unlikely. The BX parcel does not provide suitable habitat for this species.

Rim Rock Crowned Snake

Rim rock crowned snakes (*Tantilla ooltica*) typically occur in sandy and rocky soils in slash pine flatwoods, tropical hardwood hammocks, and vacant lots and pastures with shrubby growth and scattered slash pines (Moler 1992). The rim rock crowned snake has not been recorded on HARB during species-specific surveys (USAF and the Federal Aviation Administration [FAA] 2000). However, these surveys did not appear to include the pine rocklands habitat area in the northwestern corner of HARB that provides appropriate habitat for the species. Given the limited acreage of habitat available, it is possible, but considered unlikely, that the remnant pine rocklands habitat on the base could support the rim rock crowned snake. The North Gate parcel does not provide suitable habitat for the species as it contains no slash pines. The BX parcel does not provide suitable habitat for this species.

Tricolored Heron

The tricolored heron (*Egretta tricolor*) typically occurs in marsh habitat. While the species may occur on HARB, there is no potentially suitable habitat for the tricolored heron in the North Gate parcel or the BX parcel. Because of the lack of suitable habitat, the tricolored heron would not occur in the project area.

White Ibis

The white ibis (*Eudocimus albus*) typically occurs in marsh habitat or shallow water forested wetlands. While the species may occur on HARB, there is no potentially suitable habitat for the white ibis in the North Gate parcel or the BX parcel. Because of the lack of suitable habitat, the white ibis would not occur in the project area.

Least Tern

The natural habitat of the least tern (*Sterna antillarum*) is open, flat beach with coarse sand or shell, usually seaward or within the foredune vegetation. However, the species is opportunistic and will use any gravely or sandy area that is devoid of vegetation and provides suitable habitat, such as spoil islands, parking lots, bridge or building construction sites, and temporary landfills. The least tern is observed seasonally at HARB and has nested on the installation (Friers 2014). Neither the North Gate parcel nor the BX parcel provide suitable habitat for this species.

Bartram's Hairstreak Butterfly and Florida Leafwing Butterfly

The federally endangered Bartram's hairstreak (*Strymon acis bartrami*) and federally endangered Florida leafwing (*Anaea troglodyta floridalis*) occur within pine rocklands that contain their only known host plant, pineland croton (NatureServe 2013). This plant occurs in the remnant pine rocklands area in the northwestern portion of HARB, and as a result, both butterfly species may occur at HARB. A butterfly survey is proposed at HARB to determine if these two protected species occur on the installation. Pineland croton has not been identified on the North Gate parcel or the BX parcel. Because the host plant does not occur, it is unlikely either butterfly species would occur.

Eastern Indigo Snake

The federally threatened eastern indigo snake *(Drymarchon corais couperi)* is a large, shiny, non-venomous snake that is found throughout central and southern Florida (USAF 2009). Their diet consists of various vertebrates including fish, frogs, toads, lizards, small turtles, snakes, birds, and small mammals. During cold and dry conditions, this snake requires shelter, such as a land crab, armadillo or rodent burrow, a hollow log, a stump hole, or root channels, but they are most often found in or near gopher tortoise burrows. In its southern range, the species uses a wider array of habitats, and is more active throughout the year, presumably because it does not get as cold. Home ranges used by individual snakes in south-central Florida average about 19 hectares to 74 hectares (47 to 183 acres) for females and males, respectively (HARB 2010). The North Gate parcel could provide suitable poor quality habitat for this species.

American Crocodile

Habitat for the federally protected American crocodile *(Crocodylus acutus)* includes inland ponds and creeks in areas where there is access to water more than 1 meter deep. The species is known to occur in the drainage canals of HARB. However, the North Gate parcel lacks water-filled canals or other aquatic habitat, and the American crocodile would not occur in the project area for the ECC. The BX parcel does not provide suitable habitat for this species.

Everglade Snail Kite

The endangered Everglade snail kite (*Rostrhamus sociabilis plumbeus*) occurs in freshwater marshes and shallow, vegetated edges of natural or man-made lakes where apple snails occur. Because of its specific dietary and hydrological requirements, the Everglade snail kite is restricted to the watersheds of the Everglades, Lake Okeechobee, Lake Kissimmee, and the upper St. Johns River. The snail kite has been

observed on HARB, but only on rare occasions and for short durations. The native and non-native species of apple snails are known to occur on HARB, and the snail kite forages on the native populations. There is no suitable habitat for this species within the North Gate parcel or the BX parcel.

Wood Stork

The wood stork (*Mycteria americana*) is a long-legged wading bird that breeds in colonies. The wood stork population that once occupied the southeastern region of the United States no longer nests in Florida, but they are known to forage in shallow areas in the Everglades. They are often seen on or flying over the base annually in winter and have been seen foraging in the wetlands to the southeast of the runway, but it is unlikely that nesting would occur there (HARB 2010). Because the ditches on the North Gate parcel do not retain water, there is no suitable habitat for this species within the North Gate parcel or the BX parcel.

Audubon's Crested Caracara

The threatened crested caracara (*Polyborus plancus audubonii*) is a large raptor that, in Florida, typically occurs in open country, dry prairie with scattered cabbage palms, wetter prairies, and occasionally in improved pastures and wooded areas with limited areas of open grassland. In Florida, the center of its range is the Kissimmee Prairie, which consists of an area of shallow ponds and sloughs with scattered hammocks of live oaks and cabbage palms. This species typically nests in trees among branches or palm fronds and often in cabbage palm. This species is considered a permanent resident of much of Florida but is not common in Miami-Dade County (NatureServe 2013, Friers 2014). This bird could occur on HARB for foraging or for nesting and breeding. There is no suitable habitat for this species within the North Gate parcel or the BX parcel.

West Indian Manatee

The federally endangered West Indian manatee (*Trichechus manatus*) inhabits coastal and inland waterways throughout Florida's east coast. Manatees require access to aquatic vegetation, freshwater sources, and at least 2 meters of water depths. Biscayne Bay supports a year-round population, with greater numbers occurring during the winter (USFWS 1999). Near HARB, there have been numerous observations of manatees in and near Black Creek (about 3 miles north of Military and Mowry canals) and Convoy Point (about 2 miles south of Military Canal). Three manatee sightings occurred near Military Canal between 1989 and 1994 (USAF and FAA 2000). Manatees are regularly observed in the Military Canal and travel as far as the HARB stormwater pump during the winter. The ditches on the North Gate parcel and the BX parcel do not provide suitable habitat for the West Indian manatee.

Bat Survey

In March and April 2015, Smart-Sciences, Incorporated (Smart-Sciences) and Dr. Kirsten Bohn completed a survey to determine the presence of potential roost sites for the Florida bonneted bat. The survey encompassed the North Gate parcel and the BX parcel. The Florida bonneted bat, which is found in southern Florida and in Miami-Dade County, was listed as an endangered species by the USFWS in 2013 and is protected by the Endangered Species Act of 1973. A roost survey and an acoustic survey were conducted as part of the field work. In order to identify possible locations for bat roosting, two pedestrian surveys were conducted and trees were "examined for crevices or snags that could serve as a potential roost location" (Smart Sciences 2015). The vacant BX buildings was also examined for air vents and nooks around loading bay docks where bats could roost. Potential tree roosting sites were mapped by a Global Positioning System (GPS) and were used to select the placement of the songmeters as part of the acoustic survey. The second pedestrian survey was conducted at sunset to listen for echolocation calls produced by bats leaving their roosts. The acoustic survey, which was conducted between March 18 and April 1, 2015 involved the placement of songmeters at six locations throughout the North Gate parcel and the BX parcel in locations identified during the roosting survey. Further information regarding the methodology used for the bat survey is detailed in the associated report produced by Smart-Sciences entitled *Florida bonneted bat Survey*

Draft Report: Homestead Entry Control Complex, Homestead Air Reserve base, Homestead, Miami-Dade County, Florida (Smart-Sciences 2015).

During the survey, four trees within the North Gate parcel and the crown shafts of the cabbage palm trees within the BX parcel were identified as "potential roosting locations" (Smart-Sciences 2015). However, "bat guano was not observed at the base of the potential roost locations" (Smart-Sciences 2015). The acoustic survey recorded Florida bonneted bat passes over the North Gate parcel and the BX parcel; however, bat passes of other species were significantly more frequent. The results of the survey indicate that Florida bonneted bats fly over the site but do not appear to use the property [North Gate parcel or BX parcel] for foraging or roosting (Smart-Sciences 2015).

Plant Survey

The IRC conducted a plant survey of the entire proposed HARB ECC project area, including the North Gate parcel, in June 2014. The endangered Small's milkpea (*Galactia smallii*) was the only federally protected plant identified within the project area. Four Small's milkpea populations were mapped in the survey area, and two are within the North Gate parcel (Figure 3-3). Approximately 900 individual Small's milkpea plants were identified on the property with larger population (823 individuals) occurring near the southern boundary (IRC 2014).

The IRC identified seven State protected plant species in the HARB ECC vicinity, which is a larger area than would be used for the ECC (Table 3-5) (IRC 2014). The locations of State protected species were not mapped, so it is uncertain whether they occur in the area that would be disturbed. Therefore, these species are considered to potentially occur on the subject property.

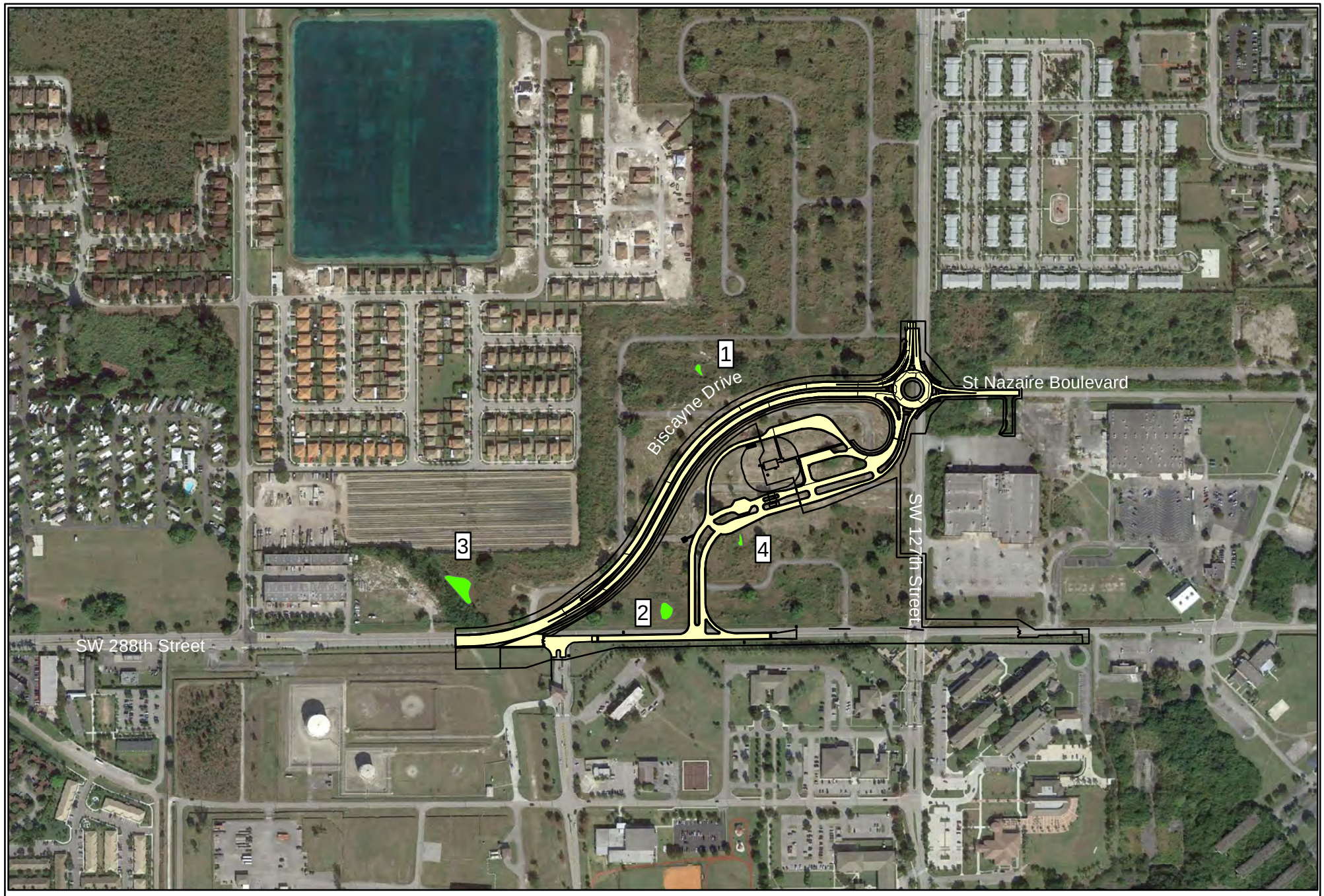
TABLE 3-5
State Protected Plants with Potential to Occur in the Subject Property

Common Name	Scientific Name	Status*	Preferred Habitat
Pineland golden trumpet	*Angadenia berteroi*	ST	Pine rocklands
White sunbonnets	*Chaptalia albicans*	ST	Pine rocklands
Christmas berry	*Crossopetalum ilicifolium*	ST	Pine rocklands, rockland hammock, sinkhole, sinkhole edges
Blodgett's swallowwort	*Cynanchum blodgettii*	ST	Pine hammocks and pine-palmetto hammocks
Bahama break	*Pteris bahamensis*	ST	Pine rocklands, sinkhole (edges), on limestone
Southern fogfruit	*Phyla stoechadifolia*	SE	Marl prairies and glades
Havana greenbrier	*Smilax havanensis*	ST	Pine rocklands

*ST = State Threatened, SE = State Endangered
Source: IRC 2014, CH2M HILL 2014

3.5 Hazardous Materials and Waste Management

Hazardous material is any material that is not a waste; has been designated in the 49 CFR 172. 101 Hazardous Materials Table; and has been determined by the U.S. Department of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Hazardous waste is defined under RCRA as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that could pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitability, or corrosivity. Certain types of wastes are "listed" or identified as hazardous in 40 CFR 263.



Legend

Small's milkpea (Galactia smallii)

Preferred Alternative

N

0 250 500 1,000 Feet

Figure 3-3
Small's milkpea Populations
HARB ECC EA

CH2M HILL

Hazardous Materials

Procedures and standards that govern the management of hazardous materials throughout the USAF, including HARB, are established in AFI 32-7086, *Hazardous Materials Management* (Secretary of the Air Force 2008). These procedures apply to all HARB personnel who authorize, procure, issue, use, or dispose of hazardous materials; and to those who manage, monitor, or track any of those activities.

Hazardous Wastes

The 482 Mission Support Group/Environmental Management (MSG/CEV) maintains a *Hazardous Waste Management Plan* for HARB as directed by AFI 32-7042, *Solid and Hazardous Waste Compliance* and USAF pamphlet 32-0743, *Hazardous Waste Management Guide* (Secretary of the Air Force 1994b, Secretary of the Air Force 1995). The plan includes discussions on the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The roles and responsibilities of appropriate HARB personnel are defined in this plan. For a list of guidelines for contractors working at HARB, refer to the 2010 EA (HARB 2010).

3.5.1 Existing Conditions

3.5.1.1 North Gate Parcel

EPA has identified moderate radon levels, between 2 and 4 picocuries per liter (pCi/L), occurring in Dade County (EPA 2014b). The EDR reports indicate Miami-Dade County is in zone 2 with indoor average levels between 2 and 4 pCi/L. Radon screening under USAF Radon Assessment and Mitigation Program Guidance was conducted at HAFB, including the subject property, in 1992 (USAF 1994). The surveys indicated radon levels were above the EPA regulatory guideline (4.0 pCi/L) in 47 housing units and one temporary living facility. These structures were not located on the subject property and have since been demolished.

Based on the records search and site inspection, no hazardous materials are stored on the North Gate parcel and no spills or releases were recorded on the subject property or within the immediate vicinity. According to available records and interviews with HARB and Miami-Dade County personnel, no aboveground storage tanks (AST), underground storage tanks (UST), Installation Restoration Program (IRP) sites, medical or biohazardous waste, munitions or unexploded ordnance are present on the North Gate parcel.

According to the 1993 Environmental Baseline Survey (EBS) conducted for HAFB following Hurricane Andrew (1993 EBS), small supplies of pesticides for use within the buildings may have been stored in the military family housing units. However, all hazardous materials were removed from the destroyed military family housing area in August 1993 following Hurricane Andrew (USAF 1993). Miami-Dade County occasionally mows the subject property, but pesticides or herbicides are not used (Warren 2015a, personal communication).

Renovation and demolition of buildings with ACM have the potential for releasing asbestos fiber into the air. Asbestos fibers could be released because of disturbance or damage to various building materials, such as pipe linings, ceilings, floor tile, sheetrock, waterlines, and gasket material. No buildings are on the North Gate parcel. According to the 1993 EBS, ACMs were not present within the former military family housing units (USAF 1993). However, transite piping, which is an ACM, has been found throughout the base as the old water supply lines are updated. Transite piping from old water supply lines was likely abandoned in place on the property (Andrejko 2010, Warren 2015a, personal communication).

Lead is a heavy, ductile metal commonly found in association with organic compounds, oxides, salts, and metallic lead. Human exposure to lead has been classified as an adverse health risk by agencies such as the Occupational Safety and Health Administration of the United States Department of Labor and EPA. Sources of exposure to lead include paint, dust, and soil. Exposure to lead-based paint (LBP) presents a health concern primarily to children, and its use was generally discontinued in 1978. The routine application of LBP in the past, and the associated peeling or degradation of paint over time, has created the potential for localized lead contamination in soils around buildings that were constructed before or during 1978.

According to the 1993 EBS, LBP occurred within the former military family housing units (USAF 1993). However, all the housing units were destroyed by Hurricane Andrew in 1992 and removed in 1994. No painted buildings, structures, or other improvements occur on the subject property.

Electrical transformers, electrical equipment, light ballasts, and machinery with hydraulic systems are potential sources of polychlorinated biphenyls (PCB)-containing oil. None of the equipment was observed on the North Gate parcel.

3.5.1.2 BX Parcel

According to the 1993 EBS, a 200-gallon AST containing diesel was located at the former BX (Building 920) (USAF 1993). In 1994, a 550-gallon AST containing diesel fuel near the northwest corner of Building 920 was removed. The AST included secondary containment and no evidence of release was observed. Seven surface soil samples were collected beneath the secondary containment following removal. The results indicated hydrocarbon concentrations were less than 10 parts per million. An additional 8 feet of aboveground piping associated with the AST was also removed (OHM Remediation Services 1994). During the VSI, an AST associated with a back-up generator was observed near the northwest corner of Building 920. No staining, stressed vegetation, or evidence of release was observed in the area surrounding the AST. The AST included placards indicating it contained diesel. No additional labels were found to indicate capacity or installation date. Robert Vespe at HARB indicated that the tank is a 525-gallon, double-walled tank used to provide fuel for the emergency generator. He did not have records indicating tank's installation date; however, the tank contains ultra-low sulfur diesel and there have been no documented spills or releases from the tank (Vespe 2015, personal communication). According to the interviews and records search, no medical or biohazardous waste, munitions, or unexploded ordnance are stored on the property that contains the former BX building. According to available records and interviews with HARB personnel, no USTs are known to occur on the BX parcel. According to the records search and interviews, no IRP sites are present on the subject property. See Section 4.3 for the IRP sites located within 1 mile of the subject property. According to the 1993 EBS, pesticides were stored and offered for retail sale within Building 920. However, no spills or release of pesticides was reported at the building. Pesticides and herbicides were not mixed on the property (USAF 1993). Robert Vespe's records did not indicate any USTs listed for the former BX building (Vespe 2015, personal communication).

Two pad-mounted transformers were observed adjacent to Building 920, but no PCB-free stickers or markers were observed. Additionally no staining, stressed vegetation, or evidence of release was observed around the transformers. Several dry transformers were also observed within Building 920. Robert Vespe at HARB noted that in his experience, most government-owned transformers at HARB have an interior data plate and usually do not contain PCBs (Vespe 2015, personal communication).

SECTION 4

Environmental Consequences

Section 4 describes the environmental consequences from implementation of the 2015 SEA Preferred Alternative and the No Action Alternative. Within each subsection, the consequences of the No Action Alternative are discussed first to provide a description of impacts occurring under existing, baseline conditions. Three alternatives were analyzed in the 2010 EA. The potential impacts of the 2015 SEA Preferred Alternative are evaluated relative to the previously considered alternatives. In addition, alternatives previously evaluated in detail were revaluated for those resources where baseline conditions have changed substantially since the 2010 EA. The consequences of the 2015 SEA Preferred Alternative are described and compared to the consequences under the No Action Alternative in order to determine the relative magnitude and significance of impacts under the Proposed Action.

The CEQ regulations implementing NEPA require evaluation of the significance of an impact based on both its context and intensity. The evaluation of the significance of an impact involves consideration of several contexts, including the consideration of local and regional effects and short-term and long-term effects. The significance of an impact also is evaluated with regard to its intensity or severity. The regulations provide ten considerations relevant to assessing the significance of impacts, which are listed in the 2010 EA (40 CFR 1508.27, HARB 2010).

The following subsections discuss the level of impact each alternative would have on each environmental resource assessed in this SEA. In addition, any alternative expected to have more than minor adverse effects on a specific resource is evaluated further with regard to the significance of the effects based on context and intensity. The evaluation includes consideration of mitigation measures, if relevant, so that the final assessment of impacts is based on the remaining effects after mitigative factors have been taken into consideration. In addition, the possibility of significant impacts from cumulative effects that are not individually significant also is considered. Section 5 addresses possible cumulative impacts from the Proposed Action in conjunction with other actions.

4.1 Transportation

4.1.1 Discussion of Impacts

4.1.1.1 No Action Alternative

Because no new ECC would be constructed at the North Gate parcel under the No Action Alternative, the existing conditions described in Section 3.1.1 would continue. Impacts to transportation under the No Action Alternative would continue to be adverse due to the congestion on SW 288th Street and Westover Street caused by the inadequacy of the Westover Gate. Anticipated future increases in gate traffic would exacerbate the congestion and would pose an increasing traffic safety concern. Adverse impacts to public transportation may include delays in Metrobus Route 70 due to the increased congestion along SW 288th Street near Westover Street.

4.1.1.2 Preferred Alternative

The information from the traffic analysis was used to extrapolate the traffic conditions likely after the construction of the proposed ECC. Based on the analysis, the Preferred Alternative would allow the new intersections to operate at a LOS B or better during the same weekday and Saturday am peak periods under both current conditions and 20-Year traffic projections, which would be an improvement over the existing conditions (Ramakers 2015). Based on the analysis, implementation of the Preferred Alternative would allow for better operational characteristics of the roadway system compared to the current configuration. Further, the Preferred Alternative would allow for greater queuing of vehicles waiting to enter at the gate locations and reduce vehicle congestion on streets to the west of the proposed ECC (Ramakers 2015). Therefore, beneficial impacts to traffic are anticipated as a result of implementation of the Preferred Alternative.

Some adverse impacts to traffic could occur during construction, although these would be temporary and minor. During construction, a haul route would be established to allow trucks to haul material to and from the project area. Contractor access would be via SW 127th Avenue and SW 288th Street. Appropriate construction haul routes, appropriate timing for construction-related traffic, and the process for implementation of appropriate traffic controls during construction would be established through coordination between the construction contractors and Miami-Dade County (Figure 4-1) (Andrejko 2015c). The Preferred Alternative would require the permanent closure of small portions of SW 127th Avenue and SW 288th Street to accommodate the realignment of SW 288th Street. Phased construction would reduce impacts on residents, employees, and students in the area. The following four phases of construction would occur:

Phase 1

Phase 1 would include the construction of the proposed future Biscayne Drive, which would connect the new terminus of SW 288th Street to SW 127th Avenue. Interior construction of the ECC would occur during Phase 1; however, it would not include construction of the roundabout. Phase 1 would also include construction of an entrance to the rear of the BX parcel off of St. Nazaire Boulevard. During the Phase 1 construction, traffic flow would be maintained on SW 288th Street and SW 127th Avenue along existing routes. Access to and from the base would remain unchanged at both the Westover Gate and Old Main Gate (Mason & Hanger 2015b).

Phase 2

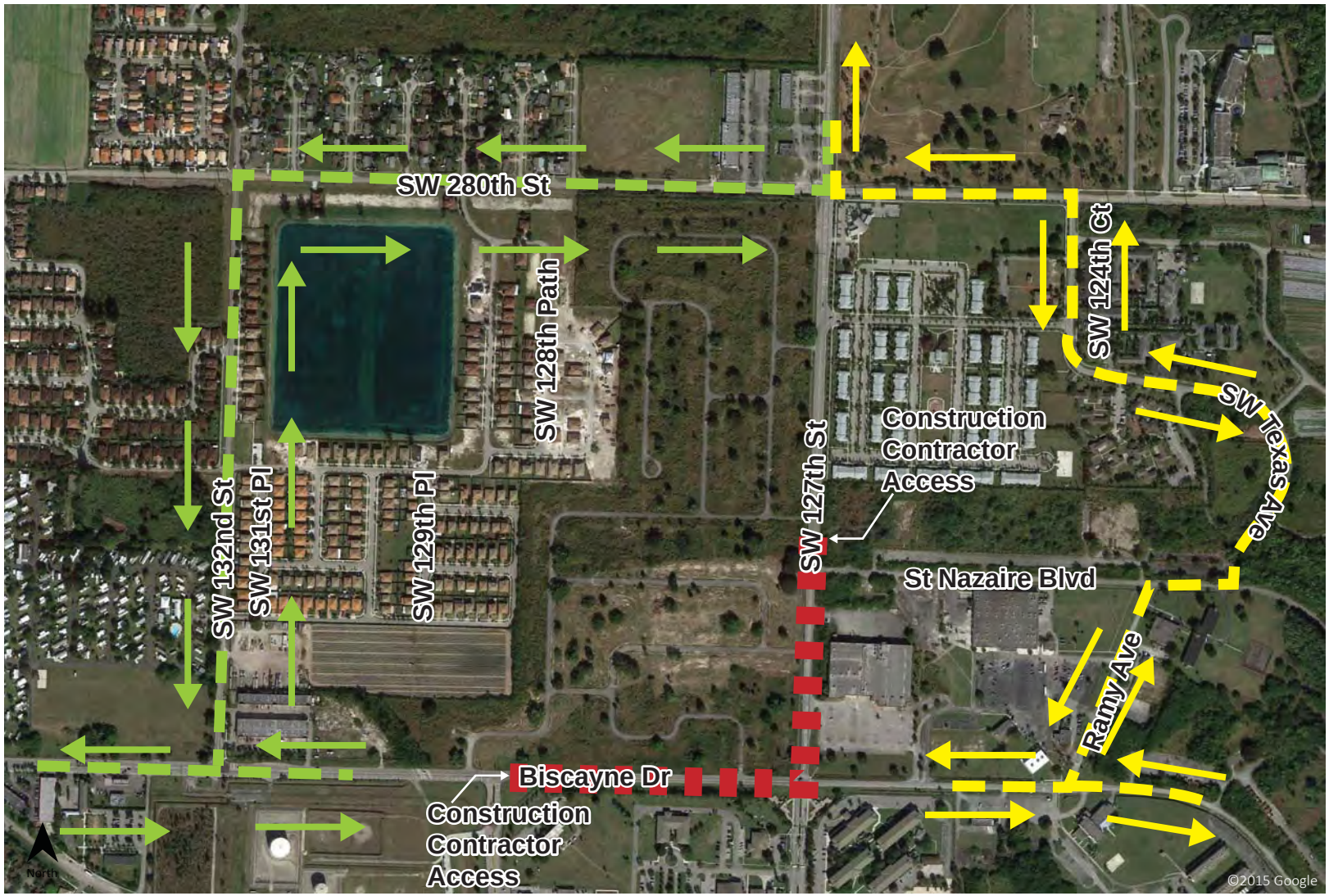
Phase 2, which could begin before the completion of Phase 1, would include construction of the roundabout at SW 127th Avenue and tie into existing St. Nazaire Boulevard. The existing SW 127th Street in this area would be closed. Additionally, Phase 2 would include construction of perimeter security fencing along SW 127th Avenue and on the north side of SW 288th Street. A temporary construction easement from the County to the United States of America may be required at the intersection of St. Nazaire Boulevard and SW 127th Avenue, for use of the northeastern corner of the intersection (Mason & Hanger 2015b). A detour would be required around SW 127th Avenue at St. Nazaire Boulevard. There are two primary detour routes that are shown on Figure 4-1 and include the following:

1. Traffic traveling southbound on SW 127th Avenue toward SW 288th Street would be detoured at SW 280th Street and would be directed either east or west on SW 280 Street. Traffic directed westbound would travel along SW 280th Street to SW 132nd Avenue, then south to SW 288th Street. Traffic directed eastbound would travel from SW 280th Street to SW 124th Court, St. Nazaire Boulevard, Ramey Avenue, ending up on SW 288th Street (Figure 4-1).

2. Traffic traveling eastbound on SW 288th Street wishing to travel north on SW 127th Avenue would be directed north onto SW 132nd Avenue at its intersection with SW 288th Street. From SW 132nd Avenue, vehicles could turn right on SW 280th Street and travel eastbound to get on SW 127th Avenue. Traffic westbound on SW 288th Street wishing to travel north on SW 127th Avenue would be detoured at Ramey Avenue to St. Nazaire Boulevard followed by SW 124th Court, arriving at SW 280th Street, where they could travel westbound to access SW 127th Avenue (Figure 4-1).

3. Through traffic along SW 280th Street would not be altered, but traffic volume would increase during the detour period. The rerouting of traffic flow along SW 280th Street would take vehicles along a two-lane road through a residential area. The intersection of SW 280th Street and SW 124th Court is marked by a stop sign. The intersection of SW 280th Street and SW 132nd Avenue (which is also two lanes) is marked by a four-way stop.

The existing SW 288th Street would remain open during Phase 2 of construction to maintain traffic along the existing route.



LEGEND

- Road closed to thru traffic
- Detour for traffic west of HARB to and from SW 288th St and SW 127th Ave
- Detour for traffic east of HARB to and from SW 288th St and SW 127th Ave

FIGURE 4-1
Construction Access and Detour Routes
HARB ECC SEA

Phase 3

Phase 3 construction would begin once the construction of the roundabout at SW 127th Street and the future Biscayne Drive is complete. Phase 3 construction would include: closing of SW 288th Street just east of Westover Gate; construction of temporary lanes, if required, to maintain traffic while newly constructed future Biscayne Drive is tied into the existing SW 288th Street; temporary traffic control at the intersection of future Biscayne Drive, SW 288 Street, and the Westover Gate entrance; completion of construction of the ECC, including all interior roads and facilities; and completion of the security fencing at the Old Main Gate if necessary (Mason & Hanger 2015b).

During Phase 3, traffic along SW 288th Street would be routed to the future Biscayne Drive. SW 288th Street would be permanently closed west of the entrance into the BX facility. The Old Main Gate would also be temporarily closed. All HARB traffic would be required to enter and exit through the Westover Gate. The entrance into the base from the newly constructed roundabout at SW 127th Avenue would remain closed (Mason & Hanger 2015b).

Future Biscayne Drive and the roundabout area at SW 127th Avenue would be open during Phase 3 of construction. However, SW 288th Street would be closed west of the HARB entrance driveway, including the section between Westover Gate and Old Main Gate, and east of the Old Main Gate (Mason & Hanger 2015b).

Phase 4

Phase 4 construction would complete the perimeter security fencing for the base as well as complete emergency evacuation routes (crash gates) from the base. SW 288th Street at Westover Gate would be closed and all temporary traffic-control devices at SW 288th Street would be removed. All traffic entering the base would be routed through the new ECC. Traffic would be able to flow to either the Westover Gate or the Old Main Gate internally to the base. At this phase of construction, all roads would be used by public and/or HARB traffic, as appropriate (Mason & Hanger 2015b).

Public Transportation Access

The implementation of a new ECC would require changes to Miami-Dade Transit's Metrobus Route 70, which includes stops along SW 288th Street (near the Old Main Gate and near Westover Gate), Ramey Avenue, and St. Nazaire Boulevard. Alternative routing of Metrobus 70 in the vicinity of HARB could have potential minor impacts on residents of the nearby housing areas, employees and customers of the 1st National Bank of South Florida, students at the Homestead Job Corps, and HARB employees. However, the Metrobus would continue to service HARB, the Homestead Job Corps center, Verde Gardens Apartments, and the 1st National Bank of South Florida. Therefore, no significant adverse impacts are expected to occur to public transportation access as a result of the Preferred Alternative. During construction, residents and employees in the area could experience some additional adverse impacts as buses are rerouted according to the phased construction plan. However, the impacts would be temporary and would not be considered significant because the locations in the area currently serviced by the Metrobus Route 70 would continue to be serviced despite any changes in routing. The four-legged roundabout could improve service for Job Corps passengers (Hyden, 2014).

The bus stops near the Old Main Gate at the intersection of SW 288 Street and SW 127 Avenue were likely established for easy access to HARB (and previously to HAFB). After implementation of the Preferred Alternative, the stops could be relocated to the west of the proposed ECC roundabout. Additionally, the two stops near Westover Gate would be eliminated and alternative stops would be designated after implementation of the Preferred Alternative. Sidewalks proposed as part of the proposed ECC design could also be used to access the new bus stops (Ramakers 2015). No significant changes are expected to occur to the bus stops on Ramey Avenue, although slight modifications could occur to the "circulating route on St. Nazaire Boulevard, Ramey Avenue, and the existing portion of SW 288 Street" to avoid construction activities (Ramakers 2015).

The 2010 EA assessed the impacts to Metrobus Route 70. The Tetra Tech traffic report notes "as the design has progressed, while the impacts have remained the same, some of the bus route alternatives have become no longer viable" (Ramakers 2015). Two of the three bus route alternatives discussed in the 2010 EA still remain viable reroutes for the 2015 SEA Preferred Alternative:

1. The first reroute possibility, for buses traveling on SW 127th Avenue towards the proposed ECC roundabout, would be to turn eastbound onto St. Nazaire Boulevard, turn right (southbound) onto Ramey Avenue, and turn right (westbound) onto SW 288th Street. Once on SW 288th Street, buses would turn right into the Homestead Job Corps center property parking lot "to circulate back to Ramey Avenue north" (Ramakers 2015). From Ramey Avenue, buses would turn left traveling westbound on St. Nazaire Boulevard and then right onto SW 127 Avenue traveling northbound. The Tetra Tech traffic report notes that "this path could also be used for both the northbound and southbound segments of Route 70, and would also allow the bus stops at SW 288th Street and Ramey avenue to remain as well" (Ramakers 2015).
2. The second reroute possibility, for buses traveling on SW 127 Avenue towards the proposed ECC roundabout would be to turn eastbound onto St. Nazaire Boulevard, followed by Ramey Avenue, SW 288 Street, and St. Lo Boulevard "to complete a loop, depending on the route" (Ramakers 2015). The Tetra Tech traffic analysis asserts that "this route would be longer than the one previously listed, but would not require the 'cutting through' of busses on the Job Corp site, and would also require relocation of the bus stops at SW 288th Street and Ramey Avenue" (Ramakers 2015).

These two feasible reroutes would not have a significant impact bus route schedules and operations (Ramakers 2015). The design for the proposed ECC roundabout at the intersection of the future Biscayne Drive, SW 127th Avenue, and St. Nazaire Boulevard is intended to accommodate a WB-50 design vehicle; therefore, buses should be able to use the roundabout without difficulty.

Pedestrian Traffic

The 2015 SEA Preferred Alternative for the proposed ECC includes pedestrian features as part of the four-leg roundabout. Pedestrian features have also been included to access the proposed Visitors Center and the proposed Main Gatehouse within the North Gate parcel. Walkways would connect to the existing sidewalk on the west side of SW 127th Avenue. The Tetra Tech report notes that "while it is anticipated that the vast majority of base personnel and visitors will drive to the site, along with low pedestrian volumes observed during the peak hour traffic counts, there is the potential for increases in pedestrian traffic in the future due to development" (Ramakers 2015). Since the design for the proposed ECC would increase the amount of available pedestrian access around HARB, implementation of the 2015 Preferred Alternative would likely result in a beneficial impact to pedestrian traffic.

4.1.1.3 Alternatives 1, 2, 3 (2010 EA)

Impacts from Alternatives 1, 2, and 3 (2010 EA) would be similar to those discussed for the Preferred Alternative.

4.2 Socioeconomics

4.2.1 Discussion of Impacts

4.2.1.1 No Action Alternative

Under the No Action Alternative, the existing conditions would remain as discussed above, and there would be no significant adverse impacts to socioeconomics.

4.2.1.2 Preferred Alternative

Population

The Preferred Alternative would have no direct effects on population. No new permanent jobs would be created and no jobs would be lost. There would be no immigration to or emigration from the project area.

Because the new ECC would accommodate projected future mission growth at HARB, the Preferred Alternative could indirectly contribute to projected future population increases through accommodating an increased mission presence at HARB, which would bring new jobs and persons to the area.

Employment and Earnings

Minor short-term benefits to the local economy would occur from construction-related jobs and wages during phased construction of the Preferred Alternative. No permanent jobs would be created. Because the new ECC would accommodate mission future growth at HARB, it could indirectly contribute benefits to the economy if this growth should occur.

The implementation of the Preferred Alternative could result in indirect adverse impacts to the local economy if Miami-Dade County is required to pay for the installation of new signals at the ECC and the implementation of additional road improvements as a result of road closures at the intersection of SW 127th Avenue and SW 288th Street. The Preferred Alternative could result in increased traffic on St. Nazaire Boulevard and the rerouting of Metrobus Route 70, roadway improvements on this street may be necessary.

1st National Bank of South Florida

Reroutes on SW 288th Street would affect access to the 1st National Bank of South Florida. The bank would only be accessible to drivers traveling from the east on SW 288th Street or southbound on Ramey Avenue because SW 288th Street would be closed to through traffic west of the bank. Because of the increased transit time to reach the bank, customer use could decline. The nearest alternative bank branch is located approximately 2.64 miles northwest of the Base Branch, in Princeton, approximately a 7-minute drive from the Base Branch. Customers could continue to access the Base Branch via the Metrobus, and no substantial increase in access time by bus would be expected. As noted in the 2010 EA, traveling a few extra minutes around the alternative route in the Base Branch vicinity would be a shorter transit route for most customers than traveling to the Princeton Branch. The 1st National Bank of South Florida offers certain online banking capabilities which would likely continue to reduce the need for regular bank visits to the Base Branch, which already has limited hours of operation.

Although there is the potential for the 1st National Bank of South Florida Homestead Base Branch to experience minor adverse impacts from the implementation of the Preferred Alternative, these impacts are not expected to cause long-term disruption to the bank's business operations.

Homestead Job Corps

Implementation of the Preferred Alternative is not expected to result in adverse impacts to the Homestead Job Corps facility in terms of operations or accessibility. The staff of the facility are not expected to experience any adverse impacts to their employment or earnings. The primary entrance to the campus is on St. Nazaire Boulevard. Traffic that is rerouted away from the intersection of SW 127th Avenue and SW 288th Street as a result of construction would use St. Nazaire Boulevard, and therefore would still be able to access the Job Corps campus. Additionally, the Metrobus Route 70 bus stop on Ramey Avenue, adjacent to the parking lot for the Job Corps facility, would remain in operation during and after construction. Thus, access to the campus would not be restricted, allowing for student enrollment and daily operations of the campus to continue as under the existing conditions. Any impacts experienced by the staff at the Homestead Job Corps facility as a result of construction would be temporary and minor.

Walmart Supercenter

The Walmart Supercenter is not anticipated to experience any adverse impacts as a result of the Preferred Alternative. Located at 13600 SW 288th Street on the corner of SW 288 Street and SW 137th Avenue, the Walmart Supercenter is approximately 0.7 mile west of the North Gate parcel. Vehicle access to the retail store would not be inhibited by implementation of the Preferred Alternative. During construction, drivers approaching Walmart from the east via SW 288th Street could experience delays as a result of the traffic reroutes. However, these delays would be minor and impacts to customers would be temporary. The

Metrobus Route 70 bus does not stop at Walmart, so with the existing conditions, customers using public transportation are required to walk several blocks from the nearest stop, at the corner of SW 286th Street and SW 132nd Avenue. Therefore, the Preferred Alternative would have no adverse impacts on the Walmart Supercenter.

Housing and Residential Areas

Because no permanent jobs would be created or lost as a result of the Preferred Alternative, there would be no direct impact on local housing demand. The Preferred Alternative would not be expected to affect the price of housing in the region. Because the new ECC would accommodate mission future growth at HARB, it could indirectly contribute increased housing demand in the area should this growth occur.

The haul route could pass through residential neighborhoods, and truck traffic along the haul route could impact residents. However, impacts would be temporary and moderate. Efforts would be made to operate haul trucks during non-peak traffic hours and to implement appropriate traffic controls during construction to minimize impacts.

4.2.1.3 Alternatives 1, 2, 3 (2010 EA)

Impacts from Alternatives 1, 2, and 3 (2010 EA) would be similar to those discussed for the Preferred Alternative.

4.3 Environmental Justice

4.3.1 Discussion of Impacts

4.3.1.1 No Action Alternative

Under the No Action Alternative, the existing conditions would remain as discussed above, and there would be no significant adverse impacts to socioeconomics.

4.3.1.2 Preferred Alternative

No significant human health impacts or environmental impact to minority or low income populations would occur as a result of the Preferred Alternative.

The haul route, which would operate during construction and could pass through residential neighborhoods, could impact residents. However, impacts would be temporary and moderate. Efforts would be made to operate haul trucks during non-peak hours to minimize impacts to residents in the area. Construction contractors and Miami-Dade County would coordinate to identify appropriate construction haul routes and times and to implement appropriate traffic controls during construction.

Verde Gardens Apartments, which is a community housing facility for homeless families, is in the vicinity of the project site. For this reason, the area surrounding the project site is not typical of the reference areas in terms of income because it contains more low-income populations when compared to the reference areas. However, impacts to residents of the Verde Gardens Apartments housing development are not anticipated to be disproportionately high or adverse because implementation of the Preferred Alternative would not result in housing relocations, changes in employment opportunities, significant health or safety hazards, significant increase in air emissions, or significant increases in traffic. Potential impacts to traffic patterns are discussed in more detail in Section 3.1 (Transportation). Therefore, the Preferred Alternative would not result in disproportionately high and adverse impacts to minority and low-income populations.

Walking Access

Construction of the new ECC has the potential to affect students who attend the Homestead Job Corps facility and walk to and from campus along SW 288th Street. Although construction would potentially require pedestrians to change their routes, alternative pedestrian sidewalks would be accessible. Therefore, changes to pedestrian traffic would be minor and impacts to walking access would be negligible. New

roadways constructed as part of the Preferred Alternative would include sidewalks to reduce potential disturbances to existing pedestrian traffic.

4.3.1.3 Alternatives 1, 2, 3 (2010 EA)

Impacts to EJ from Alternatives 1, 2, and 3 (2010 EA) would be similar to those discussed for the Preferred Alternative.

4.4 Biological Resources

4.4.1 Discussion of Impacts

4.4.1.1 No Action Alternative

Under the No Action Alternative, no construction or disturbance would occur on the North Gate parcel or the neighboring former BX parcel and therefore, there would be no adverse direct or indirect impacts to threatened or endangered species. The parcel would remain vacant and would continue to provide poor habitat, as described in the Section 3.4.1, which is unlikely to be used by endangered, threated, or special concern species.

4.4.1.2 Preferred Alternative

The project area does not provide suitable habitat for large populations of wildlife. Implementation of the Preferred Alternative would reduce terrestrial habitat within the footprint of the new ECC. Several threatened, endangered, or special concern wildlife species have potential to occur on the North Gate parcel and could be affected by the Preferred Alternative.

During construction, temporary, minor impacts to wildlife species that occur within the proposed project site could result from the implementation of the Preferred Alternative. The Florida burrowing owl and the southeastern American kestrel are known to occur within the vicinity of the proposed project area. However, the current habitat quality onsite is poor and no suitable burrows or pine flatwoods are present. The species are unlikely to nest within the proposed project area. Any impacts would be negligible and limited to relocation of foraging animals to other nearby habitat. The subject property also does not contain cabbage palms, making it unlikely that construction activities would affect Audubon's crested caracara. No impacts are expected to occur to the species.

Bartram's hairstreak butterfly and the Florida leafwing butterfly are unlikely to occur on the subject property because no pine rocklands that contain pineland croton have been identified. Therefore, there is no suitable habitat for the butterfly populations and no impacts to these species are expected.

The Florida pine snake and the eastern indigo snake could occur in the area bordering the proposed construction site. However, any use by these species would likely be incidental due to the level of development in the area and the poor quality of habitat. Construction activities would likely cause minor short-term disturbances to the species, but no mortality would be expected. Impacts would be negligible.

Because there is no suitable habitat for the American alligator, American crocodile, rim rock crown snake, tricolored heron, white ibis, least tern, Everglades snail kite, wood stork, and West Indian manatee within or adjacent to the subject property, there would be no impacts to these species.

The results of the bat survey indicate that the Florida bonneted bat does not roost or forage within the project area. For this reason, there would be no impacts to this endangered species.

If certain avoidance and protection measures are followed, no direct impacts are expected to occur to the federally endangered Small's milkpea, which has been identified on the North Gate parcel and in Miami-Dade County near the proposed project area. To avoid impacts, the project design would include avoidance and protection of the two populations on the North Gate parcel. Temporary fencing would be used to delineate their locations to avoid disturbance and silt fencing would be placed to prevent stormwater transport of sediments from disturbed ground into the areas where the species occurs. Construction

workers would be instructed to avoid the areas during activities and not to use those areas as staging areas during construction.

Grading for five proposed stormwater infiltration areas would occur in the vicinity of Small's milkpea populations Nos. 2 and 4 (Figure 3-3). However, the areas would be designed to avoid impacts to the Small's milkpea population. A 10-foot buffer would be maintained around both populations. On the nearby SOCSOUTH property, Small's milkpea were observed growing within 10 feet of drainage ditches (IRC 2013). Therefore, maintaining a 10-foot buffer around the populations should be sufficient to protect the populations from impacts associated with the presence of the stormwater infiltration areas. Since population No. 4 is in the active construction area, the 10-foot buffer around the population would be isolated from the disturbance with the chain-link fence, and orange construction fencing and signage would be attached to the chain-link fence. Silt fencing would be installed around the chain-link fence during construction to prevent stormwater transport of sediments to the population. A gate would be installed in the chain-link fence to allow mowing. However, the area would not be mowed while the Small's milkpea is flowering or fruiting. Temporary orange construction fencing, signage, and silt-fencing would be placed at the 10-foot buffer around the Small's milkpea population No. 2 (Figure 3-3). Workers would be instructed to avoid the areas and not to use the areas for staging during construction. The design drawings for the fencing around the populations is an appendix to the HARB ECC Biological Evaluation, which is included in Appendix B.

The two identified populations on Miami-Dade County land outside of the North Gate parcel would not be within the construction area. The active construction area would be clearly marked with silt fencing to prevent stormwater transport of sediments offsite. Workers would not be allowed on the Miami-Dade County property outside the construction area. No direct or indirect impacts to Small's milkpea on Miami-Dade County land would result.

Minor direct impacts could occur to State protected plants that have been identified within the subject property, including the pineland golden trumpet, white sunbonnets, Christmas berry, Blodgett's swallowwort, Bahama break, southern fogfruit, and Havana green brier. State protected species co-occurring with the protected Small's milkpea populations would also be protected. State protected species occurring outside the Small's milkpea populations would be identified and protected prior to construction if possible.

4.4.1.3 Alternatives 1, 2, 3 (2010 EA)

Designs for Alternative 1 (2010 EA) would not disturb any of the four identified Small's milkpea populations. The design for Alternatives 2 and 3 (2010 EA) would disturb and have adverse impacts on two of the four populations in the project area.

Impacts to wildlife from Alternatives 1, 2, and 3 (2010 EA) would be similar to those discussed for the Preferred Alternative. No impacts to the Florida bonneted bat would be anticipated.

4.5 Hazardous Materials and Waste Management

4.5.1 Discussion of Impacts

4.5.1.1 No Action Alternative

Under the No Action Alternative, management of hazardous materials and wastes at HARB would continue as discussed above. Activities at the current entry complex do not generate hazardous wastes, and hazardous materials usage is confined to small quantities of liquids associated with office-related tasks. No adverse hazardous materials impacts are anticipated from the No Action Alternative.

4.5.1.2 Preferred Alternative

A temporary increase in hazardous materials management on the North Gate parcel would likely follow implementation of the Preferred Alternative.

During demolition of the residential structures between 1994 and 1996, LBP chips and scrapings could have potentially been deposited into the surficial soil and this contaminated soil could be encountered during construction activities (HARB 2010). Fuels, lubricants, solvents and oils are hazardous materials associated with operation and maintenance of construction equipment. These activities would be subject to the reporting and monitoring requirements discussed above and in the 2010 EA. All base contractors would be required to follow HARB's HAZMAT and spill prevention plans and protocols (HARB 2010). Construction effects would be temporary and hazardous materials management activities would decrease back to the level experienced under the existing conditions. Buried utilities located along the new road route would be removed to place the road foundation and could generate small quantities of hazardous wastes, particularly if transite piping is present. However, the small footprint of the Preferred Alternative would not likely yield significant impacts to hazardous materials and hazardous waste management.

4.5.1.3 Alternatives 1, 2, 3 (2010 EA)

Impacts to hazardous materials and hazardous waste management from Alternatives 1, 2, and 3 (2010 EA) would be similar to those discussed for the Preferred Alternative.

SECTION 5

Cumulative Impacts and Irreversible and Irretrievable Commitment of Resources

5.1 Cumulative Effects

5.1.1 Definition of Cumulative Effects

Cumulative effects are impacts that result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions regardless of the agency (federal or non-federal) or person undertaking such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). The cumulative effects of an action may be undetectable when viewed in the individual context of direct and indirect impacts, but nonetheless can add to other disturbances and eventually lead to a measureable environmental change. Government agencies need to consider cumulative impacts to evaluate a proposed action and its alternatives in a broad perspective, including how the project might interact with impacts that persist from past actions, with present-day activities, and with other planned projects. A cumulative impact assessment can reveal unintended consequences that might not be apparent when the project is evaluated in isolation instead of in a broader context.

5.1.2 Past, Present and Reasonably Foreseeable Actions

This section presents the past, present, and foreseeable projects that were considered during the assessment of cumulative effects for the Preferred and No Action Alternatives (Figure 5-1). The potential for cumulative effects to the environment from each alternative was evaluated by reviewing historical aerials to identify past projects and by reviewing ongoing and planned projects within the vicinity of the sites that could affect the same environmental resources as each alternative. Actions that were considered include construction projects that were recently completed, are underway, or are planned to occur within the near future. Cumulative effects were not analyzed for those resources that were eliminated from further consideration. Cumulative effects are described for each resource area in the following sections.

Historic aerial photographs show that new residential and commercial developments have been constructed near the North Gate parcel since the previous EA was completed in 2010. This includes a number of residences associated with the Evergreen Garden Estates approximately 0.03-mile west of the North Gate parcel and the expansion of the HAC with the construction of Verde Gardens Apartments approximately 0.04 mile northeast of the North Gate parcel. Walmart Supercenter at 13600 SW 288th Street was constructed in early 2014 approximately 0.7 mile west-southwest of the North Gate parcel.

In 2013, a new SOCSOUTH Headquarters Building was completed on land adjacent to HARB that is owned by Miami-Dade County and leased via the Army. The building is approximately 120,000 square feet and includes adjacent surface parking lots (Warren 2015b, personal communication).

In June 2015, the Board of County Commissioners gave its final approval to sell 50 acres of land at the southwest corner of SW 127th Avenue and SW 272nd Street to a developer for the construction of a 250,000-square-foot FedEx distribution warehouse (Warren 2015c). The facility would include parking and land for future growth of a second building. Negotiations are nearing completion and the building could be ready in 2 to 3 years (Warren 2015b, personal communication).

The L-shaped property east and south of the proposed FedEx warehouse location includes 75 acres of land that is planned for an industrial park. During 2015, the County will release and advertise an Expression of Interest to the development community and others to collect ideas from qualified developers who want to build an industrial park or have a project on a smaller parcel within the planned park (Warren 2015c).

Figure 5-1
Past, Present, Foreseeable Projects
HARB ECC SEA

CH2M HILL

Miami-Dade County will be offering approximately 50 acres directly north of the proposed ECC to developers for the possible construction of an additional industrial park with warehouse/distribution buildings planned, along with some limited retail space (Warren 2015b, personal communication).

Future mission growth could occur at HARB. However, at present, there are no other military construction projects at HARB that might contribute to the cumulative impacts. While future mission growth could be considered a reasonably foreseeable action, there is no planned expansion that can be analyzed.

Should a change in the mission occur, additional NEPA analysis would be required for that action and that NEPA analysis would consider the potential for the growth to interact with this 2015 Preferred Alternative. All other funded current and proposed projects at HARB fall into the restoration and modernization category. These are on-base projects that typically would not affect people outside the HARB fence (Bowie 2015, personal communication).

5.1.3 Analysis of Cumulative Impacts

The limited traffic analysis that was conducted in 2014 for the 2015 SEA included a 20-Year Forecast Design Analysis "to forecast operations for the proposed roadway realignments in 20 years, to ensure adequate operation exists not only under current, existing conditions, but also under forecast future conditions" (Ramakers 2015). The Miami-Dade Metropolitan Planning Organization was contacted and the *Miami-Dade 2040 Long Range Transportation Plan* was reviewed. Information regarding population growth was used to predict future traffic growth on the roadways. The *Miami-Dade 2040 Long Range Transportation Plan* indicated that between 2010 and 2040, the population of the county is expected to increase by 49.6 percent, with a 1.35 percent annual growth rate. In order to extrapolate how this would impact traffic over the next 20 years, "a 1.5 percent annual, compounded growth rate was applied to traffic volumes within the study limits" (Ramakers 2015). The results of the study suggest that, under the proposed reconfiguration, all approaches to the new intersections "would operate at a LOS B or better during the same weekday and Saturday am peak periods under both current conditions and 20-Year traffic projections" (Ramakers 2015). Therefore, the 2015 SEA Preferred Alternative would not likely result in any long-term, significant, direct adverse cumulative impacts to local traffic from the combined volume of construction vehicles and privately-owned vehicles during the construction phases. Additional vehicle traffic that may occur as a result of construction of the ECC would not result in significant long-term cumulative impacts to local transportation and traffic because, despite some rerouting, once construction is completed, traffic flow patterns would largely not be disrupted and delays entering HARB that add to congestion on the surface streets would be eliminated.

There would be no significant human health impacts or environmental impact to minority or low income populations from the Preferred Alternative. However, minor potential impacts to EJ populations from the Preferred Alternative could add cumulatively to similar impacts from the various recently completed residential and commercial projects in the vicinity, including small County projects, the construction of Verde Gardens Apartments, Evergreen Garden Estates, and Walmart Supercenter and other minor HARB renovation projects. These potential cumulative effects are anticipated to not be significant because impacts from the types of development in the area do not typically result in housing relocations, significant health or safety hazards, or significant noise impacts. Housing relocations were not likely a result of these developments because historical photographs show the areas were undeveloped prior to recent construction of developments such as Verde Gardens Apartments and the Evergreen Gardens Estates. The new construction of the other projects in the area would be expected potentially to increase the level of local traffic. Beneficial impacts to this area, including minority and low-income populations, could include a potential increase in available housing and job opportunities.

Impacts to biological plant and wildlife resources from the Preferred Alternative would not be expected to add measurable incremental impacts that would combine with other projects in the vicinity because the habitat that would be converted for the ECC is highly disturbed, of poor quality, and largely overrun with exotic invasive species. Elimination of this area as a source of seeds of these invasive species could result in

a minor beneficial cumulative impact to biological resources in the area. The federally-endangered Small's milkpea plant occurs on HARB and was found in the project vicinity. However, no Small's milkpea populations would be directly affected by the project. Populations on HARB and on the SOCSOUTH Headquarters property are managed through designated restoration areas to benefit the species. Although the Small's milkpea plant has been identified on the North Gate parcel, populations would be protected and avoided during the phased construction activities.

The Florida bonneted bat does not roost or forage within the North Gate parcel or the BX parcel. Therefore, it is not anticipated that there would be any cumulative impacts to the endangered Florida bonneted bat as a result of the 2015 Preferred Alternative.

It is not anticipated that the Preferred Alternative would result in any cumulative impact on the use of hazardous materials and disposal of hazardous waste when combined with other commercial and residential projects in the area or when combined with minor renovation projects at HARB. Any hazardous waste generated by operation of the ECC would be handled, stored, and disposed of in accordance with applicable HARB and USAF policies as well as federal, state, and local regulations.

In conclusion, there would be no significant cumulative impacts to the human or natural environment from the implementation of the Preferred Alternative.

The No Action Alternative would potentially result in long-term adverse cumulative impacts to transportation. No long-term adverse cumulative impacts would be expected to biological, socioeconomic, EJ, or hazardous materials and waste resources.

5.2 Irreversible and Irretrievable Commitment of Resources

Irreversible commitments of resources are those that essentially cannot be reversed, such as the extinction of a species or the consumption of fossil fuels. Irretrievable commitments of resources are those that are lost for a period of time, but that may be recoverable over the long term, such as the cutting of a pine plantation.

Implementation of the Preferred Alternative would involve irreversible and irretrievable commitments of natural resources, labor, materials, and fiscal resources beyond those that would occur under the No Action Alternative. However, the North Gate parcel was previously utilized as base housing, and this history of development minimizes irreversible and irretrievable commitments of natural resources. Labor and materials, such as fossil fuels and building materials, would be expended during construction of a new ECC. Additionally, labor and natural resources would be used in the fabrication and preparation of construction materials. These resources generally would not be retrievable; however, they are not in short supply and their commitment would not have an adverse effect on their availability. In addition, fiscal resources would be committed, as the proposed new ECC and associated road re-route would require an irretrievable expenditure of federal funds.

SECTION 6

List of Preparers

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Sara Kent	BS, Biology	8
Richard Reaves	BS, PhD, Wildlife and Wetland Ecology	19
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Tara Glenna	BA, English	6
Kimberly Richardson	BA, Geography	6

SECTION 7

References

1st National Bank of South Florida. 2015. Locations. Available online at: http://www.1stnatbank.com/about/locations.asp. Accessed January 14, 2015.

AECOM. 2012. *Homestead Air Reserve Base Final Jurisdictional Wetland Report*. July 20.

Air Force Center for Environmental Excellence (AFCEE). 2001. Preliminary Assessment/Remedial Design Contract Final Focused Feasibility Study for Operable Unit 11 at Homestead Air Force Base, Florida. November.

AMEC Environmental & Infrastructure, Inc. (AMEC). 2012. *Homestead ARB Caiman Removal Feasibility Study*. September 2012.

Andrejko, M. 2010. *Environmental Condition of Property Base Exchange (BX Mart) Parcel Homestead Air Reserve Base, Florida*. March.

Andrejko, Michael. 2015a. Base population information from the presentation "Homestead ARB's Economic Impact." Personal communication with Sara Kent/CH2M HILL. January 21.

Andrejko, Michael. 2015b. "Tenant" Units at HARB. Personal communication with Sara Kent/CH2M HILL and Mary Anne Bowie/FAICP. March 19.

Andrejko, Michael. 2015c. Haulage Route for the ECC Construction. Personal communication with Sara Kent/CH2M HILL. April 22.

Andujar, Aida. 2011. Verde Gardens: Carrfour Supportive Housing Creates Oasis. *The Housing News Network*. Available online at: http://www.flhousing.org/wp-content/uploads/2012/07/Verde-Gardens-Carrfour-Supportive-Housing-Creates-Oasis.pdf. Accessed January 8, 2015.

Austin, D. F. 1997. *Pine Rockland Plant Guide: A Field Guide to the Plants of South Florida's Pine Rockland Community*. Department of Environmental Resource Management, Environmentally Endangered Lands, Miami-Dade County, Florida.

Bowie, Mary Anne/FAICP. 2015. Personal communication with Sara Kent/CH2M HILL. January 14.

Camillus House. 2014. "What are the Homeless Assistance centers, and how do they relate to Camillus House?" Available online at: http://www.camillus.org/?src=gendocs&ref=FAQ_assistance. Accessed January 9, 2015.

CH2M HILL. 2014. *Draft Final Integrated Natural Resources Management Plan for Homestead Air Reserve Base, Homestead, Florida*. May 2014.

Chapman Partnership. 2015. About Chapman Partnership: Overview. Available online at: http://www.chapmanpartnership.org/about-us/overview/. Accessed January 9, 2015.

Florida Fish and Wildlife Conservation Commission (FFWCC). 2013. Florida's Endangered and Threatened Species. Updated January 2013. http://myfwc.com/media/1515251/threatened_endangered_species.pdf. Website Accessed: October 29, 2014.

Florida National Guard. 2012a. 125th Fighter Wing. Florida Guard Online: The Official Site of the Florida National Guard. http://www.fl.ng.mil/units/125th-fighter-wing. Accessed April 14, 2015.

Florida National Guard. 2012b. 50th Regional Support Group. Florida Guard Online: The Official Site of the Florida National Guard. http://www.fl.ng.mil/units/50thrsg. Accessed April 14, 2015.

Florida Natural Areas Inventory (FNAI). 2010. Guide to the natural communities of Florida: 2010 edition. Florida Natural Areas Inventory, Tallahassee, FL.

Friers, Joshua. 2014. Personal communication with Sara Kent/CH2M HILL. January 15, 2014.

Halzack, Sarah and Josh Hicks. 2013. "Job Corps closes the door on new recruits." *The Washington Post*. February 16. Available online at: http://www.washingtonpost.com/politics/job-corps-closes-the-door-on-new-recruits/2013/02/16/9ff4e118-712b-11e2-8b8d-e0b59a1b8e2a_story.html. Accessed January 9, 2015.

Homestead Air Force Base (HAFB). 1993. *Homestead Air Force Base, Florida Draft Report Ecological Inventory*. October.

Homestead Air Reserve Base (HARB). 2010. *Final Environmental Assessment for Construction of a New Entry Gate Complex at Homestead Air Reserve Base Miami-Dade, Florida*. http://www.homestead.afrc.af.mil/shared/media/document/AFD-100513-043.pdf. Accessed March 30, 2015.

Hyden, Brent A. Lt. Col. / P.E. 482FW MSG/CE. 2014. Minutes County Coordination Meeting 19 Nov 2014 ECC Project at Homestead Air Reserve Base (HARB). Memorandum for Record: Entry Control Complex (ECC) Files. Department of the Air Force, Air Force Reserve Command. November 21.

The Institute for Regional Conservation (IRC). 2013. *Assessment of the Federally Endangered Small's Milkpea (Galactia smallii) and Candidate Sand Flax (Linum arenicola) at the Homestead Air Reserve Base, Homestead, Florida*. November.

LaRoe, E. T., G. S. Farris, C. E. Puckett, P. D. Doran, and M. J. Mac. 1995. *Our Living Resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems*.

Mason & Hanger. 2014. *Entry Control Complex (ECC) Homestead Air Reserve Base (HARB), Florida. Interim 65% Submittal Design Analysis*. December 2014.

Mason & Hanger. 2015a. *Entry Control Complex (ECC) Homestead Air Reserve Base (HARB), Florida. Final 100% Submittal Design Analysis*. April.

Mason & Hanger. 2015b. Construction Phasing – Homestead ECC. Phasing Schedule. Miami-Dade County. 2014. "Who Are We? Where Are We?" FY 2013-2014 Proposed Budget and Multi-Year Capital Plan. Available online at: http://www.miamidade.gov/budget/library/FY2013-14/proposed/volume1/where-who.pdf. Accessed January 6, 2015.

Miami-Dade County. 2014. *Fiscal Year 2013-14 Proposed Budget and Multi-Year Capital Plan*.

Miami-Dade Transit. 2015. Route Details: Route 70. Miamidade.gov. Available online at: http://www.miamidade.gov/transit/routes_detail.asp?route=70. Accessed January 14, 2015.

Moler, Paul E. 1992. *Rare and Endangered Biota of Florida: Volume III, Amphibians and Reptiles*.

NatureServe. 2013. NatureServe Explorer, Species Quick Search. Available online at: http://www.natureserve.org/explorer/. Accessed October 21.

Norton, Timothy F. 2015. Request for Verification of PA material. Personal correspondence with Mary Anne Bowie/ FAICP. April 29.

Office of the Undersecretary of Defense. 2012. *Action Memo: Major Land Acquisition Moratorium Waiver Request- Homestead Air Reserve Base, Florida*.

OHM Remediation Services Corp (OHM). 1994. Aboveground Storage Tank Closure Assessment Report 39 AST Locations. Homestead Air Force Base, Dade County, Florida. October.

Ramakers, Kyle. 2015. Homestead Air Reserve Base, Entry Control Complex (ECC), Existing and Proposed Roadway Configuration, Traffic Operational Analysis. Technical Memorandum. Tetra Tech, Inc. March 16.

Secretary of the Air Force. 1994a. Air Force Instruction (AFI) 32-7060, Interagency and Intergovernmental Coordination for Environmental Planning. March 25. http://www.keesler.af.mil/shared/media/document/afd-070221-023.pdf. Accessed April 14, 2015.

Secretary of the Air Force. 1994b. Air Force Instruction (AFI) 32-7042, Solid and Hazardous Waste Compliance. May 12. http://webapp1.dlib.indiana.edu/virtual_disk_library/index.cgi/821003/FID577/pubs/af/32/afi32-7042/afi32-7042.pdf. Accessed April 14, 2015.

Secretary of the Air Force. 1995. Air Force Pamphlet 32-7043, Hazardous Waste Management Guide. November 1. Certified Current December 29, 2009. http://static.e-publishing.af.mil/production/1/af_a4_7/publication/afpam32-7043/afpam32-7043.pdf. Accessed April 14, 2015.

Secretary of the Air Force. Revised 2003. Administrative Changes to Air Force Instruction (AFI) 32-7061, The Environmental Impact Analysis Process. OPR AF/A7CI. March 12. http://static.e-publishing.af.mil/production/1/af_a4_7/publication/afi32-7061/afi32-7061.pdf. Accessed April 14, 2015.

Secretary of the Air Force. 2008. Air Force Instruction (AFI) 32-7086, Hazardous Materials Management. March 24. http://static.e-publishing.af.mil/production/1/ang/publication/afi32-7086_angsup_i/afi32-7086_angsup_i.pdf. Accessed April 14, 2015.

Smart-Sciences. 2015. *Florida bonneted bat Survey Draft Report: Homestead Entry Control Complex, Homestead Air Reserve base, Homestead, Miami-Dade County, Florida.* Smart-Sciences Environmental Consulting. Prepared for CH2M HILL. Prime Contract No. W91278-12-D-0026. April 16.

South Dade Chamber of Commerce. 2015. Our Community: Past and Present. Available online at: http://chamberinaction.com/pages/OurCommunity. Accessed January 7, 2015.

Sutta, David. 2011. Innovative Housing Community Opened for Homeless in South Dade. *CBS Miami*. September. Available online at: http://miami.cbslocal.com/2011/09/07/innovative-housing-community-for-homeless-in-south-dade/. Accessed January 8, 2015.

The Institute for Regional Conservation (IRC). 2014. *Final Report Plant Survey for the Endangered Small's Milkpea (*Galactia smallii*), Candidate sand flax (*Linum arenicola*), and other Rare Plants, Dade County Florida, For Proposed Entrance Control Complex at Homestead Air Reserve Base, Homestead, Florida*. September 2014.

U.S. Army Corps of Engineers (USACE). 1987. *Wetlands Delineation Manual Technical Report Y-87-1*.

United States Air Force (USAF). 1993. *Basewide Environmental Baseline Survey, Homestead Air Force Base, Florida*. December.

United States Air Force (USAF). 1994. *Final Environmental Impact Statement – Disposal and Reuse of Homestead Air Force Base, Florida*. February.

United States Air Force (USAF). 2009. *Integrated Natural Resources Management Plan for Homestead Air Reserve Base, Homestead, Florida*. Prepared for the United States Department of the Air Force, Environmental Division. July.

U.S. Air Force and Federal Aviation Administration (USAF and FAA). 2000. *Final Supplemental Environmental Impact State for the Disposal of Portions of the Former Homestead Air Force Base*. December.

US Census Bureau (USCB). 2010. Data: Interactive Population Map. United States Census 2010. Available online at: http://www.census.gov/2010census/popmap/. Accessed January 14, 2015.

US Census Bureau (USCB). 2011-2013. 3-Year American Community Survey (ACS). American Fact Finder. Available online at: http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t. Accessed January 14, 2015.

US Census Bureau (USCB). 2015. Welcome to QuickFacts Beta. Available online at: http://www.census.gov/quickfacts/#table/PST045214/00,12,12086,1232275. Accessed January 14, 2015.

US Department of Labor (DOL). 2013. "About Us: What We Do." Homestead Job Corps Center. Available online at: http://homestead.jobcorps.gov/about.aspx. Accessed January 7, 2015.

US Department of Labor (DOL). 2015. "Wondering who's eligible for Job Corps?" Job Corps Eligibility Factsheet. Available online at: http://www.jobcorps.gov/Libraries/pdf/eligibility_factsheet.sflb. Accessed January 9, 2015.

United States Environmental Protection Agency (EPA). 2014a. Summary of Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. February 16.

United States Environmental Protection Agency (EPA). 2014b. Where you Live Florida Radon Levels. Available online at: http://www.epa.gov/radon/states/florida.html Accessed October 20, 2014.

U.S. Fish and Wildlife Service (USFWS). 1999. *South Florida Multi-Species Recovery Plan: A Species Plan…An Ecosystem Approach*.

Vespe, Robert/ GS-11, DAF. 2015. Personal communication with Sara Kent/CH2M HILL. January 20.

Warren, Robert N. / Miami-Dade County Real Estate Advisor. 2015a. Real Estate Development Division, Internal Services Department. Personal communication with Jesse Brown/CH2M HILL. January 2.

Warren, Robert N./ Miami-Dade County Real Estate Advisor. 2015b. Real Estate Development Division, Internal Services Department. Personal communication with Sara Kent/CH2M HILL. January 28.

Warren, Robert N./ Miami-Dade County Real Estate Advisor. 2015c. Real Estate Development Division, Internal Services Department. Personal communication with Michael Andrejko/ USAF. June 3.

Appendix A
HARB ECC Alternatives Analysis

TAB 14

Analysis of Entry Control Complex Alternatives for MILCON Project KYJM07-9014 Homestead Air Reserve Base Entry Control Complex

Prepared by 482 MSG/BCE

27 May 2015

Foreword

The current layout of the Homestead Air Reserve Base (HARB) entrance gate does not provide standoff distance from mission-critical facilities in the event of a Vehicle-Borne Improvised Explosive Device (VBIED) attack and is compliant with neither UFC-4-020-01, *DoD Security Engineering Facilities Planning Manual*, Appendix A nor UFC 4-010-01 para 1-7.2 "Design-Based Threat." The new Entry Control Complex (ECC) will meet the obligatory and vital DoD Force Protection requirements in accordance with: UFC 4-022-01, Security Engineering: Entry Control Facilities/Access Control Points, Air Force Manual 32-1084, Facility Requirements, DoD Instruction 2000.16 Antiterrorism Standards, and UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings.

National Defense Authorization Act FY14 authorized the funding for the Homestead Air Reserve Base (HARB) Entry Control Complex (ECC) and the land acquisition effort via a no-cost gift conveyance in accordance with § 125.38 Florida Statutes from Miami-Dade County is proceeding within time critical deadlines.

Brent A. Hyden, P.E., MBA
482 MSG/Base Civil Engineer

Table of Contents

Executive Summary:.....iii
Alternatives Considered:.....1
ON BASE 1:.....1
ON-BASE 2:.....4
ON-BASE 3:.....5
ON BASE 4:.....6
ON BASE 5:.....7
OFF BASE 6 EAST GATE:.....9
OFF BASE 7 NORTH GATE LAND EXCHANGE:.....10
OFF BASE 8 NORTH GATE LAND GIFT:.....13
SUMMARY.....14
Appendix A - Sand Flax Locations.....A-1
Appendix B - Small's Milkpea Locations.....B-1
Appendix C - Miami-Dade Fire Rescue Access Road Requirements.....C-1
Appendix D - Talking Paper on Basis of AT/FP Criteria for ECC Siting.....D-1

Executive Summary

Since before 2009, the Entry Control Complex (ECC) alternatives location discussion and land acquisition process has been underway for the HARB ECC MILCON Project KYJM07-9014. The 2010 approved Environmental Assessment (EA) considered many on-base and off-base alternatives and identified the preferred alternative at the North Gate location. In January 2013 through a Major Land Acquisition Moratorium Waiver (MLAW) the Under Secretary of Defense approved a land exchange with Miami-Dade County for the purpose of obtaining the North Gate location. During 2014, Air Force Reserve Command requested re-evaluation of on-base alternatives. At HARB, the Force Protection, environmental and socio-economic impacts were evaluated and again, the North Gate location was found to be the preferred alternative. Because study of alternative locations occurred in different venues and at different times, this Analysis of Entry Control Complex Alternatives for MILCON Project KYJM07-9014 Homestead Air Reserve Base Entry Control Complex provides a comprehensive view of the eight major on-base and off-base alternatives considered over the past several years.

Locations of Alternatives Considered:

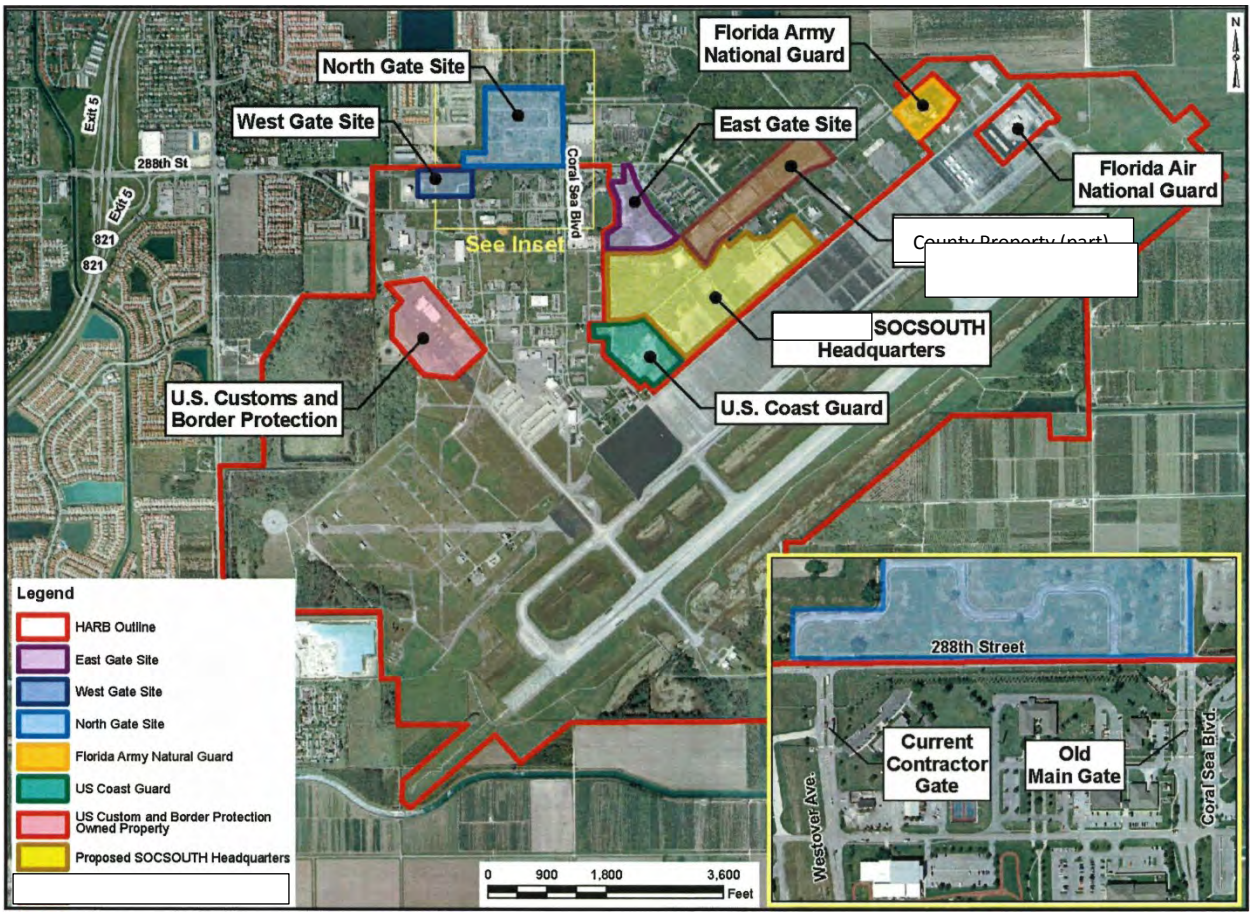


Figure 1. Homestead ARB overview and project vicinity locations.

Air Force Reserve Command's 482nd Fighter Wing (FW) is the host unit at Homestead Air Reserve Base (HARB). The 482d FW provides premier global combat capabilities to the joint warfighter and ready on-call regional humanitarian support. The Homestead location provides a significant gateway to the Southern Hemisphere and is equipped with one of the Air Force Reserve's longest airfields. HARB supports the ACC combat mission with twenty-six F-16 aircraft and over 1,600 base personnel. In addition to 482d FW, HARB also supports multiple tenant units that include both Department of Defense (DOD) and Department of Homeland Security agencies. These valuable assets require protection and safety from terrorist actions.

Since 2000, HARB has operated without a fully-secure, force-protection entry control point. The new ECC will meet the obligatory and vital DoD Force Protection requirements in accordance with: UFC 4-022-01, Security Engineering: Entry Control Facilities/Access Control Points, Air Force Manual 32-1084, Facility Requirements, DoD Instruction 2000.16 Antiterrorism Standards, and UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings.

The National Defense Authorization Act FY14 both authorized and appropriated the funding for the Homestead Air Reserve Base (HARB) Entry Control Complex (ECC) project and both design and land acquisition efforts are occurring with time critical deadlines.

All reasonable alternatives were evaluated in the 2010 Environmental Assessment (EA). In the EA, certain alternatives were eliminated from detailed analysis based on operational, technical, or environmental standards that are applicable to the project. For example, the ability of an alternative to satisfy the operational and technical objectives of a project is a principal determinant of whether the alternative is reasonable. Any alternative, other than the No Action Alternative, that does not satisfy the purpose and need for the Proposed Action, is rejected as a reasonable alternative evaluated in the EA.

Also critical to alternative evaluation is the ability of an alternative to meet established environmental protection standards or regulatory or public expectations of environmental protection. Any alternative likely to cause a significant, immitigable environmental impact that would result in regulatory or public opposition is not considered a reasonable alternative and is not evaluated further in the EA.

Besides the alternatives considered during the Environmental Assessment completed in 2010, several other alternatives were considered at various times during the development of the project. Several alternatives were eliminated due to not meeting screening criteria while the remaining alternatives were carried forward for additional consideration or design, for evaluation against other selection criteria, and for comparison of alternatives. Ultimately, eight alternatives have been considered for this project and they correspond to the three general gate locations (north, east, and west) depicted in figure 1.

ON BASE 1:

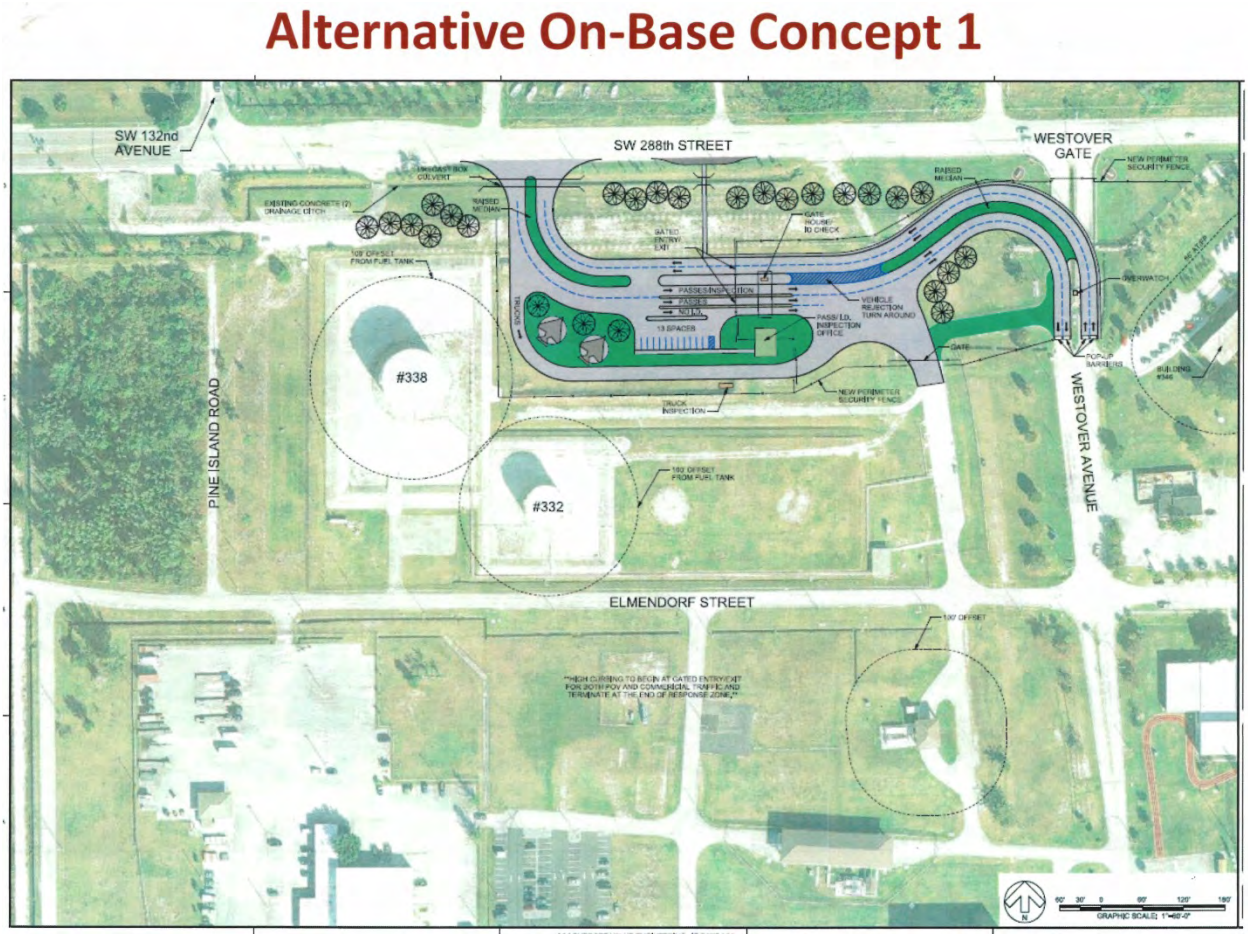


Figure 2. On base alternative concept 1, north gate.

- Presence of federal-listed endangered plant species (Appendix B - Small's milkpea) and federal candidate species (Appendix A - Sand flax) will require formal biological evaluation through US Fish and Wildlife Service (USFWS) for determining mitigation measures necessary.

- Former location of two large contractor-owned, contractor-operated bulk jet fuel above-ground storage tanks (ASTs). Area is an Installation Restoration Program (IRP) site (SS-02A) with residual petroleum soil and ground-water contamination above regulatory clean up criteria. Site is subject to an AFCEC IRP cleanup project.

- Updated full NEPA analysis would need to be performed. New traffic flow study would need to be undertaken, especially with proximity of charter school since 2010 EA.

- Would require OSD approval in place to build on non-DoD owned land to install necessary traffic light.

- Does not comply with local AT/FP requirements due to proximity to active JP8 bulk fuel storage, at tanks #338 and #332. Total storage in those tanks in 2.5M gallons, distance is 110 feet. (Appendix D).

ON BASE 2:

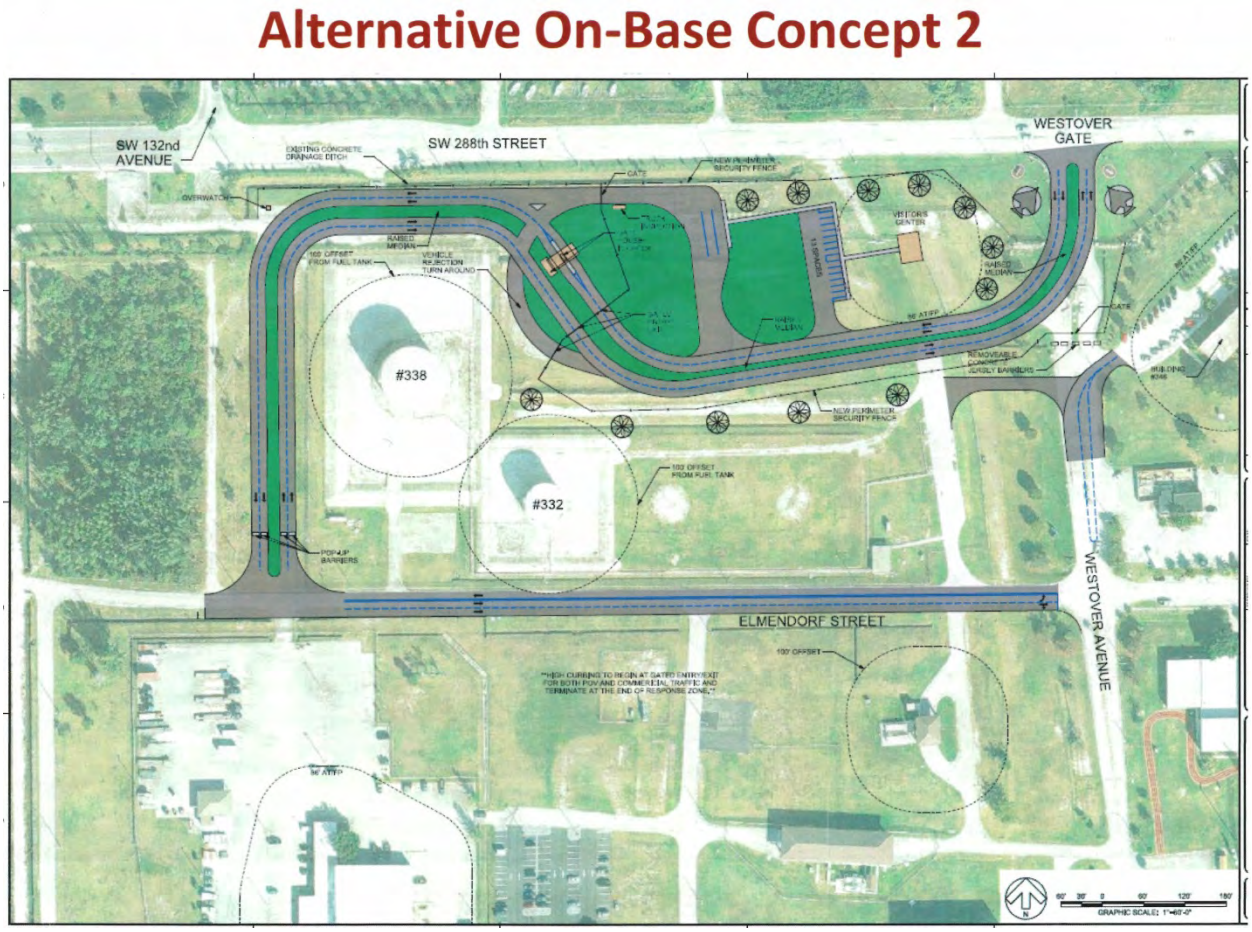


Figure 3. On base alternative concept 2, north gate.

- Presence of federal-listed endangered plant species (Appendix B - Small's milkpea) and federal candidate species (Appendix A - Sand flax) will require extensive formal biological evaluation through US Fish and Wildlife Service (USFWS) for determining mitigation measures necessary. There are two major areas: one on north side of the tank farm, the other on west side.

- Western new roadway would be adjacent and parallel to a USFWS critical habitat candidate area (pine rockland) which contains a number of federal and state-listed species. Construction and traffic activity would result in need for mitigation measures to be performed.

- Former location of two large contractor-owned, contractor operated bulk jet fuel above-ground storage tanks (ASTs). Area is an Installation Restoration Program (IRP) site (SS-02A) with residual petroleum soil and ground-water contamination above regulatory clean up criteria. Site is subject to an AFCEC IRP cleanup project.

- New west side roadway would require relocation of the storm-water retention pond that is part of the fuel tank farm. This would require locating, designing and building a new retention pond prior to

construction of the new roadway. Design process would require working with South Florida Water Management District (SFWMD).

- New traffic flow study would need to be undertaken, especially with proximity of charter school since 2010 EA.

- New design analysis for acceptable curvature of entrance roadway for traffic entering from the west.

- Updated full NEPA analysis would need to be performed.

- Does not comply with local AT/FP requirements due to proximity to active JP8 bulk fuel storage, at tanks #338 and #332. Total storage in those tanks in 2.5M gallons, distance is 110 feet. (Appendix D).

ON BASE 3:

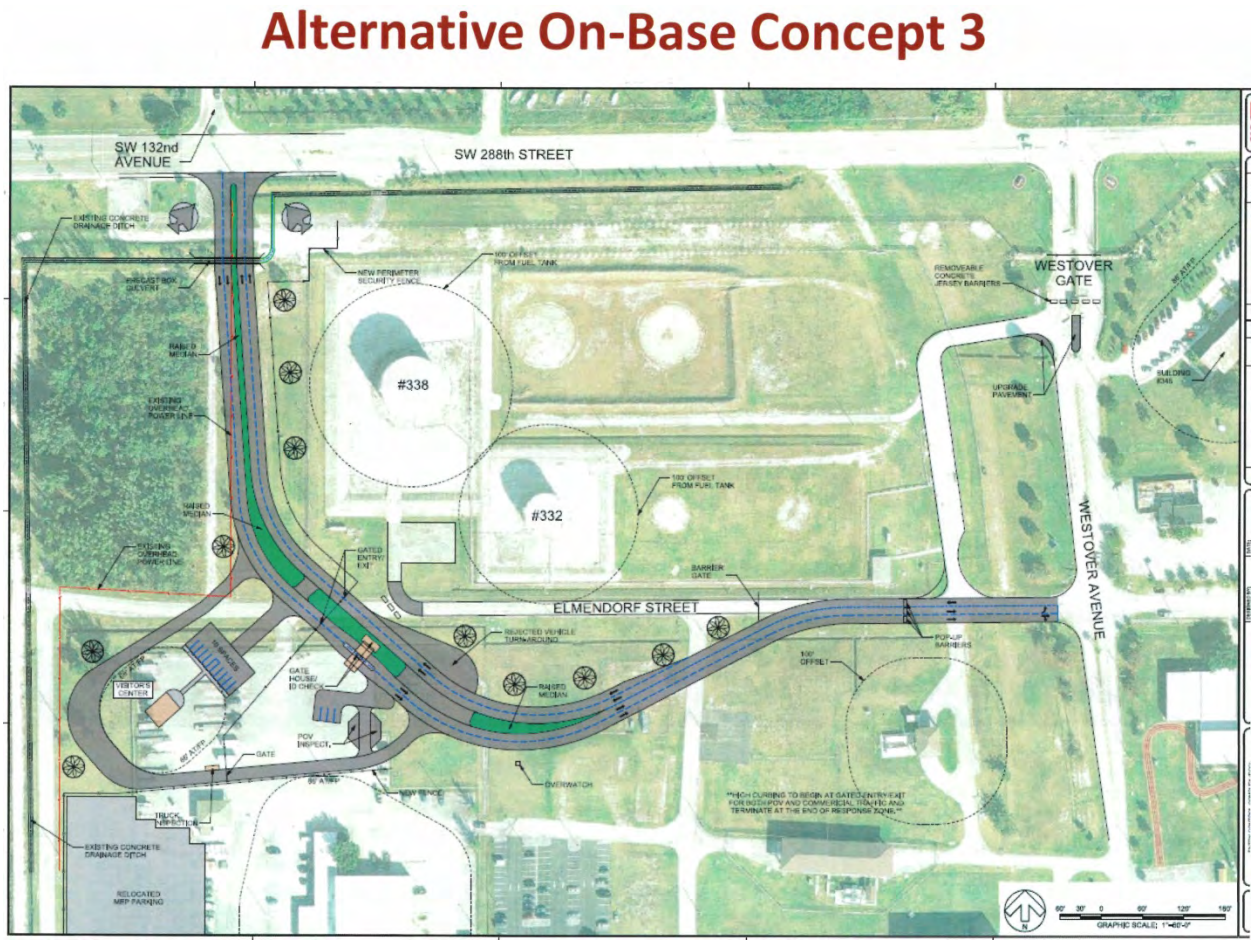


Figure 4. On base alternative concept 3, north gate.

- Presence of federal-listed endangered plant species (Appendix B - Small's milkpea) and federal candidate species (Appendix A - Sand flax) will require extensive formal biological evaluation through US

Fish and Wildlife Service (USFWS) for determining mitigation measures necessary. There are three major areas: one on west side of the tank farm, and the other two are located south of Elmendorf St.

- Western roadway would be adjacent and parallel to a USFWS critical habitat candidate area (pine rockland) which contains a number of federal and state listed species. Construction and traffic activity would result in need for mitigation measures to be performed.

- New west side roadway would require relocation of the storm-water retention pond that is part of the fuel tank farm. This would require locating, designing, and building a new retention pond before construction of new road. Design process would require working with South Florida Water Management District (SFWMD).

- Subject design would remove the only viable alternative site for relocated the aforementioned storm-water retention area.

- New traffic flow study would need to be undertaken, especially with proximity of charter school since 2010 EA, and that new entrance would be directly across SW 288th St from Pine Tree Rd.

- Subject design would require realignment or new construction of access road to the base's Combat Arms Training and Maintenance (CATM) and the US Customs and Border Protection (USCBP) facilities.

- Updated full NEPA analysis would need to be performed.

- Would require OSD approval in place to build on non-DoD owned land to install necessary traffic light.

- Does not comply with local AT/FP requirements due to proximity to active JP8 bulk fuel storage, at tanks #338 and #332. Total storage in those tanks in 2.5M gallons, distance is 110 feet. (Appendix D).

ON BASE 4:

Figure 5. On base alternative concept 4, north gate.

- Presence of federal-listed endangered plant species (Appendix B - Small's milkpea) and federal candidate species (Appendix A - Sand flax) will require extensive formal biological evaluation through US Fish and Wildlife Service (USFWS) for determining mitigation measures necessary.

- Former location of two large contractor-owned, contractor operated bulk above-ground storage tanks (ASTs) for jet fuel. Area is an Installation Restoration Program (IRP) site (SS-02A) with residual petroleum soil and ground-water contamination above regulatory clean up criteria. Site is subject to an AFCEC IRP cleanup project.

- New traffic flow study would need to be undertaken, especially with proximity of charter school since 2010 EA.

- Updated full NEPA analysis would need to be performed.

- Would require OSD approval in place to build on non-DoD owned land to install necessary traffic light.

- Does not comply with local AT/FP requirements due to proximity to active JP8 bulk fuel storage, at tanks #338 and #332. Total storage in those tanks in 2.5M gallons, distance is approximately 250 feet. (Appendix D).

ON BASE 5 WEST GATE:

Figure 6. On base alternative concept 5, west gate.

The potential West Gate Site is previously developed area of Homestead ARB property, located south of but adjacent to SW 288th Street, between SW 132nd Avenue to the west and two existing fuel storage tanks surrounded by a berm to the east. The West Gate Site would have connected with Old Biscayne Drive and is a fairly flat, grassy area that would have been a suitable location for the new gate complex; however, it was eliminated from consideration based on security and risk issues related to the proximity to the existing fuel storage tanks.

Site constraints for this option include security issues with the proximity to existing fuel storage tanks, insufficient land to allow for sufficient turning radius for large vehicles (without demolition of existing structures, inadequate set back from entry gate and POV traffic and overall non-compliance with UFC 4-010-01. Total costs for placement of gate in this area is approximately $16.0M, approximately $6.2M greater than the proposed solution.

- Since the 2010 EA, the area outside the gate on the west end of Elmendorf St has undergone considerable development. Subject two lane-roads bisects an area with a charter school to the north and residential housing units to the south.

- On site construction is limited by presence of drainage canal along perimeter fence line, and a parallel access road leading to the CATM and USCBP facilities.

- Western gate would be adjacent and just south of a USFWS critical habitat candidate area (pine rockland) which contains a number of federal and state-listed species. Construction and traffic activity would result in need for mitigation measures to be performed.

- Updated full NEPA analysis would need to be performed.

- Would require OSD approval in place to build on non-DoD owned land to install necessary traffic light and make improvements to Old Biscayne Drive to meet fire access requirements (Appendix C).

- Does not comply with local AT/FP requirements due to proximity to active JP8 bulk fuel storage, at tanks #338 and #332. Total storage in those tanks in 2.5M gallons, distance is 110 feet. (Appendix D).

OFF BASE 6 EAST GATE:

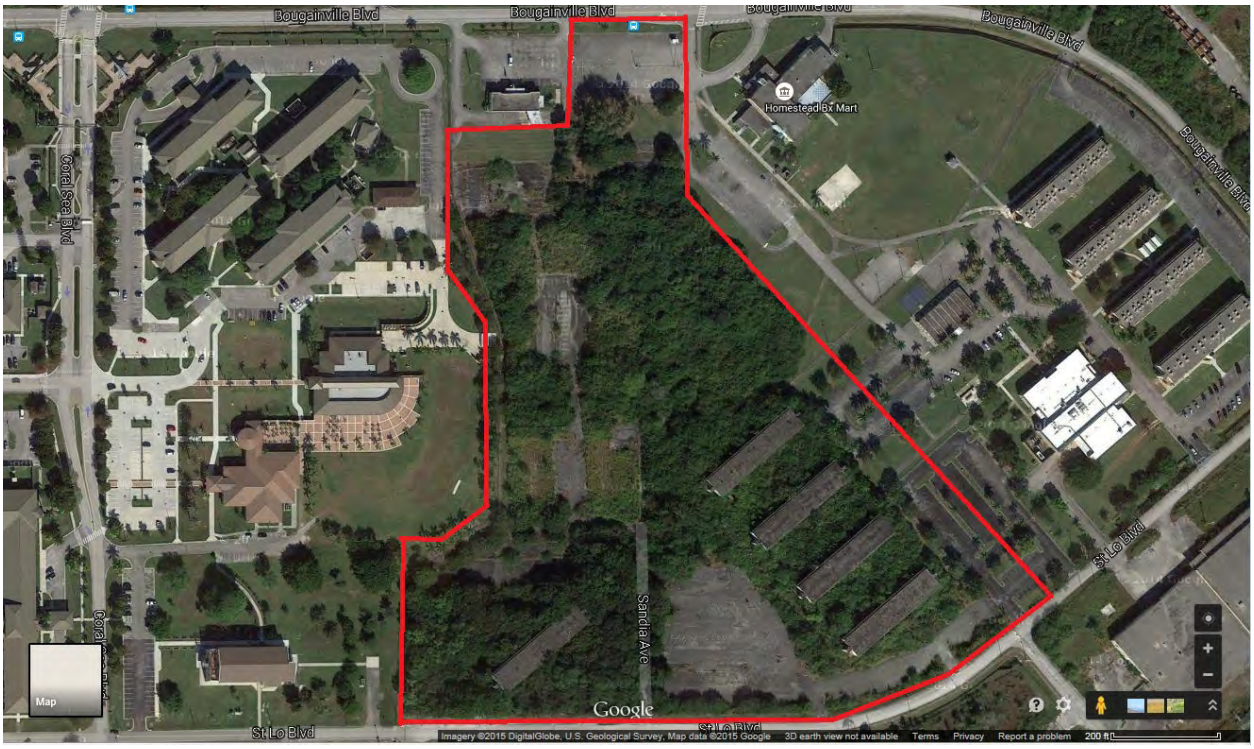


Figure 7. Off base alternative concept 6, east gate area.

The potential East Gate Site consists of an 18.1 acre parcel of land located adjacent to the current eastern base boundary. Although the site location is centrally located, it was eliminated from further consideration based on-site preparation costs. In order to utilize the East Gate Site, a number of old, abandoned former Homestead AFB buildings which are still standing on-site, would need to be demolished. The East Gate parcel currently consists of five structures formerly used as dormitories (Buildings 446, 637, 638, 639, and 640) and a former pavilion (Building 640a). Asbestos-containing materials (ACM) have been found in other former Homestead AFB buildings; therefore, it would be expected that asbestos abatement would be necessary during demolition. In addition, major vegetation clearing would have to be performed and Bougainville Boulevard, which is a very narrow road with drainage ditches on both sides, would require major road re-work to meet fire access requirements (Appendix C).

This alternative entailed the construction of a new POV only entry gate at the east side of the base, just east of the existing billeting units along Bougainville Blvd (SW 288th Street). Trucks and commercial

vehicles would have been required to use the existing Westover gate. However, separating POV and commercial traffic into separate entry points would require additional security personnel manpower. The site is constrained by several owners, the 1st National Bank of Homestead and the US Labor Department, and an already congested intersection with the existing Bank traffic and the Department of Labor traffic converging at the location where the proposed Entry Control Complex would have been developed. Additional road improvements in driveways for both land parcels would be required to meet fire access requirements (Appendix C). This site would require the demolition of 4 (3 level) existing abandoned living quarters that were turned over to local government; this would add approximately $5.0M to the $9.8M projected costs for the Entry Control Complex on the north side.

- Only reasonable access road from Bougainville Blvd. would be between the Homestead First National Bank property, part of the Job Corps Center and through abandoned heavily overgrown former HAFB dormitory property owned by Miami-Dade County.

- Bougainville Blvd at this location would not meet current Miami Dade Fire Rescue Access Road Requirements (Appendix C).

- Subject road issues also apply for safe and adequate large-size delivery truck traffic to/from the base.

- Access road would empty out to St. Lo, where traffic would flow to the west adjacent to the current SOCSOUTH HQ, and enter the base where the VOQ (B-410) is located. There would not be enough room for adequate force protection structures and safety distance.

- Updated full NEPA analysis would need to be performed.

- New traffic flow study would need to be undertaken, especially with proximity to the Job Corp Center.9:

- Would require OSD approval in place to build on non-DoD owned land to make improvements to Bougainville Blvd.

- Does comply with local AT/FP requirements (Appendix D).

OFF BASE 7 NORTH GATE LAND EXCHANGE:

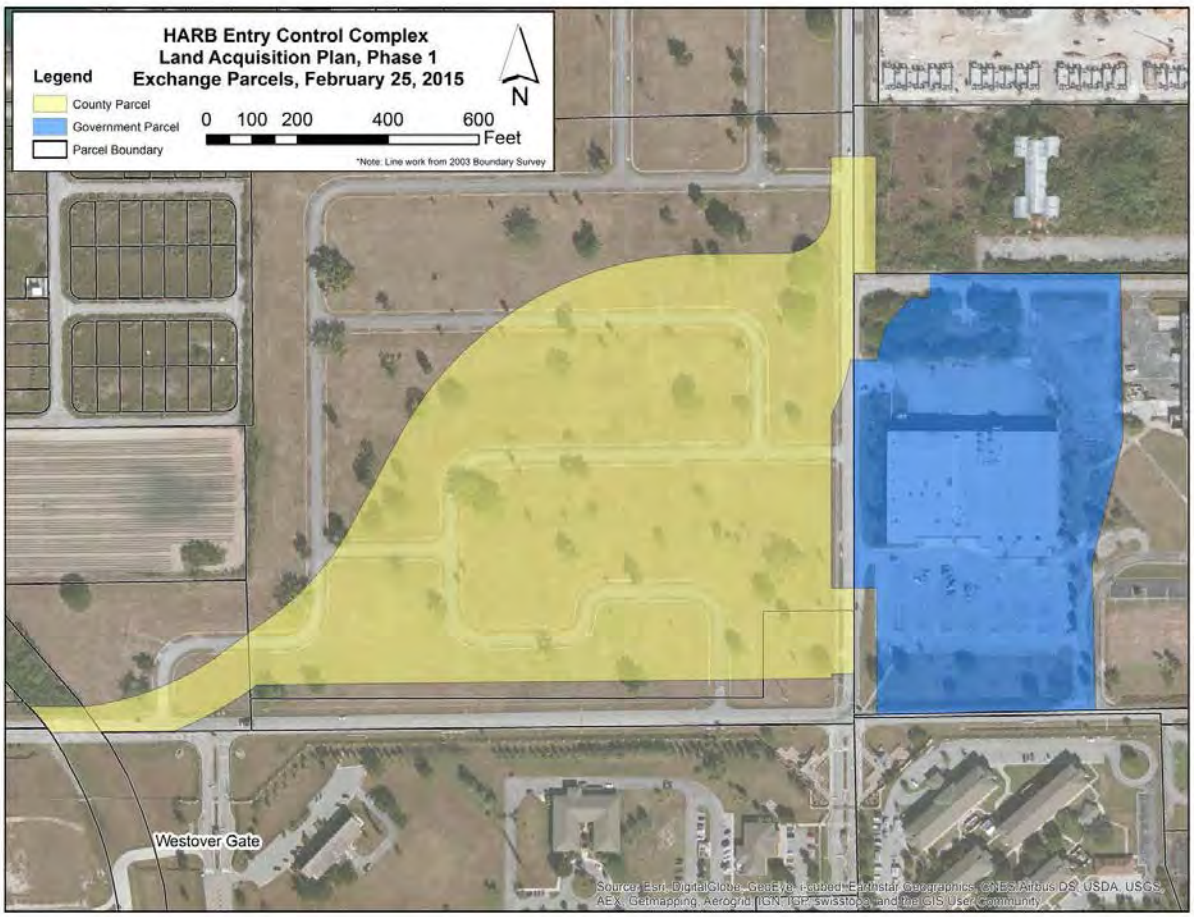


Figure 8. Off base alternative concept 7, north gate land exchange, initial land ownership.

The property to be acquired by the Government is a vacant site with a proposed area of approximately 22.5 acres in unincorporated Miami-Dade County, Florida. The proposed site is located immediately north of Homestead Air Reserve Base. Additional acreage of approximately 4.5 acres will be acquired by the Government via a subsequent right of way closure.

The facility to be conveyed by the Government to the County under the exchange agreement is an approximate 93,000 square foot, retail discount warehouse formerly operated as a base exchange (commissary) (BX) for the Homestead Air Reserve Base. It is situated on a site with a proposed area of approximately 11.6 acres in unincorporated Miami-Dade County, Florida. The proposed site is also located directly north of the Homestead Air Reserve Base. Built in 1986, the building consists of concrete and steel frame construction with tilt-up curtain walls. It has eight dock-height loading doors at the rear and 22 foot high ceiling heights in warehouse areas.

Once all of the transfers are complete, the Department of Defense would have a net increase of 8.5 acres of property, less than the 12.43 approved in the MLAW. Final land ownership by the Government of 21.088 acres and by the County of 18.206 acres is reflected in Figure 9.

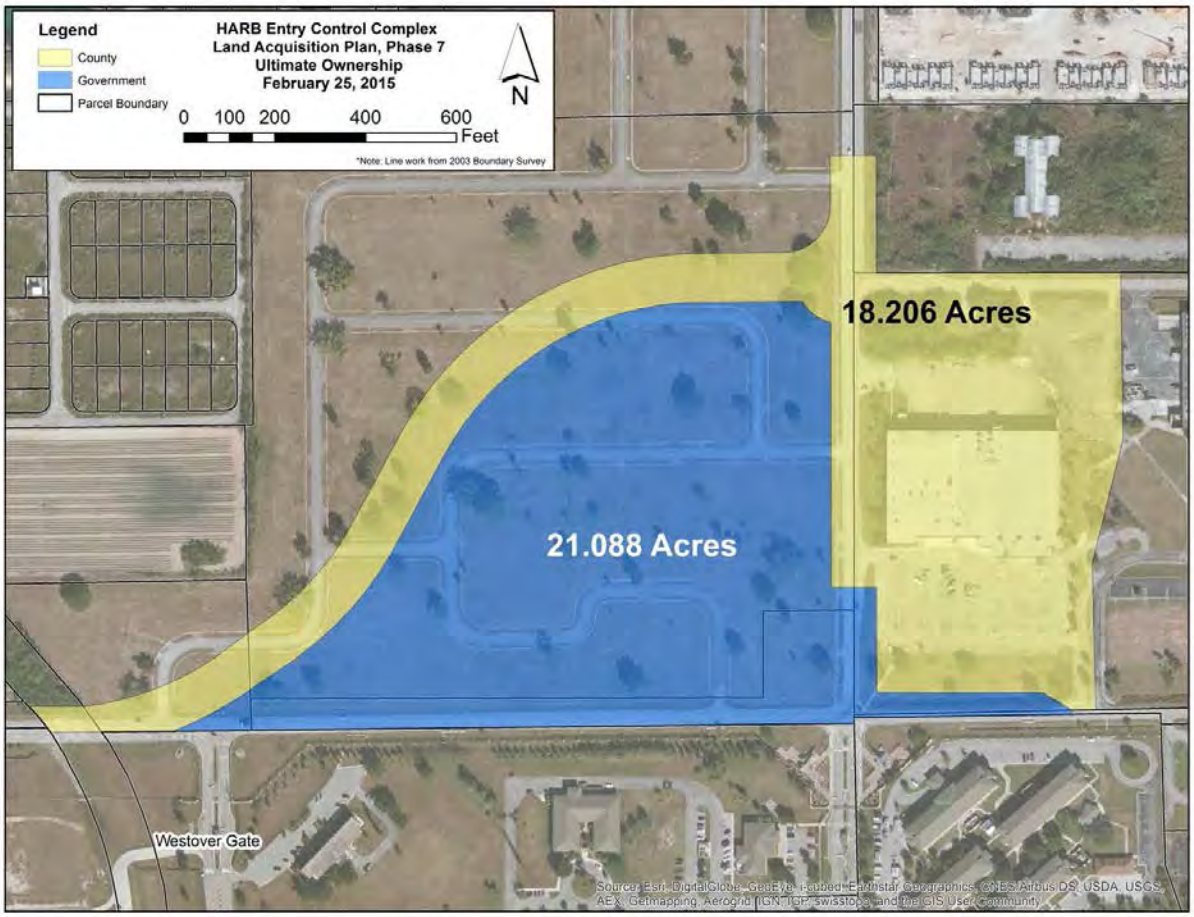


Figure 9. Off base alternative concept 7, north gate land exchange, final land ownership.

The land exchange concept had not moved forward since January 2013, most likely due to the complications requiring road closures and construction of replacement access. By December 2013, at the Design Charette held by AFRC at Homestead ARB, the replacement road access challenge was solved with construction of future Biscayne Drive connecting to a new roundabout at St. Nazaire and SW 127th. In October 2014, HARB BCE was requested to lead the land acquisition effort for this MILCON project on the preferred North Gate location.

In 2010 the Environmental Assessment identified the preferred alternative at the North Gate location. The land acquisition pre-approval process began. Emphasis was on keeping any increase in the footprint of HARB to a minimum, IAW DoD direction. Thus, an exchange concept was developed that would increase HARB's footprint by only 12.5 acres. In 2011, the lands to be exchanged at the North Gate location had a close to equal fair market value (FMV) and a Major Land Acquisition Moratorium Waiver (MLAW) was pursued in the land acquisition pre-approval process. The MLAW was approved in January 2013 that approved a Land Exchange with Miami-Dade County, known as Off-base Alternative 7, North Gate Land Exchange.

The MLAW approved land exchange alternative involves exchange of the former BX property for approximately 27 acres north of Biscayne Drive to allow construction of a by-pass to tie into Biscayne Drive and connecting with SW 127th Ave to the north. The Entry Point for the installation would connect to the by-pass at the north side entering into the visitors Control Center and circling around to a truck inspection and main entry point. The separation between the truck inspection area, Visitor Center and POV entry is sufficient to clear the AT/FP requirements IAW UFC 4-0I0-01. Even though in 2011 the exchange parcels has equal FMV, the April 2015 appraisal identified a gap of $2.1 million in FMV between the two parcels.

- The land exchange with Miami-Dade County became extremely problematic with the gap in appraised property values.

- Does comply with local AT/FP requirements (Appendix D).

100% DESIGN AT NORTH GATE LOCATION:

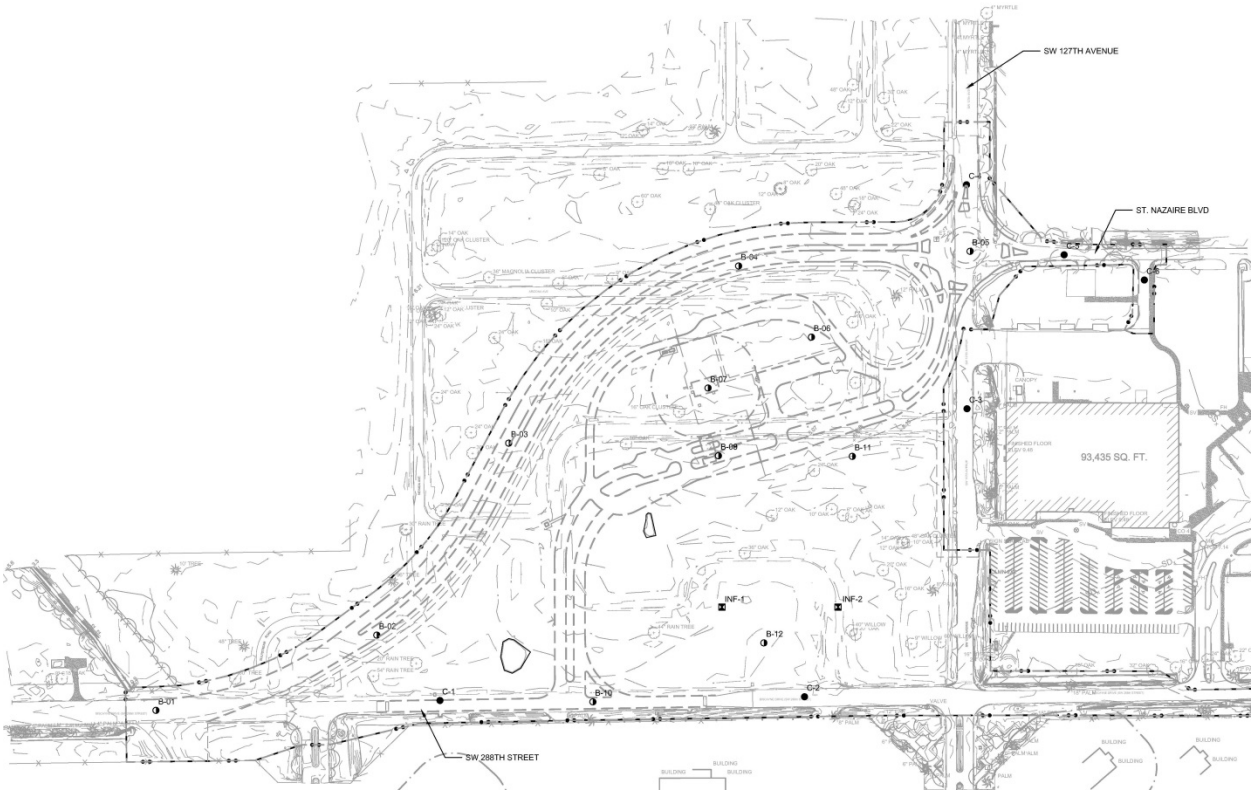


Figure 10. Design located at north gate site with either Alternative 7 or 8 land acquisition approach.

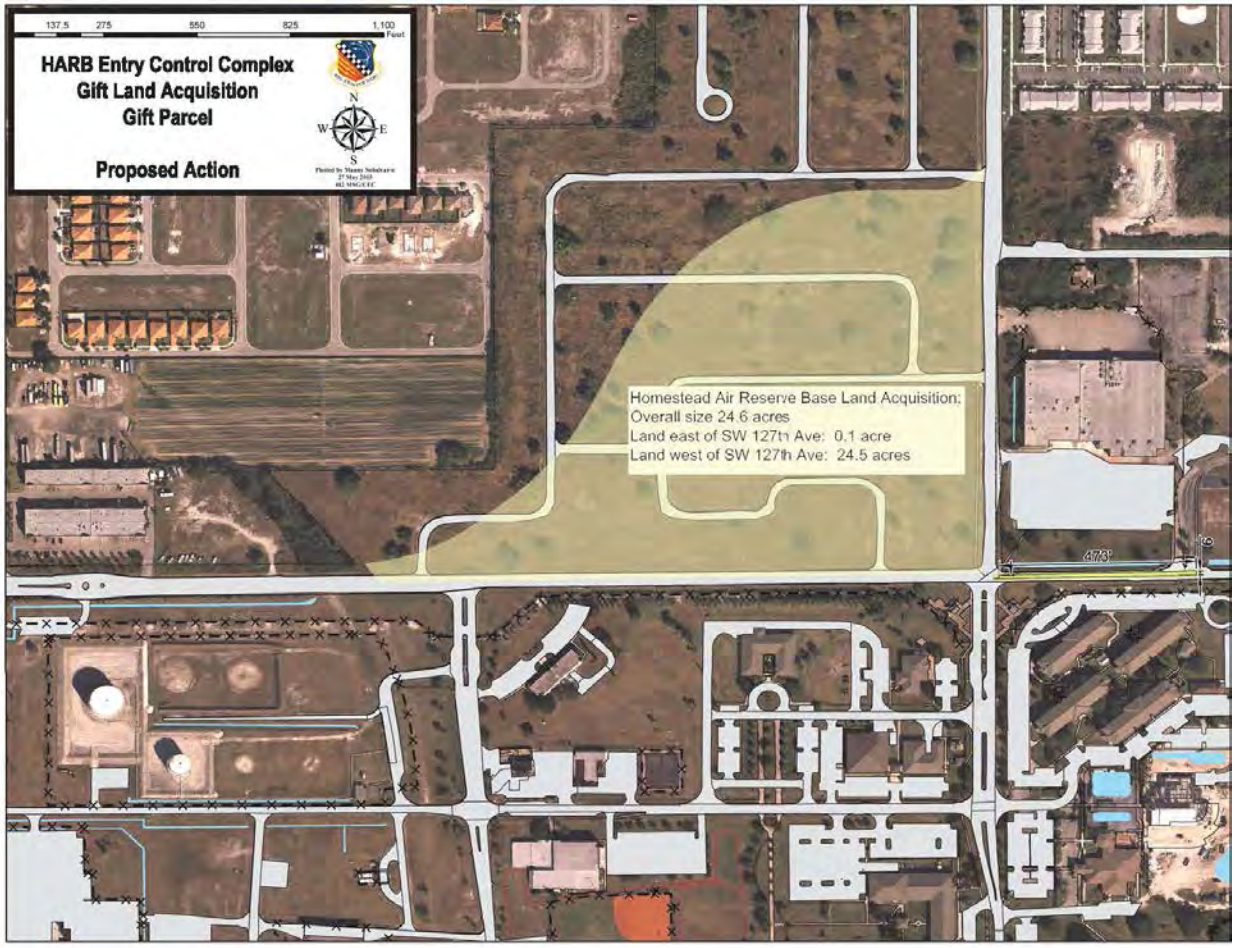


Figure 11. Gift parcel for alternative concept 8

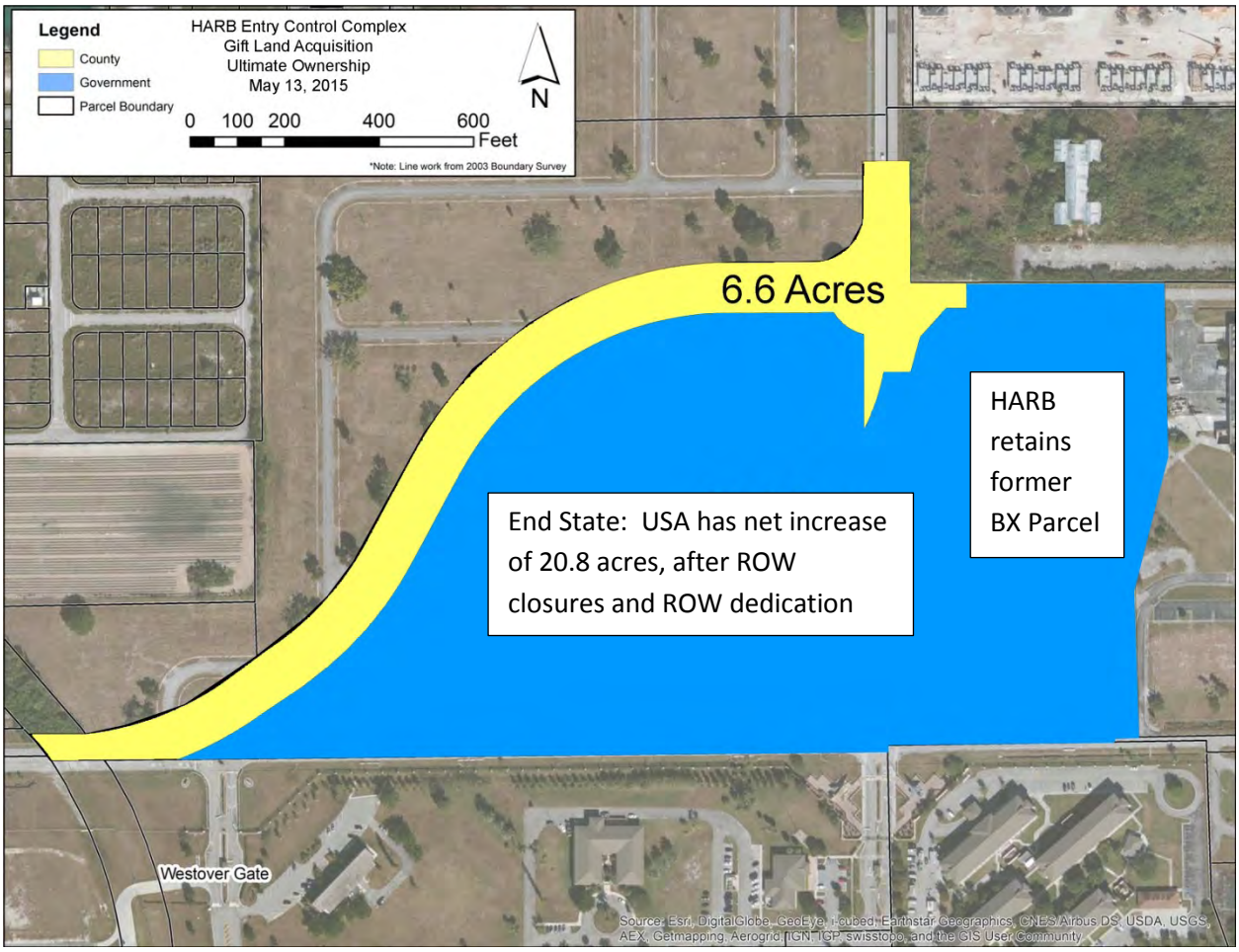


Figure 12. Ultimate land ownership for alternative concept 8

HARB sought to devise an alternative with a minor change to the previously developed land exchange plan in order to avoid the complications of the gap in appraised property values. In order to move forward, IAW § 125.38 Florida Statues, Miami-Dade County will gift the required land to the USA. As a result, the USA owned property to be used in the exchange (the former BX property) will be available for other uses, outgrant and/or disposal.

- Does comply with local AT/FP requirements (Appendix D).

- The cost of maintaining the former BX property (building 920 and parking lots) for 10 additional years is estimated at $3,600,000.

- The cost of maintaining the new section of Biscayne Drive is estimated to cost $110,943 per year until it is divested.

SUMMARY

Each of the eight alternatives considered, whether on-base or off-base, as part of NEPA requirements needed to consider economic, social and environmental considerations. Even more importantly, to be a serious contender, each alternative has to meet anti-terrorism/force protection requirements. HARB ECC Alternative Matrix on the following pages was developed on 21 Apr 2015 and provides an easy to understand summary of the eight alternatives discussed herein.

The proposed action is the initial Gift conveyance from Miami-Dade County, followed by the County closing the southernmost portion of SW 127th Avenue and extinguishing public access easements on SW 288th Street, in front of Homestead Air Reserve Base. Additionally, future Biscayne Drive ROW will be dedicated to Miami-Dade County, once the County accepts that the road is built to County standards. The timing of these activities is expected to occur in accordance with the HARB ECC Construction Phasing Plan, approved by the HARB Facilities Board.

ECC Alternative COA Matrix

label	On Base Homestead Entry Control Complex Alternative	Allows 1 Jun 15 Ready to Advertise (RTA) Date	Meets 518 ft. AT/FP	Factors Not Yet Addressed	Considered in 2010 NEPA & 2015 Sup. Environmental Assessment	Endangered Species Act (ESA) impact	Installation Restoration Program (IRP) Risk	Traffic Impact Off Site	Miami-Dade Coord. Complete	OSD Approval in Place to Build on Non DOD Owned Land
ON1	A7P On Base "1" Also HARB "B"	NO	NO	1-IRP cleanup 2-ESA mitigation 3-Design 4-full NEPA	YES	Medium	High	High – close to school	NO	NO – need traffic light
ON2	A7P On Base "2"	NO	NO	1-Storm water 2-new access road 3-ESA Mitigation 4-Design 5- full NEPA	YES	High	High	High	NO	YES - not Needed
ON3	A7P On Base "3"	NO	NO	1-Storm water 2-isolates US CBP &CATM, 3-Design 4-full NEPA 5-ESA mitigation 6-new road	YES	High	High	High – requires new traffic light	NO	NO – need traffic light
ON4	HARB On Base "A"	NO	NO	1-minor IRP 2-ESA Mitigation 2-Design 3-NEPA 4- minimal improvement to existing gate	YES	Medium	Medium	High	NO	NO – need traffic light
ON5	On Base West Gate	NO	NO	1-inadequate road 2-school & housing adjacent 4-Design 5-NEPA	YES	Medium	High	High	NO	NO – need traffic light and road improved
	Continued pg 2									

label	Off Base Homestead Entry Control Complex Alternative	Meets Ready to Advertise (RTA) Date	Meets 518 ft. AT/FP	Factors Not Yet Addressed	Considered in 2010 NEPA & 2015 Sup. Environmental Assessment	Endangered Species Act (ESA) Impact	Installation Restoration Program (IRP) Risk	Traffic Impact Off Site	Miami-Dade Coord. Complete	OSD Approval in Place to Build on Non DOD Owned Land?
OFF6	Off Base "East Gate"	NO	YES	1.Inadequate road 2. On SOCSOUTH property 3-Design 4-NEPA	YES	Medium	Medium	High	NO	NO – need road improved
OFF7	North Gate Off Base "Exchange"	MAYBE – Must resolve appraisal Δ	YES	AF Approval – Resolve Appraisal Δ	YES	Low	None	Low	YES	YES – MLAW, NDAA, and building road on DOD owned land
OFF8 **RECOMMENDED**	North Gate Off Base "Exchange With Leases"	YES – READY to EXECUTE	YES	AF Approval	YES	Low	None	Low	YES	YES – MLAW, NDAA, and building road on DOD owned land
OFF9	North Gate Off Base "Lease/Convey" (No Exchange)	YES – READY to EXECUTE	YES	AF Approval	YES	Low	None	Low	YES	YES – MLAW, NDAA, and building road on DOD owned land

Appendix A

Sand Flax Locations

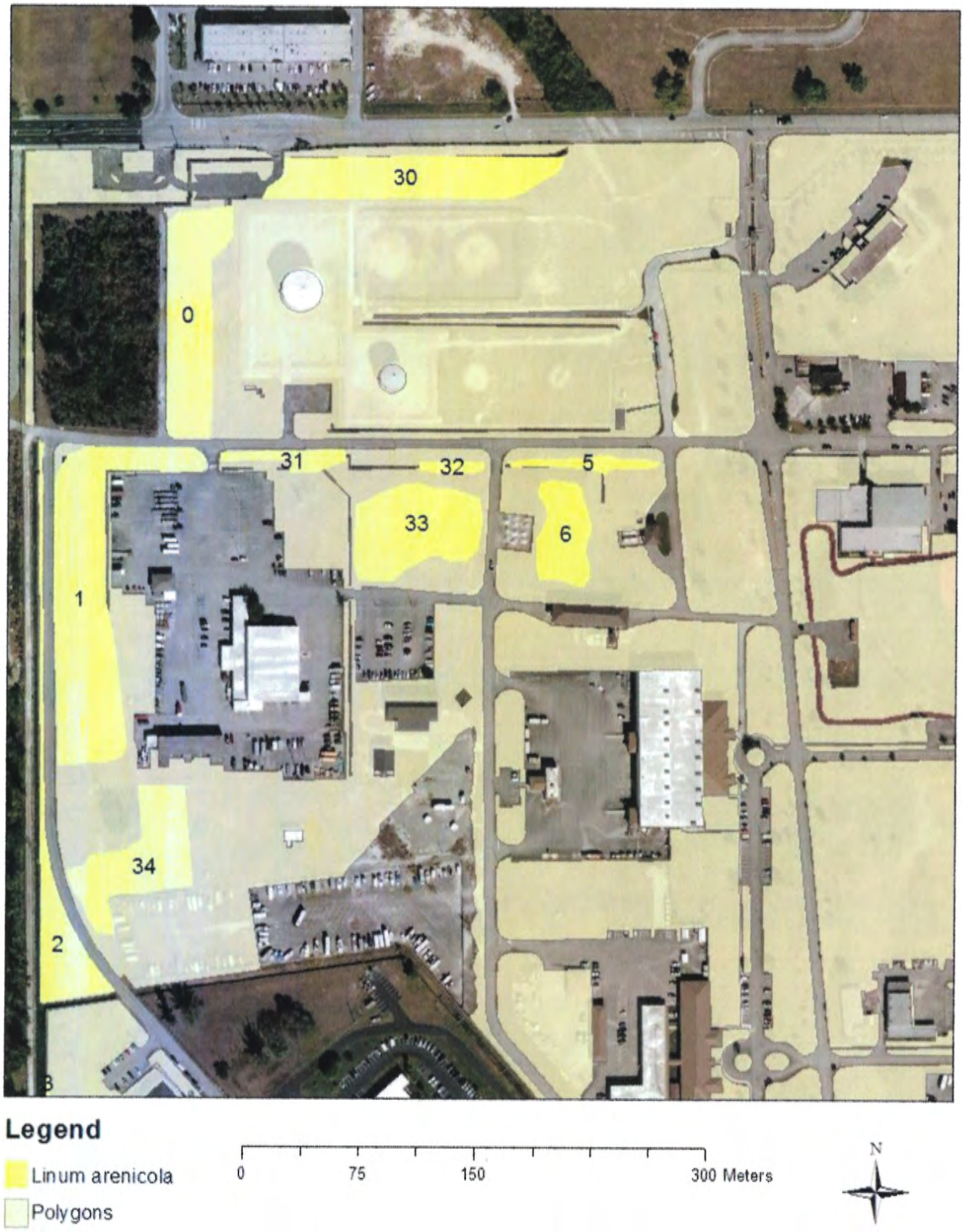


Figure 27. Map showing locations of sand flax: Polygon 0 showing populations 0 and 30; Polygon 112 contains populations 5 and 6; Polygon 200 contains populations 31, 32 33; Polygon 202 containing population 2.

Appendix B

Small's Milkpea Locations

Figure 10. Map showing locations of Small's milkpea: Polygon 0 showing populations 0, 1, 2, 3, 4, 5, 6 159; Polygon 111 has population 18; Polygon 112 has a single large population 19; Polygon 200 has population 8.

Appendix C

Miami-Dade Fire Rescue Access Road Requirements

Miami-Dade Fire Rescue
Access Road Requirements

The requirements identified in this document are minimum standards. The Authority Having Jurisdiction (AHJ), based on specific fire fighting/and or Emergency Medical Service (EMS) needs, may require necessary modifications to these minimum standards on a case-by-case basis.

Fire department access roads must be provided for every community, facility, building, or portion of a building. Set-up sites, fire lanes, and slopes in a project must be able to accommodate a truck with dimensions as follows.

Overall length:	46 feet, 10 inches
Bumper to bump:	32 feet
Wheelbase length:	256 inches

Requirements for changes of elevation on Fire Department access roads

- Angle of approach: 11 degrees max = (1: 5.14 ratio) =(19.4%)
- Brake-over angle: 7 degrees max = (1: 8.14 ratio) =(12.3%)
- Angle of departure: 8 degrees max = (1: 7.12 ratio) =(14%)
- Driving inclines 11 degrees max = (1: 5.14 ratio) =(19.4%)

Required dimensions for fire department access roads

- All pertinent dimensions of fire department access roads such as drivable roadway width, turn radii, cul-de-sacs, and T or Y turn-arounds must be identified on a site plan. All sidewalks and green space shall be identified separate from roadway dimensions.

- The minimum dimensions for fire department access roads shall be 20 feet unobstructed width (two-way traffic) and not less than 13 feet 6 inches of unobstructed vertical clearance NFPA 1 18.2.2.5.1. The AHJ

will accept one-way traffic lanes to be a minimum of 15 feet unobstructed width.

- Dead-end fire department access roads exceeding 150 feet shall be provided with approved provisions for the turning around of fire apparatus NFPA 1 18.2.2.5.4. An approved turn-around shall be by means described below.
    - A minimum 50 feet outside radius cul-de-sac of which must be a suitable surface as described in *Emergency vehicle support capability* and approved by the AHJ.
    - Cul-de-Sac right of way minimum turn radius for residential requires a 50 feet minimum radius. The street and paving design must conform to criteria requiring either curb and gutter design allowing a minimum of 43 feet of finished pavement radius or a swale and sidewalk design with maximum 5 feet sidewalk and maximum 5 feet swale yielding 40 feet finished pavement radius.
    - Cul-de-Sac right of way minimum turn radius for commercial requires a 67 feet right of way for curb and gutter design with a maximum of 5 feet sidewalk to yield 60 feet of finished pavement radius or requires a 70 feet right of way for swale and sidewalk design with a maximum of 5 feet sidewalk and 5 feet swale yielding 60 feet minimum finished pavement radius.
    - A T-Turn or Y-Turn with an extension of the "T or Y" to be a minimum of 46 feet from the edge of each side of the roadway (not the center of the roadway) which must be a suitable surface as described below and approved by the AHJ.

Building access

- A fire department access road shall extend to within 50 feet of a single exterior door providing access to the interior of any and all buildings NFPA 1 18.2.2.2

- Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (450 feet if fully sprinklered) from a fire department access road as measured by an

approved route around the exterior of the building or facility NFPA 1 18.2.2.3.1

Gated communities or properties

- Gates to communities or properties shall be a minimum 15 feet clear width if the approach to and/or departure from the gate is not within a turn radius.
- Gates that are within a turn radius shall be a minimum 20 feet clear width
- Fire Department access to gated communities shall be by Knox Key Switch model 3502 ONLY or Knox padlock model 3753 on manual gates where permitted

Emergency vehicle support capability

- Fire department access roads shall be designed and maintained to support a minimum of 32 tons and shall be provided with a surface suitable for all-weather driving capabilities NFPA 1 (18 2.2.5.2)

Non-Paved Fire Department Access Roads

- Fire Department access roads permitted to traverse through non-paved areas via "grass pavers" or other approved means that will allow grass, foliage, or other landscaping material to grow shall be clearly delineated with signs complying with NFPA 1 Florida Edition (18.2.2.5.8). The edges of non-paved Fire Department access roads shall also be delineated in a manner that will make the access road apparent under all conditions.

Arial apparatus set-up sites

- Sites shall be provided at the corner of each building over three stories in height and at the approximate center of buildings in excess of 125 feet in length for fire fighting operations.
- Sites shall be no closer than 10 feet and no further than 30 feet from any building. Each site shall be a minimum 21 feet wide and 36 feet long with a cross slope no greater than 5 percent.
- Sites shall comply with the requirements of the emergency vehicle support capabilities above and also capable of withstanding any point forces resulting from outriggers

Fire hydrants, sprinkler systems, and other fire related devices

- Clearance from landscaping, parking, or other obstructions around fire hydrants and fire department connections to sprinkler systems shall be a minimum of seven and one-half feet in front of and to the sides of each appliance NFPA 1 18.3.4.1, 18, 3.4.2
- Any required fire sprinkler post indicator valve and/or fire department connection shall be located not less than 40 feet from the protected building
- The fire department connection shall be within 150 feet of the closest fire hydrant.

Appendix D

Talking Paper on Basis of AT/FP Criteria for ECC Siting

TALKING PAPER

ON

BASIS OF AT/FP CRITERIA FOR ECC SITING

- A7P has asked the base to respond to two questions

    -- #1 What is exact AFI guidance (chapter & verse) defining the AT/FP violation? A7P proposal is 100 feet per UFC IAW UFC 3-460-01 DESIGN: PETROLEUM FUEL FACILITIES. (reference BCE photo demonstrating 100 feet)

    -- #2 If off-base is found not feasible, do we prefer to lose the FY14 MILCON authorized project?

- No AFI addresses HARB's specific facility configuration and mission vulnerabilities.

- Discussion for question #1

    -- 482 CES/CED analysis calculation: 518 feet minimum standoff for HARB threat situation at bulk fuel storage facility. Reference Talking Paper dated 23 July 2014.

    -- 482 FW Contingency Response Plan dated 26 Feb 2015 (as updated annually)

        --- Annex B: Facility Priority Listing lists Bldgs 338 & 332 are priorities #15 and #17

        --- Priorities #1-12 are all runways and taxiways

    -- 482 FW Vulnerability Assessment (a classified document)

        --- Reinforces the value of the bulk fuel storage and mission impact of their loss

        --- Identifies the FW/CC as the decision authority to accept AT/FP risk on HARB

    -- UFC 4-010-01 para 1-7.2 ("Design-Based Threat") [emphasis added below]

"Determining the Design Basis Threat (DBT) is an **installation function** requiring programmers, antiterrorism officers, and members of the **threat working group**. Determining the facility DBT is the first step in planning antiterrorism requirements. The DBT is **unique for each individual facility** and is based on the threat likelihoods and the values of the assets in the building. The DBT development process will determine if the minimum AT standards from UFC 4-010-01 are adequate or if additional protective measures are required per UFC 4-020-01. Where a DBT is identified whose mitigation requires protective measures beyond those required by these standards or DoD Component standards, those measures will be developed in accordance with the provisions of UFC 4-020-01. Those provisions include the design criteria that will be the basis for the development of the protective measures, estimates of the costs of those measures, and detailed guidance for developing the measures required to mitigate the identified threat.
The design criteria include the assets to be protected, the threats to those assets, and the desired levels of protection. Use of UFC 4-020-01 will ensure uniform application, development, and cost estimation of protective measures throughout DoD."

- Discussion for question #2:

    -- All on-base COAs would increase net vulnerability at HARB

- RECOMMENDATION: Proceed with project as conceived, on site north of SW 288th Street

LtCol Brent Hyden/482CES/CC/535-7383/bah/27 April 2015

Appendix B
Agency and Public Correspondence

Final

Biological Evaluation for Construction of a New Entry Control Complex

Homestead Air Reserve Base Miami-Dade County, Florida

Prepared for

482nd Fighter Wing
Air Force Reserve Command

June 2015

Prepared by

CH2MHILL

Contents

Section **Page**

1 Summary of Determinations 1-1

2 Background and History 2-1

3 Description of the Proposed Action 3-1

4 Location and Setting Description 4-1
4.1 Location 4-1
4.2 Setting Description 4-1

5 Federally Listed Species and Descriptions 5-1

6 Effects of Proposed Action Implementation 6-1
6.1 Construction of New Entry Control Complex 6-1
6.2 Long-term Operation of Entry Control Complex 6-2
6.3 Cumulative Impact Summary 6-2
6.4 Conclusion 6-2

7 Review of Literature and Other Information 7-1

Table

1 Federally Listed Threatened, Endangered, or Proposed Species for Listing Occurring in Miami Dade County, Florida with Potential to Occur on the proposed ECC Parcel or the Former BX Parcel

Figures

2-1 Project Location
2-2 Comparison Between the Former HAFB and HARB
3-1 Proposed ECC Project
5-1 Small's milkpea Populations

Appendix

A Rare Plant Survey for the Proposed HARB Entry Control Complex
B Florida Bonneted Bat Survey for the Proposed HARB Entry Control Complex
C Construction Protective Measures

Acronyms and Abbreviations

AFBCA	Air Force Base Conversion Agency
AFRC	Air Force Reserve Command
BRAC	Base Realignment and Closure
BE	Biological Evaluation
BX	Base Exchange
CVIA	commercial vehicle inspection area
ECC	Entry Control Complex
ESA	Endangered Species Act
HAFB	Homestead Air Force Base
HARB	Homestead Air Reserve Base
HARS	Homestead Air Reserve Station
ID	Identification
IRC	Institute for Regional Conservation
MILCON	military construction
SOCSOUTH	Special Operations Command South
SW	Southwest
USAF	U.S. Air Force

SECTION 1

Summary of Determinations

Direct and indirect impacts to plant and wildlife species listed or proposed for listing as threatened or endangered would not be expected to result from construction of a new Entry Control Complex (ECC) on an approximately 27-acre parcel (proposed ECC Parcel) at Homestead Air Reserve Base (HARB). Elimination of the approximately 27-acre proposed ECC Parcel as a source of seeds of invasive species could result in a minor beneficial cumulative impact to sensitive species in the area. No areas designated as critical habitat under the Endangered Species Act occur within the proposed project property or any adjacent properties. There would be no impacts to designated critical habitat from the construction and operation of the proposed ECC on the proposed ECC Parcel.

Two populations of the federally endangered Small's milkpea were found on the proposed ECC Parcel and two other populations were found on nearby land that will remain Miami-Dade County property. However, site design considered the locations of these plants and the two populations on the proposed ECC Parcel would be protected and avoided during the phased construction activities and a buffer would be established around the populations in the construction area. The two nearby populations that are on Miami-Dade County land would not be within the construction area and would not be impacted. Therefore, no Small's milkpea populations would be directly affected by the project. No other species listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (ESA) were identified on the proposed ECC Parcel. No cumulative impacts to species protected under or proposed for listing under the ESA would be expected.

The federally endangered Florida bonneted bat was recorded in the area. However, no roosting or foraging habitat was identified on the proposed ECC Parcel.

Based on this analysis, the U.S. Air Force (USAF) has determined that allowing the proposed ECC development and long-term operation of the facility is not likely to affect federally listed or proposed plant or wildlife species or their designated critical habitat.

SECTION 2

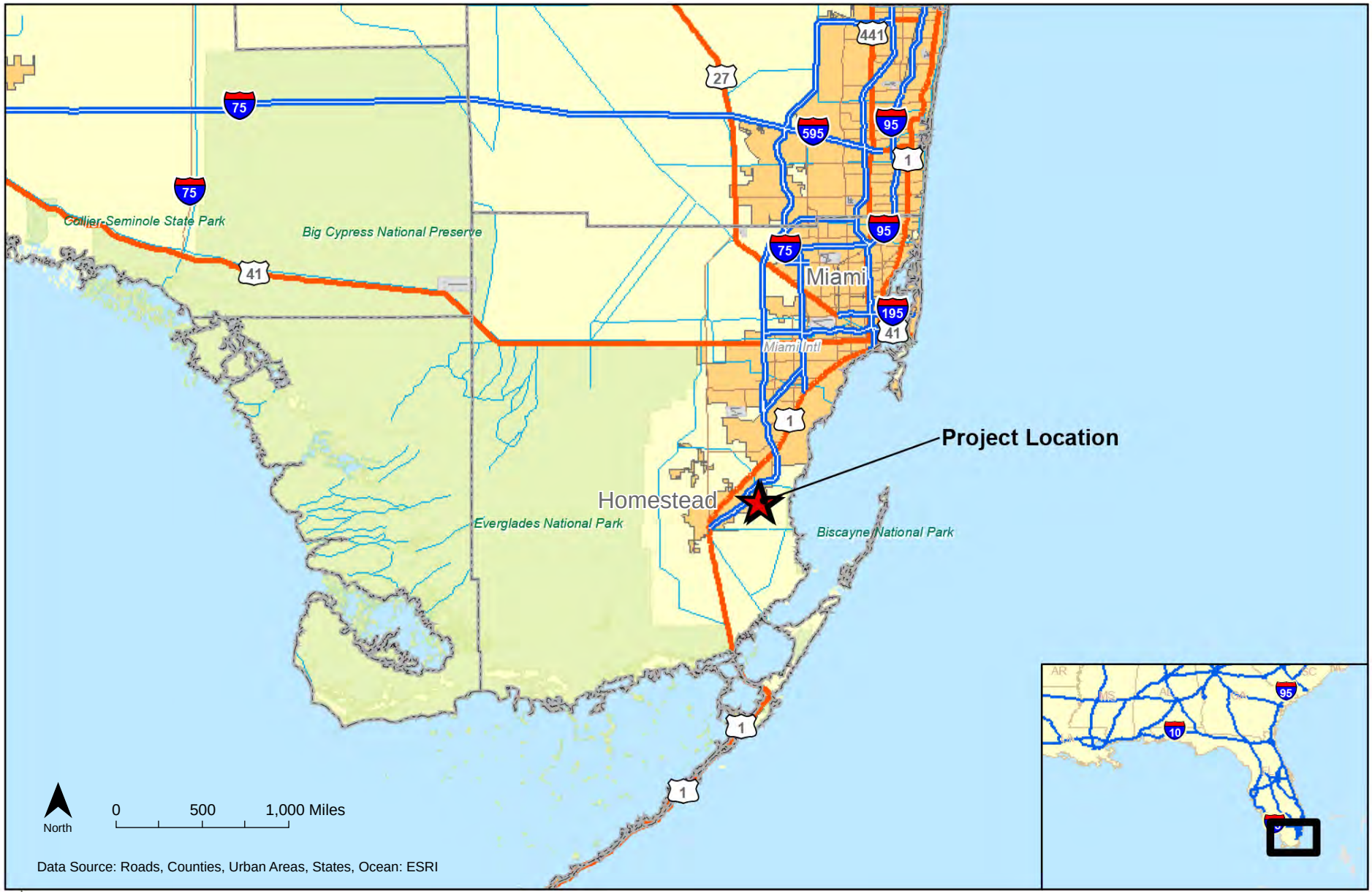
Background and History

The purpose of this USAF Biological Evaluation (BE) is to address the effects of constructing a new ECC at HARB, Florida. The proposed ECC would consist of a covered gatehouse, Visitor Center/pass and identification (ID) inspection office, commercial vehicle inspection area (CVIA), parking areas, a static aircraft display, stormwater management features, and associated changes to surface streets and other transportation infrastructure.

HARB is located in southern Miami-Dade County, approximately 25 miles south of Miami and approximately 8 miles east of the center of the City of Homestead (Figure 2-1). The area was first developed in the 1930s by Pan American Air Ferries, Inc. for use as an airfield. In 1942, following the start of World War II, the airfield was deeded to the U.S. government and established as the Homestead Army Air Field. In September 1945, a strong hurricane hit the area and caused extensive damage to the air field. The air field was inactivated due to high costs of rebuilding, along with military downsizing following the war. The property was transferred to Dade County (now known as Miami-Dade County). The Dade County Port Authority retained possession for the next 8 years. During this period, crop dusters used the runways, and the buildings housed a few small industrial and commercial operations. The military reacquired the property in 1953 and Homestead Air Force Base (HAFB) was established. HARB continued to grow when activated in 1953 and into the 1980s, encompassing approximately 2,938 acres and a population of over 6,000 personnel (USAF 1993).

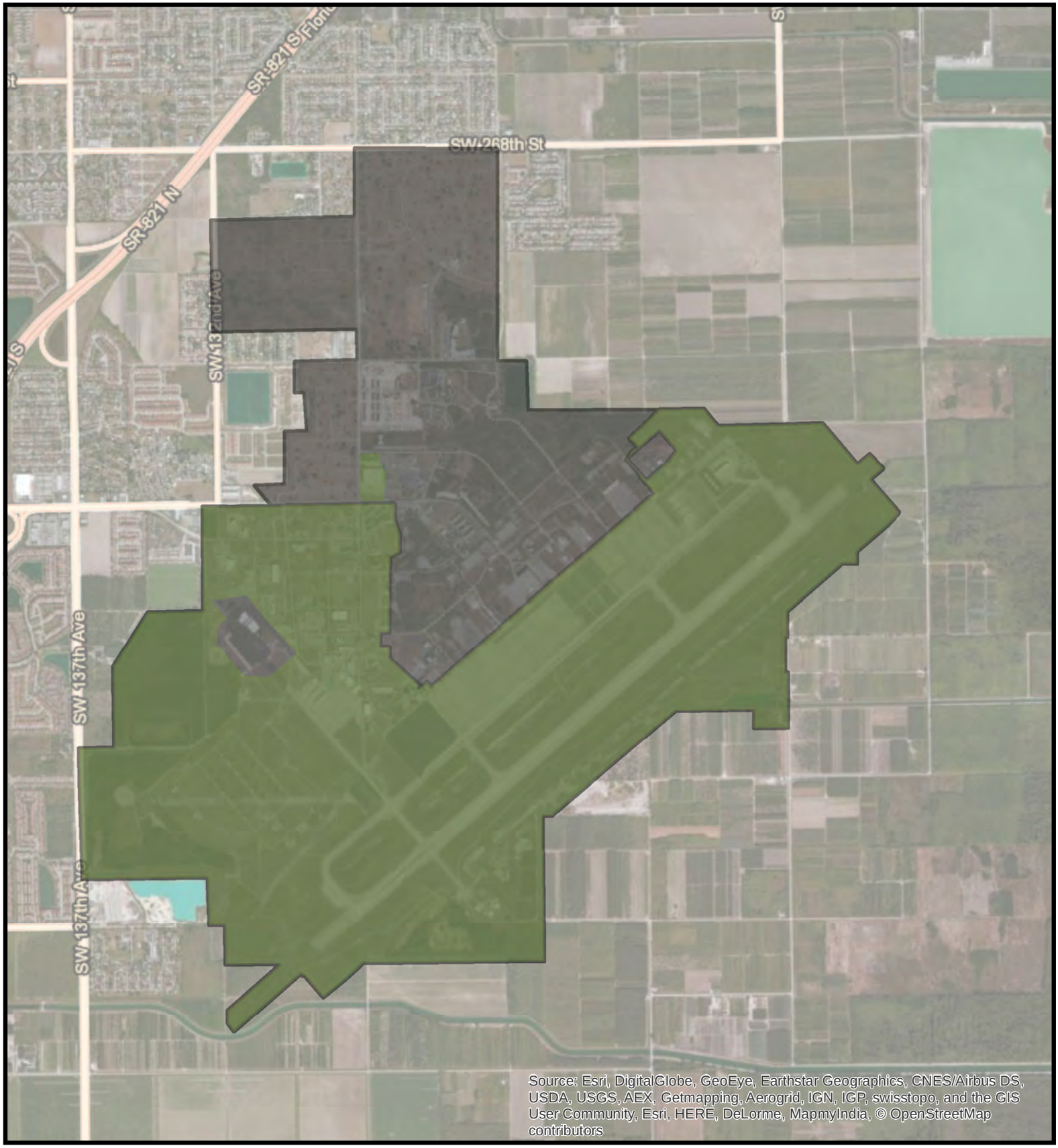
In 1992, Hurricane Andrew hit HAFB, destroying 97 percent of the base facilities. In 1994, 852 acres of the former HAFB was realigned to become the Air Force Reserve Command (AFRC) Homestead Air Reserve Station (HARS) under the Defense Base Realignment and Closure (BRAC) Commission. The airfield and remaining former HAFB redevelopment area were transferred to the Air Force Base Conversion Agency (AFBCA). In 1996, HARS was proposed to become part of the joint-use civilian and military Homestead Regional Airport with adjacent commercial and industrial development. However, the project never proceeded and, in 1999, the AFBCA permitted the AFRC to use 915 acres of the former HAFB as a military airfield. Subsequently, ownership of the airfield was transferred to AFRC and HARS became HARB in 2003. USAF retained approximately 1,943 acres of the former HAFB for the HARB. The remaining acres were divided into parcels and transferred to other entities, including Miami-Dade County (USAF 1993, HARB 2006). Figure 2-2 depicts the former HAFB area and the current HARB boundary.

Southwest (SW) 288th Street is the east-west road located along the northern boundary of HARB. West of SW 127th Avenue, the name associated with SW 288th Street is Biscayne Drive. East of SW 127th Avenue, the name associated with SW 288th Street changes to Bougainville Boulevard. This road will be referred to as SW 288th Street throughout this document. SW 127th Avenue is the north-south road that leads to the HARB main gate. South of SW 288th Street, the road is called Coral Sea Boulevard. This road will be referred to as SW 127th Avenue throughout this document. The other existing surface roads that are within the vicinity of the Proposed Action are identified only by names: Ramey Avenue, Westover Street, and St. Nazaire Boulevard. The roads are referred to by those names throughout this report. The new road that would be built to extend diagonally from SW 288th Street to St. Nazaire Boulevard will be named Biscayne Drive and is referred to as future Biscayne Drive in this document.



Project Location
Limited Access
Highway
Major Road
River
Urban Areas
County Boundary

Figure 2-1
Project Location
HARB ECC BE



Legend

- Homestead Air Reserve Base
- Former Homestead Air Force Base

N

0 500 1,000 2,000 Feet

Figure 2-2
Comparision Between the Former HAFB and HARB
HARB ECC BE

SECTION 3

Description of the Proposed Action

The Proposed Action includes the construction of a new ECC for HARB, including a covered gatehouse, Visitor Center/pass and ID inspection office, CVIA, associated parking lots, a static aircraft display, stormwater management features, construction of a new road segment and roundabout, and realignment of SW 288th Street (Figure 3-1). The proposed ECC at HARB would be built as a replacement for the existing Westover Gate on Westover Street to better accommodate current and future capacity needs.

HARB would acquire an approximately 27 acre parcel from Miami-Dade County for the proposed ECC Parcel. The proposed ECC project would require the permanent closure of portions of SW 127th Avenue and SW 288th Street to accommodate the construction and operation of future Biscayne Drive. The road closures would affect vehicles traveling to destinations along SW 288th Street to the east of SW 127th Avenue. Motorists would be routed from SW 288th Street via the future Biscayne Drive, east onto St. Nazaire Boulevard, and south onto Ramey Avenue back to SW 288th Street. St. Nazaire Boulevard might need to be upgraded to accommodate the increased traffic flow once road closures are in effect.

All considered alternatives include the following common construction components:

- Temporary construction equipment and material staging areas would be established adjacent to the construction footprint and the areas would be returned to their original condition upon completion of construction.
- Future Biscayne Drive would be created as a diagonal connection from SW 288th Street to SW 127th Avenue at the intersection of SW 127th Avenue and St. Nazaire Boulevard. This would keep through-traffic outside the new HARB boundaries.
- Construction would be phased such that vehicular access to SW 288th Street east of the current HARB entry would be maintained until future Biscayne Drive is operational.
- Existing pavement on abandoned roadways on the proposed ECC Parcel would be left in place, where not affected by construction and road realignment.
- Stormwater management features would be constructed around the proposed ECC.
- New perimeter fencing would be constructed.
- Minor landscaping would be installed around infrastructure constructed for the proposed ECC.

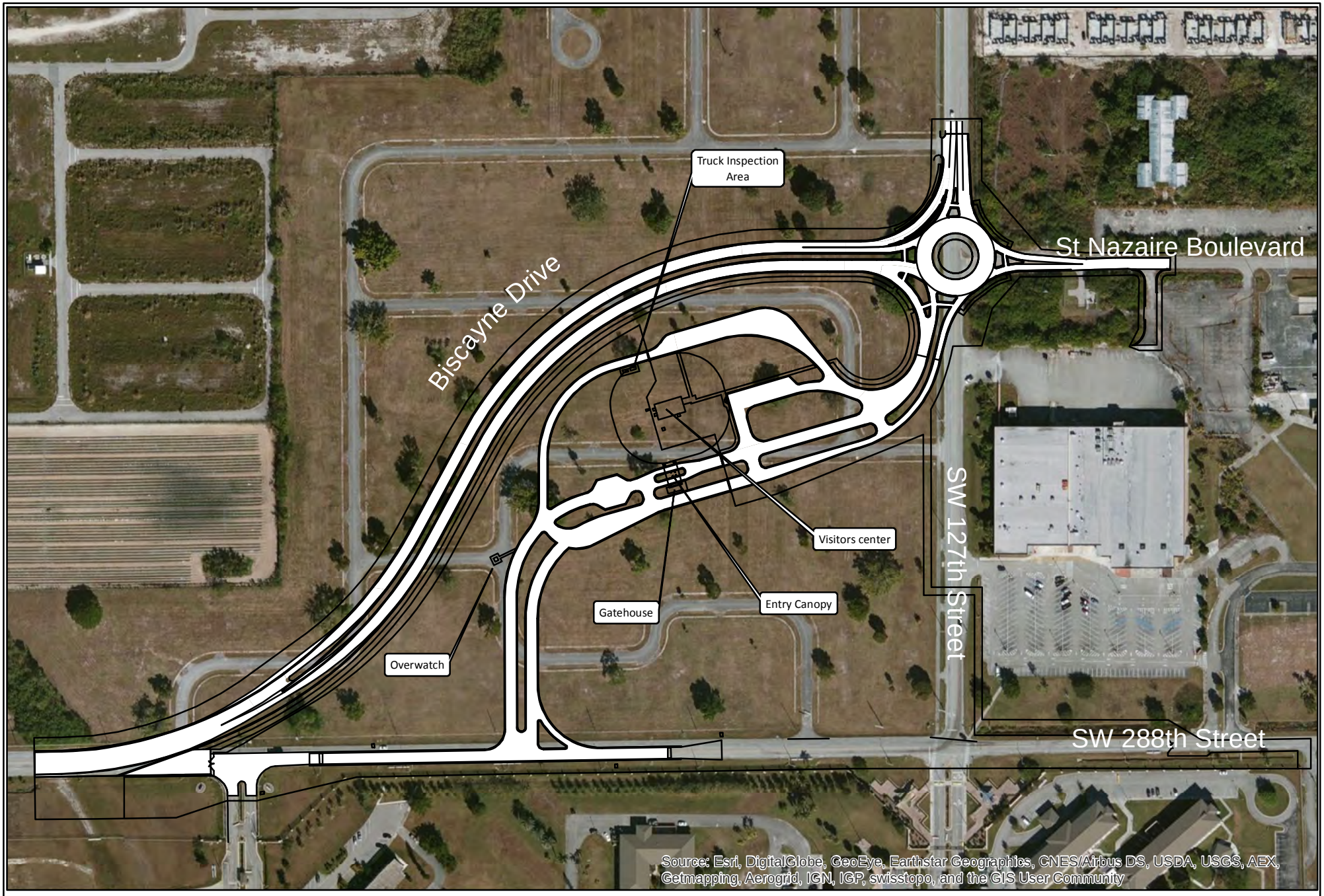


Figure 3-1
Proposed ECC Project
HARB ECC BE

SECTION 4

Location and Setting Description

4.1 Location

The proposed ECC project site is located in Miami-Dade County, northeast of Homestead, Florida. SW 288th Street borders the HARB ECC project area to the south. The HARB cantonment area is across SW 288th Street from the proposed project site.

4.2 Setting Description

The approximately 27-acre proposed ECC Parcel is unoccupied land that consisted of military housing prior to Hurricane Andrew. Prior to development, much of the area consisted of native pine rockland habitat. This sensitive vegetation community occurs only in southern Miami-Dade County, the Florida Keys, and parts of the Bahamas that are restricted to outcropping of limestone formations (Austin 1997). Remnant vegetation of historical pine rockland communities still occurs within and around the proposed ECC Parcel, but it has largely been displaced as a result of past residential development and extensive colonization by pioneer species, including invasive exotic species, in the time since the transfer to Miami-Dade County.

In 2014, the Institute for Regional Conservation (IRC) conducted a rare plant survey on the proposed ECC Parcel and the former Base Exchange (BX) Parcel, and adjacent areas to the west and north). The survey identified two populations of the federally endangered Small's milkpea (*Galactia smallii*) on the approximately 27-acre proposed ECC. Two additional small populations of Small's milkpea were identified in the areas to the west and north of the proposed approximately 27-acre ECC Parcel. No federal or state-listed plants were identified on the former BX Parcel. The survey also identified state-listed plant species within the property, including pineland golden trumpet (*Angadenia berteroi*), white sunbonnets (*Chaptalia albicans*), Christmas berry, Blodgett's swallowwort (*Cynanchum blodgettii*), Bahama break, Havana green brier (*Smilax havanensis*), and southern fogfruit (*Phyla stoechadifolia*) (IRC 2014, Appendix A).

IRC identified several exotic species on the proposed ECC Parcel, including Brazilian pepper (*Schinus terebinthifolius*), white leadtree (*Leucaena leucocephala*), silk reed (*Neyraudia reynaudiana*), napier grass (*Pennisetum purpureum*), mascarine templegrass (*Zoysia tenuifolia*), and St. Augustine (*Stenotaphrum secundatum*) (IRC 2014, Appendix A).

SECTION 5

Federally Listed Species and Descriptions

Federally protected species with the potential to occur within the proposed HARB ECC project area are listed in Table 5-1 and described in the following subsections.

TABLE 5-1
Federally Listed Threatened, Endangered, or Proposed Species for Listing Occurring in Miami-Dade County, Florida with Potential to Occur on the Proposed ECC Parcel

Species	Listing Status*	Determination
American Alligator (*Alligator mississippiensis*)	Threatened (S/A)	No affect
Florida bonneted bat (*Eumops floridanus*)	Endangered	No affect
Bartram's hairstreak butterfly (*Strymon acis bartrami*)	Endangered	No affect
Florida leafwing butterfly (*Anaea troglodyta floridalis*)	Endangered	No affect
Eastern indigo snake (*Drymarchon corais couperi*)	Threatened	No affect
American crocodile (*Crocodylus acutus*)	Threatened	No affect
Everglade snail kite (*Rostrhamus sociabilis plumbeus*)	Endangered	No affect
Wood stork (*Mycteria Americana*)	Endangered	No affect
Audubon's crested caracara (*Polyborus plancus audubonii*)	Threatened	No affect
West Indian manatee (*Trichechus manatus*)	Endangered	No affect
Small's milkpea (*Galactia smallii*)	Endangered	No affect
Sand flax (*Linum arenicol*a)	Candidate	No affect

(S/A) = Federally threatened due to similarity of appearance
Source: Florida Fish and Wildlife Conservation Commission 2013, CH2M HILL 2014

American Alligator

The American alligator has responded favorably to protection efforts, but was reclassified as threatened due to similarity of appearance to the American crocodile in 1985. In 1987, the State of Florida introduced managed harvests of alligators and their eggs to create conservation incentives by enhancing the economic value of wild alligator (LaRoe et al. 1995). The canals and lakes on HARB provide habitat for American alligators and they occur there. A Caiman Removal Feasibility Study (AMEC 2012) identified 16 American alligators and two American crocodiles on HARB. The American alligators were observed in the Boundary Canal, Phantom Lake, Twin Lakes, and in the Military Canal stormwater reservoir. The American crocodiles were observed in Phantom Lake and Twin Lakes. The proposed ECC Parcel lacks water-filled canals or other aquatic habitat and the American alligator would not occur in the HARB ECC project area.

Florida Bonneted Bat

This federally endangered bat species is confined to a small range in south Florida. It prefers to roost in old trees with suitable cavities, and the species also roosts in Spanish tile roofs. The Florida bonneted bat may colonize newly installed bat houses of appropriate design. The Florida bonneted bat has been observed in the Homestead area near HARB and throughout Miami-Dade County. There are two known roost sites in Coral Gables, near the Granada golf course and along the Ludlam Trail. An acoustic bat survey was conducted on the proposed ECC Parcel and the former BX Parcel in March 2015. The survey detected the

Florida bonneted bat in the area. However, no roosting or foraging habitat was identified on the proposed ECC Parcel and the former BX Parcel (Smart Sciences 2015, Appendix B).

Bartram's Hairstreak Butterfly and Florida Leafwing Butterfly

The endangered Bartram's hairstreak (*Strymon acis bartrami*) and endangered Florida leafwing (*Anaea troglodyta floridalis*) occur within pine rocklands habitat that contain their only known host plant, pineland croton (NatureServe 2013). This plant occurs in the remnant pine rocklands area in the northwestern portion of HARB and, as a result, both butterfly species may occur at HARB. A butterfly survey is proposed at HARB to determine if these two protected species occur on the installation. Pineland croton has not been identified on the proposed ECC Parcel. Because the host plant does not occur, it is unlikely either butterfly species would be encountered.

Eastern Indigo Snake

The federally threatened eastern indigo snake (*Drymarchon corais couperi*) is a large, shiny, non-venomous snake that occurs throughout central and southern Florida (USAF 2009). Its diet consists of various vertebrates, including fish, frogs, toads, lizards, small turtles, snakes, birds, and small mammals. During cold and dry conditions, this snake requires shelter, such as a land crab, armadillo or rodent burrow, a hollow log, a stump hole, or root channels, but they are most often found in or near gopher tortoise burrows. In its southern range, the species uses a wider array of habitats and is more active throughout the year, presumably because it does not get as cold. Home ranges used by individual snakes in south-central Florida average about 19 hectares to 74 hectares (47 to 183 acres) for females and males, respectively. The proposed ECC Parcel could provide poor quality habitat for this species. However, due to the level of disturbance, including historical paving of much of the area, it is unlikely that this species would occur on the proposed ECC Parcel.

American Crocodile

Habitat for the federally protected American crocodile (*Crocodylus acutus*) includes inland ponds and creeks in areas where there is access to water more than 3 feet deep. The species is known to occur in the drainage canals of HARB. However, the proposed ECC Parcel lacks water-filled canals or other aquatic habitat, and the American crocodile would not occur in the HARB ECC project area.

Everglade Snail Kite

The endangered Everglade snail kite (*Rostrhamus sociabilis plumbeus*) occurs in freshwater marshes and shallow, vegetated edges of natural or man-made lakes where apple snails occur. Because of its specific dietary and hydrological requirements, the Everglade snail kite is restricted to the watersheds of the Everglades, Lake Okeechobee, Lake Kissimmee, and the upper St. Johns River. The snail kite has been observed on HARB, but only on rare occasions and for short durations. The native and non-native species of apple snails are known to occur on HARB, and the snail kite forages on the native populations. There is no suitable habitat for this species within the proposed ECC Parcel.

Wood Stork

The wood stork (*Mycteria americana*) is a long-legged wading bird that breeds in colonies. The southeastern United States distinct population no longer nests in Florida, but they are known to forage in shallow areas in the Everglades. They are often seen on or flying over HARB in winter and have been seen foraging in the wetlands to the southeast of the runway. However, it is unlikely that nesting on HARB would occur. Because the ditches in the HARB ECC project area do not retain water, there is no suitable habitat for this species within the proposed ECC Parcel.

Audubon's Crested Caracara

The threatened crested caracara (*Polyborus plancus audubonii*) is a large raptor that, in Florida, typically occurs in open country, dry prairie with scattered cabbage palms, wetter prairies, and occasionally in

improved pastures and wooded areas with limited areas of open grassland. In Florida, the center of its range is the Kissimmee Prairie, which consists of an area of shallow ponds and sloughs with scattered hammocks of live oaks and cabbage palms. This species typically nests in trees among branches or palm fronds and often in cabbage palms. This species is considered a permanent resident of much of Florida, but is not common in Miami-Dade County (NatureServe 2013, Friers 2014). This bird could occur on HARB for foraging or for nesting and breeding. However, there is no suitable habitat for this species on the proposed ECC Parcel.

West Indian Manatee

The federally endangered West Indian manatee (*Trichechus manatus*) inhabits coastal and inland waterways throughout Florida's east coast. Manatees require access to aquatic vegetation, freshwater sources, and at least 6 feet of water depths. Biscayne Bay supports a year-round population, with greater numbers occurring during the winter (U.S. Fish and Wildlife Service 1999). Manatees are regularly observed in the Military Canal on HARB and travel as far as the HARB stormwater pump during the winter. Manatees cannot reach the HARB ECC project area due to the presence of obstacles (stormwater reservoir, trash weir, smaller canals).

Small's milkpea

Small's milkpea (*Galactia smallii*) is a small, trifoliolate, perennial legume with small, purple flowers and a prostrate habit. The stems are grayish, due to a covering of short hairs, and grow up to 79 inches. Stem internodes are well-developed and have long, straight, soft hairs. Leaflets are broadly ovate to elliptic and 0.4- to 0.9-inch-long. The underside of the leaflet has long, soft, wavy hairs lying almost flat against the surface. The upper surface of the leaflet is either hairless or has sparse, stiff hairs, lying flat. Flowers are about 0.5-inch-long and pinkish-purple or lavender.

Small's milkpea is endemic to the pine rocklands of Miami-Dade County. Pine rocklands habitat has been destroyed throughout much of its historical range in south Florida and replaced by residential housing, commercial construction, or agriculture. Less than 2 percent of the original pine rocklands habitat remains and most occurs in small, isolated stands. Habitat loss and fragmentation, fire suppression, and invasion by exotic plant species threaten the existence of Small's milkpea. The species typically is reduced or eliminated in areas where invasive exotic species, such as Brazilian pepper and silk reed, are prevalent. Most threats to Small's milkpea are ongoing and are considered imminent.

Small's milkpea has been documented in substantial numbers on HARB and on the Special Operations Command South (SOCSOUTH) headquarters property. The IRC conducted a rare plant survey of the proposed HARB ECC project area, including proposed ECC Parcel and the former BX Parcel, in June 2014. The endangered Small's milkpea was the only federally protected plant identified within the HARB ECC project area. Two Small's milkpea populations were mapped on the approximately 27-acre proposed ECC Parcel and two other populations were found nearby on land that will remain Miami-Dade County property (Figure 5-1). Approximately 900 individual Small's milkpea were identified in two separate populations on the proposed ECC parcel, with the larger population (823 individuals) occurring near the southern boundary (IRC 2014, Appendix A). No populations of Small's milkpea were identified on the former BX Parcel.

Sand Flax

Sand flax (*Linum arenicola*) is a glabrous, perennial herb with wiry stems reaching up to 28 inches tall. Leaves are few, alternate, and early deciduous. Flowers are in terminal cymes, 5-parted, less than 2.5 inches wide, with ephemeral yellow petals and separate styles.

Sand flax is found in pine rocklands and marl prairie habitats, which require periodic wildfires to maintain an open, shrub-free subcanopy and reduce litter levels. U.S. Fish and Wildlife Service data indicate there are 11 extant occurrences of sand flax in south Florida, with 11 other previously known populations either extirpated or destroyed. Only small and isolated occurrences remain in a restricted range of southern Florida

and the Florida Keys. Habitat loss and degradation due to development is a major threat to this species. Most remaining occurrences are on private land or non-conservation public land. Nearly all remaining populations are threatened by fire suppression, difficulty in applying prescribed fire, road maintenance activities, exotic species, and/or illegal dumping. Most threats to the species are ongoing and are considered imminent.

Sand flax has been documented in substantial numbers on HARB and on the SOCSOUTH headquarters property, but this species was not found within the proposed ECC Parcel or the former BX Parcel during the recent plant survey (IRC 2009a, 2009b, 2013, 2014, Appendix A).

Critical Habitat

Critical habitat consists of specific geographic areas that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. No critical habitat for any listed species has been designated on the proposed ECC Parcel.

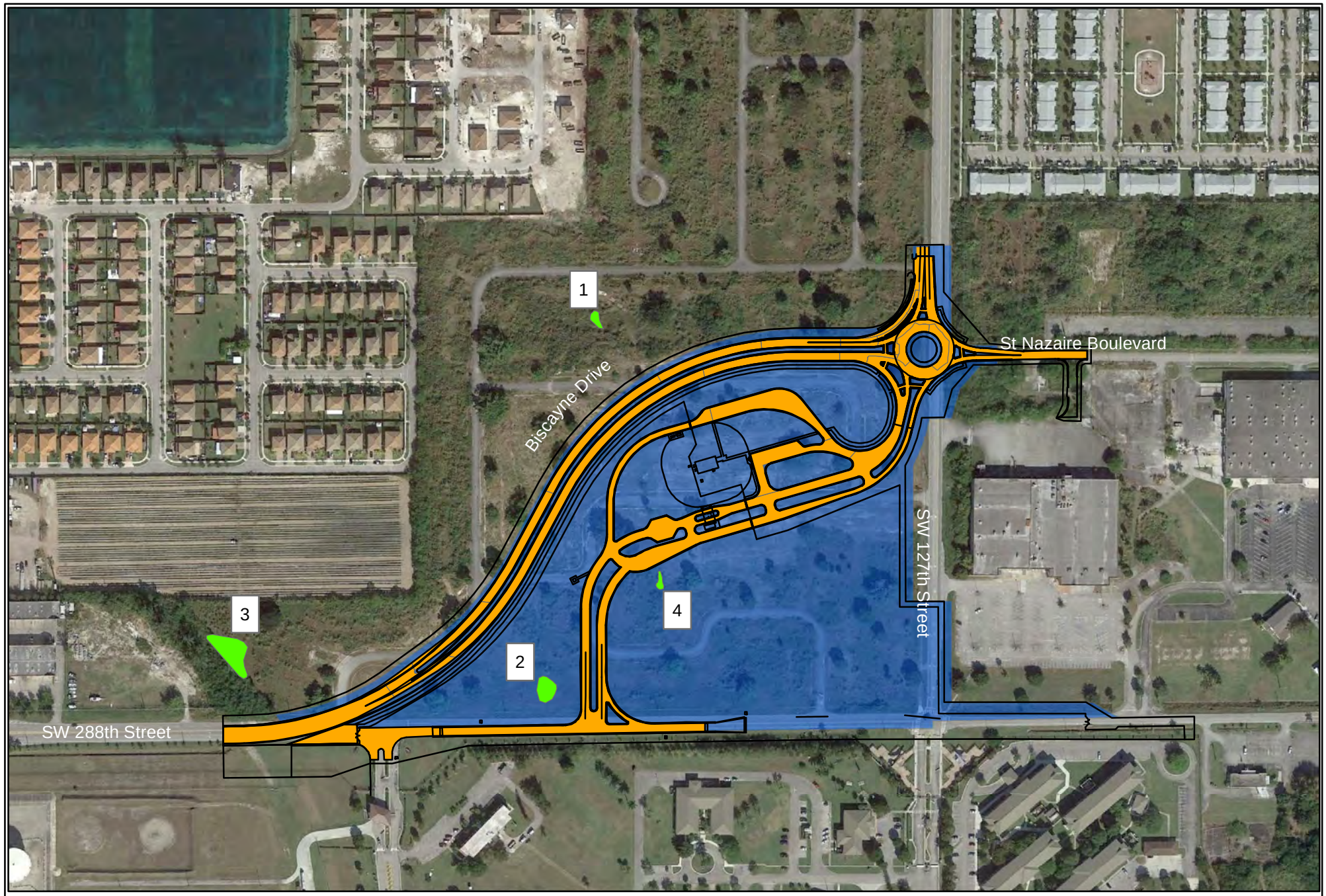


Figure 5-1
Small's milkpea Populations
HARB ECC BE

SECTION 6

Effects of Proposed Action Implementation

The activities described under the Proposed Action have the potential to affect Small's milkpea, a federal listed species. The effects analysis in this BE focuses on the elements associated with each activity and the potential impacts to the species.

6.1 Construction of New Entry Control Complex

The proposed ECC Parcel does not provide suitable habitat for large populations of wildlife. Implementation of the Proposed Action would reduce terrestrial habitat within the footprint of the new ECC. Several threatened, endangered, or special concern species have the potential to occur on the proposed ECC Parcel and could be affected by the Proposed Action.

During construction, temporary, negligible impacts to federally listed species that could occur within the proposed project site could result from the implementation of the Proposed Action.

Because there is no suitable habitat for American alligator, American crocodile, Everglade snail kite, wood stork, and West Indian manatee within or adjacent to the proposed ECC Parcel, there would be no impacts to these species.

The proposed ECC Parcel does not contain cabbage palms and the irregular mowing results in tall vegetation rather than open areas for hunting. Therefore, it is unlikely that construction activities would affect Audubon's crested caracara. No impacts are expected to occur to the species.

Bartram's hairstreak butterfly and the Florida leafwing butterfly are unlikely to occur on the proposed ECC Parcel because there is no pine rockland habitat that contains pineland croton. Therefore, there is no suitable habitat for the butterfly populations and no impacts to these species are expected.

The eastern indigo snake could occur in the area bordering the proposed construction site. However, any use by these species would likely be incidental due to the level of disturbance in the area and the poor quality of habitat. Construction activities would not be expected to cause disturbances to this species and no impacts would be expected.

No impacts are expected to occur to the federally endangered Florida bonneted bat, which is known to occur in the general area. No roosting or foraging habitat was identified on the proposed ECC Parcel and the species would not be expected to use the project area except for incidental travel.

No direct impacts are expected to occur to the federally endangered Small's milkpea, which has been identified on the proposed ECC Parcel and on Miami-Dade County near the proposed ECC Parcel. To avoid impacts, the project design would include avoidance and protection of the two populations mapped on the parcel (Figure 5-1). Temporary fencing would be used to delineate their locations to avoid disturbance and silt fencing would be placed to prevent stormwater transport of sediments from disturbed ground into the areas where the species occurs. Construction workers would be instructed to avoid those areas during activities and not to use those areas as staging areas during construction.

Grading for proposed stormwater management channels would occur around Small's milkpea population #4 (Figure 5-1). A 10-foot buffer would be maintained around population #4 (refer to drawings in Appendix C). On the nearby SOCSOUTH property, Small's milkpea were observed growing within 10 feet of drainage ditches (IRC, 2013). Therefore, maintaining a 10-foot buffer around the population should be sufficient in protecting the population from impacts associated with the presence of the channels. Since population #4 is in the active construction area, the 10 foot buffer around the population would be isolated from the disturbance with a chain-link fence, and orange construction fencing and signage would be attached to the chain link fence. Silt fencing would be installed around the chain link fence during construction to prevent stormwater transport of sediments to the population. A gate would be installed in the chain link fence to

allow mowing. However, the area would not be mowed while the Small's milkpea is flowering or fruiting. Temporary orange construction fencing and signage and silt fencing would be placed at the 10 foot buffer around Small's milkpea population #2 (Figures 5-1, Appendix C). Workers would be instructed to avoid these areas and not to use the areas for staging during construction.

The two populations on Miami-Dade County land near the proposed ECC Parcel would be outside the construction area. The active construction area would be clearly marked with silt fencing to prevent stormwater transport of sediments offsite. Workers would not be allowed on the Miami-Dade County property outside the construction area. No direct or indirect impacts to Small's milkpea on Miami-Dade County land would result.

Because no impacts to the species would result, no cumulative impacts to Small's milkpea or any other listed species would be result.

Because there is no designated critical habitat on the proposed ECC Parcel, there would be no adverse impacts to critical habitat for any species.

6.2 Long-term Operation of Entry Control Complex

Impacts to sensitive plant and wildlife resources from the Proposed Action would not be expected to add measurable incremental impacts that would combine with other projects in the vicinity because the habitat that would be converted for the proposed ECC is highly disturbed, of poor quality, and largely overrun with exotic invasive species. Elimination of this area as a source of seeds of these invasive species could result in a minor beneficial cumulative impact to biological resources in the area. The federally endangered Small's milkpea plant occurs on HARB and was found on the proposed ECC Parcel. Additional small populations were found on Miami-Dade County land near the proposed ECC Parcel. However, operation of the proposed ECC would not disturb the areas where these populations occur and no effects to Small's milkpea populations would result from operation of the proposed ECC. The federally endangered Florida bonneted bat is known in the area, but no roosting or foraging habitat was identified on the proposed ECC Parcel. Operation of the proposed ECC would not disturb the areas where the species would forage or roost, and no effects to Florida bonneted bat would result from operation of the proposed ECC.

6.3 Cumulative Impact Summary

Future mission growth could occur at HARB. However, at present, there are no other military construction (MILCON) projects at HARB that might contribute to the impacts. While future mission growth could be considered a reasonably foreseeable action, there is no planned expansion that can be analyzed. Because there would be no direct impacts to listed species and no loss of habitat for listed species from development of the proposed ECC, no cumulative impacts to listed species, species proposed for listing, or critical habitat would result from development and operation of the proposed ECC.

6.4 Conclusion

Based on this analysis, the USAF has determined that allowing the proposed ECC development and long-term operation of the proposed ECC is not likely to affect federally protected plant or wildlife species that could occur on the property and would not affect critical habitat for any listed species.

SECTION 7

Review of Literature and Other Information

AMEC Environmental & Infrastructure, Inc. (AMEC). 2012. Homestead ARB Caiman Removal Feasibility Study. September.

Austin, D. F. 1997. *Pine Rockland Plant Guide: A Field Guide to the Plants of South Florida's Pine Rockland Community*. Department of Environmental Resource Management, Environmentally Endangered Lands, Miami-Dade County, Florida.

CH2M HILL. 2014. *Draft Final Integrated Natural Resources Management Plan for Homestead Air Reserve Base, Homestead, Florida*. May 2014.

Florida Fish and Wildlife Conservation Commission. 2013. Florida's Endangered and Threatened Species. Updated January 2013. Available online at: http://myfwc.com/media/1515251/threatened_endangered_species.pdf. Accessed on October 29, 2014.

Friers, Joshua. 2014. Personal communication with Sara Kent/CH2M HILL. January 15, 2014.

Homestead Air Reserve Base (HARB). 2006. *Final General Plan, Homestead Air Reserve Base.* December.

The Institute for Regional Conservation (IRC). 2009a. *Assessment of Rare Plant Species and Pine Rockland Habitat at Proposed U.S. Army Special Operations Command South Headquarters Adjacent to the U.S. Air Reserve Base, Homestead, Florida*. July.

The Institute for Regional Conservation (IRC). 2009b. *Addendum: Assessment of Rare Plant Species and Pine Rockland Habitat at Proposed U.S. Army Special Operations Command South Headquarters Adjacent to the U.S. Air Reserve Base, Homestead, Florida*. November.

The Institute for Regional Conservation (IRC). 2013. *Assessment of The Federally Endangered Small's Milkpea (*Galactia smallii*) and Candidate Sand Flax (*Linum arenicola*) at The Homestead Air Reserve Base, Homestead, Florida*. November.

The Institute for Regional Conservation (IRC). 2014. *Final Report Plant Survey for the Endangered Small's Milkpea (*Galactia smallii*), Candidate sand flax (*Linum arenicola*), and other Rare Plants, Dade County Florida, For Proposed Entrance Control Complex at Homestead Air Reserve Base, Homestead, Florida*. September.

LaRoe, E. T., G. S. Farris, C. E. Puckett, P. D. Doran, and M. J. Mac. 1995. *Our Living Resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems*.

NatureServe. 2013. NatureServe Explorer, Species Quick Search. Available online at: http://www.natureserve.org/explorer/. Accessed October 21.

Smart Sciences Environmental Consulting (Smart Sciences). 2015. Florida Bonneted Bat Survey, Homestead Entry Control Complex, Homestead Air Reserve Base, Homestead, Miami-Dade County, Florida. In preparation.

United States Air Force (USAF). 1993. *Basewide Environmental Baseline Survey, Homestead Air Force Base, Florida*. December.

U.S. Air Force (USAF). 2009. *Draft Integrated Natural Resources Management Plan for Homestead Air Reserve Base, Homestead, Florida*. Volumes I and II. July. Prepared for: United States Department of the Air Force Headquarters, Air Force Reserve Environmental Division Robins Air Force Base, Georgia 31098-1635.

U.S. Fish and Wildlife Service. 1999. South Florida Multi-Species Recovery Plan: A Species Plan…An Ecosystem Approach.

Appendix A
Rare Plant Survey for the Proposed HARB Entry Control Complex

Final Report

Plant Survey for the Endangered Small's Milkpea, Candidate Sand Flax, and Other Rare Plants, Dade County Florida, For Proposed Entrance Control Complex at Homestead Air Reserve Base, Homestead, Florida

By

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September 26, 2014

Prepared for:

Homestead Air Reserve Base and

United States Army Corp of Engineers, Mobile District

PO 955337

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Contents

Executive Summary 3
Introduction 4
Methods 4
Results 4
Discussion 5
Tables 6
Table 1. Densities of *Galactia smallii* found in the survey area. 6
Table 2. Florida threatened species 6
Table 3. Florida State endangered species 6
Table 3. Common native species found in the survey area 7
Figures 8
Figure 1. Boundary area for rare plant survey in Miami-Dade County Florida. 8
Figure 2. Map showing four locations of *Galactia smallii* found during the survey. 9
Figure 3. Exotic invasive species dominate the survey area. Turf grass (St. Augustine) in the fore of the picture with Burma reed and white leadtree behind. 10
Figure 4. There are numerous areas of illegal dumping. 11

Executive Summary

The Institute for Regional Conservation (IRC) was subcontracted by CH2M HILL through the United States Army Corp of Engineers to conduct a plant survey for *Galactia smallii* (Small's milkpea) and other rare plants on 50 acres of the former Homestead Air Force Base for the proposed Entrance Control Complex at Homestead Air Reserve Base. Small's milkpea was found in four separate areas of varying densities 1.4- 3.3/ meter^2. The total population, of Small's milkpea, in the survey area is estimated at 1,969.35 ± 210 (Standard Error) plants. Six state threatened and one state endangered plant were also found during the surveys. The area is highly impacted by past development and invasive exotic plant species.

Introduction

The Institute for Regional Conservation (IRC) conducted rare plant surveys adjacent to Homestead Air Reserve Base in Miami-Dade County, Florida. The survey area is situated on relictual parts of the pine rockland habitat that is found on the Miami Rock Ridge. The Miami Rock Ridge is a relatively flat formation of oolitic limestone that is at or near the surface of the ground. Soils often accumulate in depressions and rock cavities and consist of sand, marl, and organic material. It is here that many rare and endemic plant species thrive.

Pine rockland's which occur on the Miami Rock Ridge, once dominated south Florida's coastal ridge but currently only 2% of this rare habitat remain outside of Everglades National Park. Typically, pine rocklands are dominated by a single canopy tree, slash pine (*Pinus elliottii*), with a diverse hardwood and palm subcanopy and a rich herbaceous layer containing many endemic species.

The survey area was part of the former base housing within the former Homestead Air Force Base property and was previously mechanically scrapped and the pine rockland habitat destroyed. There are several areas of pine rockland fragments in the vicinity of the survey area that could potentially seed this area with rare and endangered plant species. Of particular interest for this project are two species, *Galactia smallii* (Small's milkpea), which is listed as endangered under the Endangered Species Act (ESA), and *Linum arenicola* (sand flax), which is a candidate for listing under the ESA.

Methods

The objective of this project was to obtain baseline location and densities data for the federally endangered *G. smallii* and federal candidate *L. arenicola* at the time of the survey. The survey boundary area, measuring approximately 50 acres, was obtained from the CH2M HILL (Figure 1). The entire survey area was walked to locate plants. Once plants were identified, the area they covered was mapped using a hand held GPS and later plotted using ArcMap 10.2 (ESRI). Randomly placed belt transects were used to determine population size in the mapped areas.

Results

All areas in the survey polygon (Figure 1) were surveyed for *G. smallii* and *L. arenicola;* however, no L. *arenicola* was found. During the survey *G. smallii* was found in four separate areas scattered around the survey area (Figure 2). *Galactia smallii* was found in varying densities with the lowest average density of 1.4/ m^2 (m=meter) and highest density of 3.3/ m^2

(Table 1). The average density is 3.1 ± 0.44 (SE)/m^2 (SE=Standard Error). The total population is estimated at 1,969.35 ± 210 (SE) plants. All results are confined to the time of the survey.

No other species considered as endangered, threatened, or candidates by the U.S. Fish and Wildlife Service were found. A total of seven species listed by the State of Florida Department of Agriculture and Consumer Services as endangered or threatened were found during the surveys (Table 2 and 3). These plants are documented because pine rockland habitat are declining and recording occurrences fits the mandates set out in Sikes Improvement Act of 1997 for the management, enhancement and protection of natural resources.

The area was heavily invaded by exotic plants (Figure 3) covering almost the entire survey polygon (Figure 1). We also documented exotic invasive species (Table 4), and common native plants (Table 5). The area is also being used for illegal dumping of trash and yard waste which is further increasing the exotic species that are growing in this area (Figure 4).

Discussion

It was surprising that only four small sub-populations of *G. smallii* were found in the survey area especially with the large populations just south of the survey area in the Homestead Air Reserve Base and other areas of the former Homestead Air Force Base. However, the area is so heavily infested with invasive exotic species that have negative effects on pine rockland species found in the herbaceous layer. Many of the endemic species found in pine rocklands thrive in full sun and are adversely effected when they area shaded out by canopy trees or as in this case exotic species like white leadtree and Burma reed. All the sub-populations were found in open areas without Burma reed. Additionally, the area's native vegetation was destroyed for development and roads could be barriers to reseeding from areas that still contain species like *G. smallii*.

Subpopulation #3 had the most native species associated with it and could be considered for protection. At this time no management recommendations to protect the plants in the survey area can be given because recommendations would depend on the action taken on the parcel of land and we are not privy to those at this time.

Tables

Table 1. Densities of *Galactia smallii* found in the survey area.

Sub-population #	Acres	Hectares	Density per m^2	Estimated Number of Plants
1	0.0196	0.0079	2.3	183
2	0.0610	0.0247	3.3	823
3	0.1412	0.0572	1.5	886
4	0.0135	0.0055	1.4	77

Table 2. Florida threatened species

Scientific name	Common name
Angadenia berteroi	pineland-allamanda
Chaptalia albicans	white sunbonnets
Crossopetalum ilicifolium	quailberry
Cynanchum blodgettii	Blodgett's swallowwort
Pteris bahamensis	Bahama ladder brake
Smilax havanensis	Havana greenbrier

Table 3. Florida State endangered species

Scientific name	Common name
Phyla stoechadifolia	Southern fogfruit

Table 4. Exotic species found in survey area.

Scientific name	Common name
Dioscorea bulbifera	air potato
Acacia auriculiformis	earleaf acacia
Albizia lebbeck	woman's tongue
Bischofia javanica	Javanese bishopwood
Ficus religiosa	sacred fig
Ixora coccinea	jungle flame
Lantana camara	wild sage
Leucaena leucocephala	white leadtree
Neyraudia reynaudiana	Burma reed
Pennisetum purpureum	Napier grass
Schefflera actinophylla	umbrella tree
Schinus terebinthifolius	Brazilian pepper
Sporobolus indicus	smut grass
Stenotaphrum secundatum	St Augustine
Syzygium cumini	Java plum
Wedelia trilobata	creeping wedelia
Zoysia tenuifolia	mascarene templegrass

Table 3. Common native species found in the survey area

Scientific name	Common name
Andropogon spp.	Bluestem grasses
Bidens alba var. radiata	Spanish needle
Chamaecrista nictitans var. aspera	sensitive partridge pea
Chromolaena odorata	jack in the bush
Desmodium incanum	creeping beggarweed
Eustachys petraea	Common fingergrass
Melanthera nivea	Snow squarestem
Morinda royoc	mouse’s pineapple
Polygala violacea	candy weed
Schizachyrium gracile	wire bluestem
Schizachyrium sanguineum	crimson bluestem
Setaria parviflora	yellow bristlegrass
Stachytarpheta jamaicensis	blue porterweed

Figures

Figure 1. Boundary area for rare plant survey in Miami-Dade County Florida.

Figure 2. Map showing four locations of *Galactia smallii* found during the survey.

Figure 3. Exotic invasive species dominate the survey area. Turf grass (St. Augustine) in the fore of the picture with Burma reed and white leadtree behind.

Figure 4. There are numerous areas of illegal dumping.

Appendix B
Florida Bonneted Bat Survey for the Proposed HARB Entry Control Complex

Florida Bonneted Bat Survey

Proposed Entry Control Complex

Homestead Air Reserve Base

Miami-Dade County, Florida

April 28, 2015

When Urbanization Meets Nature

SMART-SCIENCES
Environmental Consulting

Prepared for:

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TABLE OF CONTENTS

EXECUTIVE SUMMARY i
1.0 INTRODUCTION 1
1.1 Site Description 1
1.2 Florida Bonneted Bat Habitat and Ecology 2
2.0 SURVEY METHODS 2
2.1 Roost Survey 2
2.2 Acoustic Surveys 3
3.0 ANALYSES 4
4.0 RESULTS 5
4.1 Roost survey 5
4.2 Acoustic survey 5
5.0 CONCLUSIONS 7

TABLES

Table 1 – Potential Roost Trees
Table 2 – Results of Acoustic Surveys
Table 3 – Location and time of each Florida Bonneted Bat echolocation pass

FIGURES

Figure 1 – Location Map
Figure 2 – 2013 Aerial Photograph Map
Figure 3 – Land Use Map
Figure 4 – Acoustic Monitoring Station Map

ATTACHMENTS

Attachment A – Photo Documentation Log

EXECUTIVE SUMMARY

The Florida bonneted bat (FBB) was added to the federal endangered species list in November 2013 by the United States Fish and Wildlife Service (USFWS). The purpose of the survey was to first determine if the FBB is present in the project area and second if present, determine whether the area provides roosting or foraging habitat. This survey will provide support for Homestead Air Reserve Base (HARB) representatives in the proposed real estate transition and the construction of the proposed new Entry Control Complex (ECC). The project is located near Homestead, Miami-Dade County, north of Bougainville Boulevard (SW 288th Street) and on the east and west sides of Coral Sea Boulevard (SW 127th Avenue). The project is approximately 50 acres and contains mostly vacant/inactive land consisting of shrub and brush with scattered trees of varying diameters and heights. On the east side of Coral Sea Boulevard (SW 127th Avenue) is an abandoned closed military building (former HARB Base Exchange building, BX) and parking area. Automated ultrasonic recording systems were used to sample the site over 14 nights. Smart-Sciences' detected FBB echolocation calls, however few calls were recorded, no feeding calls (buzzes) were recorded and no calls were recorded near sunset or sunrise. In addition to the 14-night acoustic sampling, we also walked the site at sunset and neither heard nor saw FBB on the property. The conclusion of this study is that the site does not contain roosting or foraging habitat for the FBB.

1.0 INTRODUCTION

Smart-Sciences, Incorporated (Smart-Sciences) and Dr. Kirsten Bohn conducted a survey for Florida Bonneted Bat (FBB, *Eumops floridanus*) roost sites in accordance with the Solicitation Statement of Work for the proposed real estate transition and the construction of the proposed Entry Control Complex (ECC) adjacent to Homestead Air Reserve Base (HARB). The ECC site consists of one parcel totaling approximately 50 acres and is located north of Bougainville Boulevard (SW 288th Street) on the east and west sides of Coral Sea Boulevard (SW 127th Avenue) near Homestead, Miami-Dade County, Florida (**Figure 1**). A 2013 aerial map of the site is provided as **Figure 2** with the boundary of the subject property delineated.

1.1 Site Description

The site consists of mostly inactive open land containing shrub and brush with approximately 116 trees of varying diameters and heights. On the east side of the site is an abandoned closed military building (former HARB Base Exchange building, BX) and parking area.

Land use and vegetative cover for the project site were classified and described using the Florida Land Use Cover and Classification System (FLUCCS) (Florida Department of Transportation 1999) and were verified in the field by Smart-Sciences. The land uses observed on the subject property include Military (FLUCCS 1730) and Inactive Land with Street Pattern (FLUCCS 1920). A land use map is provided as **Figure 3**.

A brief summary of each of the land use types are described below:

FLUCCS 1730, Military Land

The military land portion of the site contains the abandoned HARB Base Exchange Building with associated parking area. There is some vegetation surrounding the building including cabbage palms (*Sabal palmetto*), Brazilian pepper (*Schinus terebinthifolius*), umbrella tree (*Schefflera actinophylla*) and various species of grasses and forbs.

FLUCCS 1920, Inactive Land with Street Pattern

The inactive land portion of the site consists primarily of shrub and brush dominated by Burma reed (*Neyraudia reynaudiana*) and elephant grass (*Pennisetum purpureum*). There are several paved roads that run through this portion of the site. Common herbaceous species observed include ragweed (*Ambrosia spp.*), beggarticks (*Bidens pilosa*), finger grass (*Eustachys floridana* Chapman), lantana (*Lantana camera* L.) and false buttonweed (*Spermacoce verticillata*). Other less common herbaceous species observed includes pluchea (*Pluchea rosea*), zarzabacoa comun (*Desmodium incanum*), Mexican fire plant (*Pionsettia heterophylla*), Virginia creeper (*Parthenocissus quinquefolia*), yellow thistle (*Cirsium horridulum*), blue mistflower (*Conoclinium coelestinum*), fleabane (*Erigeron spp.*), porterweed

(*Stachytarpheta spp.*) and foxtail (*Setaria parviflora*). Trees observed on the property include mahogany (*Swietenia mahagoni*), short leaf ficus (*Ficus citrifolia*), strangler fig (*Ficus aurea*), council tree (*Ficus altissima*), lead tree (*Leucaena leucocephala*), royal poinciana (*Delonix regia*), melaleuca (*Melaleuca quinquenervia)*, umbrella tree, earleaf acacia (*Acacia auriculiformis*), black olive (*Bucida buceras*), sea grape (*Coccoloba uvifera*) and Brazilian pepper. The majority of the trees have a diameter of 10 inches or more. Photographs of the site are provided in a photo documentation log as **Attachment A**.

1.2 Florida Bonneted Bat Habitat and Ecology

The FBB was added to the endangered species list by the United States Fish and Wildlife Service (USFWS) in 2013 and is under the protection of the Endangered Species Act of 1973. The FBB is endemic to Florida, more specifically southern Florida, including Miami-Dade County. The FBB are seldom encountered and little is known regarding the life history, behavior, and biology.

Bats roost in a mixture of both natural and artificial habitat structures. This bat occurs in urban, suburban and forested areas; it roosts in buildings (e.g. in attics, rock or brick chimneys or fire places, and especially under Spanish roof tiles), tree hollows (including those made by woodpeckers), tree snags and foliage of palm trees (e.g. crownshafts). It also has been found under rocks, in fissures, in limestone outcrops, near excavations and bat houses constructed specifically to attract roosting.

The FBB is the largest species of bat in Florida and requires relatively large cavities at heights of at least 10 to 15 feet as well as open space in the immediate vicinity of cavities to use and exit roosts.

2.0 SURVEY METHODS

The project was comprised of two main survey activities, a roost survey and an acoustic survey. Each survey method is described below.

2.1 Roost Survey

The FBB roost survey was conducted by foot on December 16, 2014 in the afternoon under sunny weather conditions. The survey was led by bat scientist, Dr. Kirsten Bohn who was accompanied by Smart-Sciences' biologists Gisele Colbert and Kala Knapp.

A pedestrian survey was conducted of the entire site. Each tree on site was examined for crevices or snags that could serve as a potential roost location. The BX building was examined for potential roost habitat where small crevices were observed in air vents and around loading bay docks. Although none of the structures observed at the former BX building were deemed viable for the species to roost, trees surrounding the building, such as cabbage palms, are known to provide potential for roost habitat and were further examined by use of acoustic meters, as described below. Trees that were found to contain features for

potential roosts were mapped using a Global Positioning System (GPS) unit. The bases of these trees were also inspected for bat guano. Trees that had the greatest potential for roosts were noted for songmeter placement (see Acoustic Surveys below).

A second pedestrian survey was conducted on Monday, April 6th, 2015 at sunset when bats would be exiting roost sites (1930 hours to 0730 hours). The FBB's echolocation calls are produced at loud amplitudes that are entirely audible to the human ear, because of this, walking the property when bats would be emerging is an effective way of determining the presence of roost sites.

2.2 Acoustic Surveys

Bats produce echolocation calls whenever they are in flight, in essence "to see". Thus, automated ultrasonic recording systems can be used to assess species presence and activity levels. Automated recording systems are particularly powerful for detecting the FBB since their echolocation calls are at lower frequencies than all other Florida species. This not only makes the FBB calls easily distinguished from all other species, but they are also detected at greater distances (lower frequencies suffer less atmospheric attenuation than higher frequencies). Automated ultrasonic monitoring is the most straightforward, non-invasive approach for determining if the species is present. For this project, echolocation passes were recorded using an automated ultrasonic recording system (SM2BAT, songmeter, Wildlife Acoustics) equipped with an ultrasonic microphone (SMX-US, Wildlife Acoustics), three-meter microphone cable and 32 gigabyte sound card.

The songmeter was deployed at six different sites on the property (**Figure 4**), from March 18th, 2015 to April 1st, 2015. These six sites were selected to obtain practicable coverage of the site and to be closest to trees that had the greatest potential as roost sites. Songmeters recorded from 1930 hours to 0730 hours for a minimum of two nights at each of the six sites. However during weekends songmeters were left at single sites for three nights (Friday, Saturday and Sunday nights). Thus, four sites were sampled for two nights and the remaining two sites were sampled for three nights (14 nights total). There were two types of survey sites for acoustic surveys:

1) Trees with crevices for potential roosting (N = 4). Microphones were placed at a height of approximately two meters and affixed along branches so that there was completely open space in front of the microphone. These trees were selected based on their size and potential as roost sites.

2) On the east and west sides of the roof of the BX building (N = 2), approximately 10 meters high. At rooftop sites, microphones were affixed to a tri-pod to obtain a one foot height clearance over the roof-top edge.

At all sites the microphone was placed at an angle between 45° and 60° facing the area of the desired acoustic space (**Figure 4**). Songmeters settings were set a follows:

1) sample rate = 192 kilohertz (kHz)

2) high pass filter = 8 kHz
3) trigger window = 2 seconds (s)
4) file type = uncompressed wav files

3.0 ANALYSES

Acoustic Files

Each sound file recorded from the songmeter was visually inspected using Bat Sound Pro (*Pettersson Elektronik*) and Kaleidoscope (*Wildlife Acoustics*). Each file with greater than three echolocation calls (all files in this study) was considered a "bat pass". Files with more than one bat calling simultaneously (determined by intervals between echolocation calls) were noted and considered two bat passes. This is because we set the minimum window size at 2 s, meaning that a file continued to record until there was at least a 2 s period of silence. Any intervals less than 2 s were recorded in the same file and were counted as a single bat pass. FBBs can be distinguished from all other bat species by the frequency of their echolocation calls; FBBs frequency range is 10 – 17 kHz, with minimum frequencies always below 16 kHz whereas all other species use frequencies of 18 kHz or greater. Brazilian free-tailed bat *(Tadarida brasiliensis*) has the most similar echolocation calls to FBBs, however they never produce entire passes of calls with minimum frequencies below 18 kHz. Each file is labeled as "FBB", "OTHER BAT" (for a bat species other than FBB) or "NO BAT" (noise or other animals). Files that were abnormal were flagged and at the end of the study all flagged files and FBB files were reanalyzed to confirm FBB presence.

In addition to detecting the presence of the FBB, acoustic recordings can indicate whether bats are feeding at a location by the presence of "feeding buzzes"; when bats hone in on an insect they rapidly modify their echolocation calls to short broadband pulses in rapid succession (called a "feeding buzz"). In addition we counted the number of social calls produced in flight during all bat passes (social calls are of longer duration than echolocation calls and have different frequency modulation patterns). Finally, proximity to a roost site is indicated by the hour in which bat passes are recorded. Specifically, the FBB emerges from roost sites between 20 minutes and one hour after sunset, thus bat passes within one hour of sunset indicate that a roost is very close. The songmeter system includes the date and time of recording in the name of each acoustic file and we included the site location (Site 1 – 6) in the filenames as well. Thus, there could be no ambiguity as to the time, or location of every recording.

Data Analysis

Each file recorded was included in a database in excel using Kaleidoscope and DOS command files. For each acoustic file we had the following data: site, date, time, identification, one bat/two bats, feeding buzz/no feeding buzz, social calls/no social calls and identification (FBB, OTHER, NOISE). The entire dataset was imported into JMP® where tables were constructed using their tabulate function (no manual tabulation was conducted).

4.0 RESULTS

4.1 Roost survey

Four trees with potential for FBB roosting were observed in the inactive land portion of the site and the crown shaft of the cabbage palm trees on the east and west sides of the former BX building were also considered as potential roosting locations. The remainder of the trees on the site did not contain cavities or snags suitable for FBB roosting or the base/understory of the tree was too crowded with other types of foliage to provide a suitable ingress/egress point for the FBB. Bat guano was not observed at the base of any of the potential roost locations. Details on each of the six potential roost locations are provided below in **Table 1**.

Table 1 – Potential Roost Locations

Acoustic meter monitoring site designation	Tree type Scientific Name	Tree type Common Name	Height (feet)	Diameter at Brest Height (inches)	Possible Roost Location within Trees
1	*Sabal palmetto*	Several Cabbage Palms west side of BX	20	10	Crown shaft
2	*Sabal palmetto*	Several Cabbage Palms east side of BX	20	10	Crown shaft
3	*Ficus citrifolia*	Short-leaf fig	55	190	3 Crevices*
4	*Ficus altissima*	Council tree	50	205	5 Crevices*
5	*Melaleuca quinquenervia*	Punk tree	30	50	1 Crevice*
6	*Ficus aurea*	Strangler fig	45	105	1 Crevice*

*Crevices were shallow and not ideal for roosting

4.2 Acoustic survey

We recorded 848 acoustic files over the 14-night sample period. In those files we recorded 580 bat passes including calls from Northern yellow bat (*Lasiurus intermedius*), Brazilian free-tailed bat, evening bat (*Nycticeius humeralis*) and Florida Bonneted bat. The number of FBB calls ranged from 0 to 7 per night with the greatest calls per night at the north end of the property (Site 5 and Site 6, **Table 2**). The earliest FBB pass was at 2247 hours (almost 3 hours after sunset) and the latest FBB pass was at 0505 hours (1.5 hours prior to sunrise). In comparison the earliest bat pass was by the Brazilian free-tailed bat at 2006 hours and the latest pass was also by the Brazilian free-tailed bat at 0653 hours. **Table 3** lists the location and time of all 22 FBB echolocation passes.

Table 2 – Results of Acoustic Surveys

Site	Start Night	Nights	FBB	FBB/ night	Other Species	FBB Buzz	Other Buzz
Site 1	3/18/15	2	3	1.5	162	0	31
Site 2	3/20/15	3	1	0.3	145	0	9
Site 3	3/23/15	2	0	0.0	54	0	10
Site 4	3/25/15	2	0	0.0	36	0	2
Site 5	3/27/15	3	11	3.7	85	0	17
Site 6	3/30/15	2	7	3.5	75	0	12
TOTAL		14	22		557	0	81
Start night, number of nights sampled, total number of FBB passes, average number of FBB passes/night, number of passes of other bat species, number of FBB feeding buzzes and number of feeding buzzes by other bat species.							

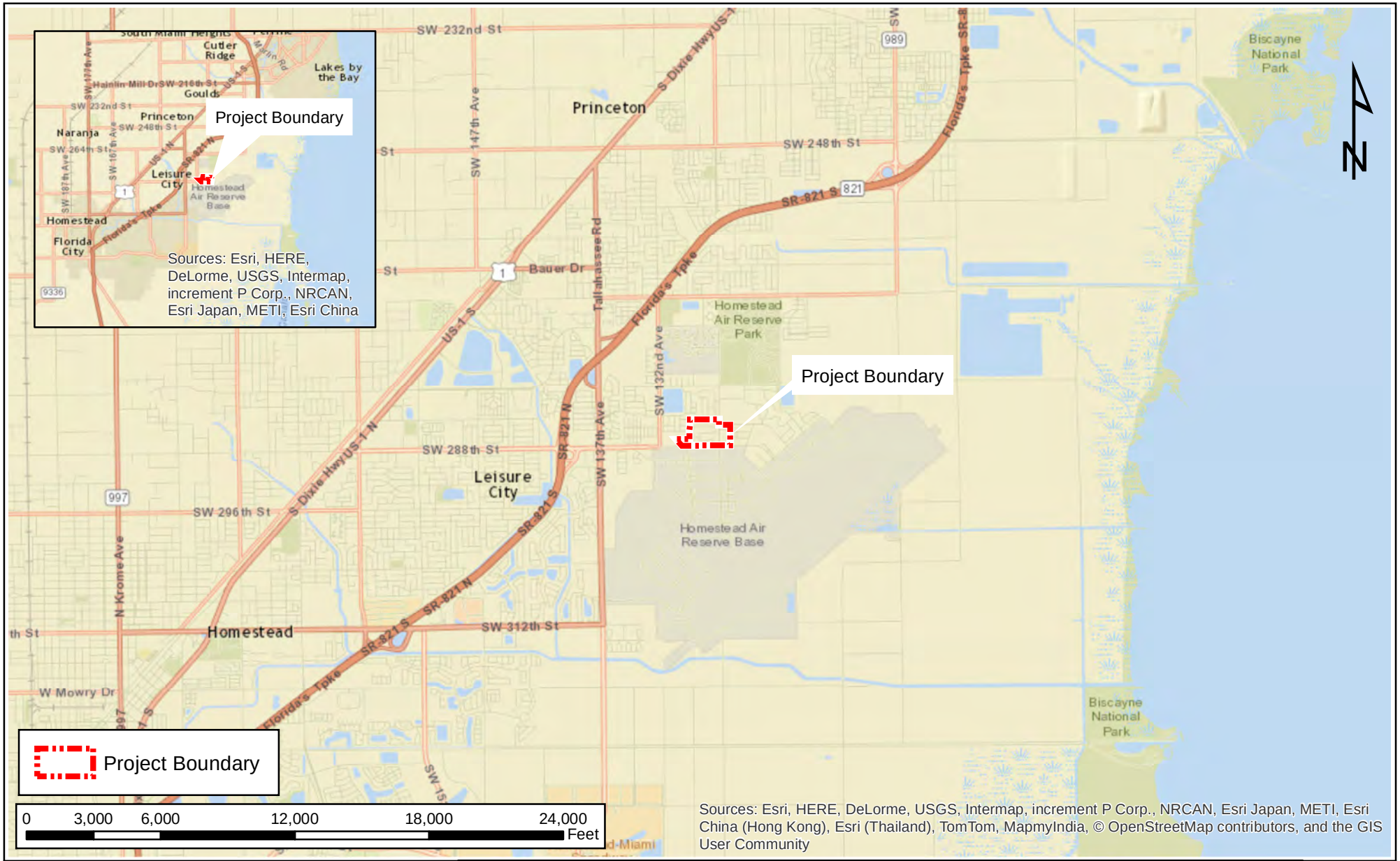
Table 3 - Location and time of each FBB echolocation pass.

Pass #	Site	Time
1	Site 1	2:11
2	Site 1	4:21
3	Site 1	4:47
4	Site 2	0:39
5	Site 5	2:38
6	Site 5	2:47
7	Site 5	2:47
8	Site 5	22:47
9	Site 5	23:25
10	Site 5	23:31
11	Site 5	23:54
12	Site 5	22:48
13	Site 5	23:58
14	Site 5	0:13
15	Site 5	2:43
16	Site 6	0:04
17	Site 6	1:27
18	Site 6	1:44
19	Site 6	2:10
20	Site 6	2:18
21	Site 6	5:05
22	Site 6	2:31

5.0 CONCLUSIONS

The Florida Bonneted Bat survey was conducted in support of HARB representatives for the proposed real estate transition and the construction of the ECC adjacent to Homestead Air Reserve Base. Two survey methods were executed over a 14 night period at six potential roost locations consisting of roost and acoustic monitoring. The data shows that FBB do fly over the site but do not appear to use the property for foraging or roosting. The fact that we did record FBB and 100's of calls from other species are evidence that our equipment and sampling protocol were successful.

FIGURES



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P: 786.313.3977 F: 305.356.4333

CHECKED BY: GLC | DRAWN BY: KLK | PROJECT NUMBER 2014-0058-001

Proposed Entry Control Complex
Florida Bonneted Bat Survey

Bouganville Blvd (SW 288th Street) and Coral Sea Blvd (SW 127th Avenue)
Section 01 & 02, Township 57S, Range 39E
Homestead ARB, Miami-Dade County, Florida

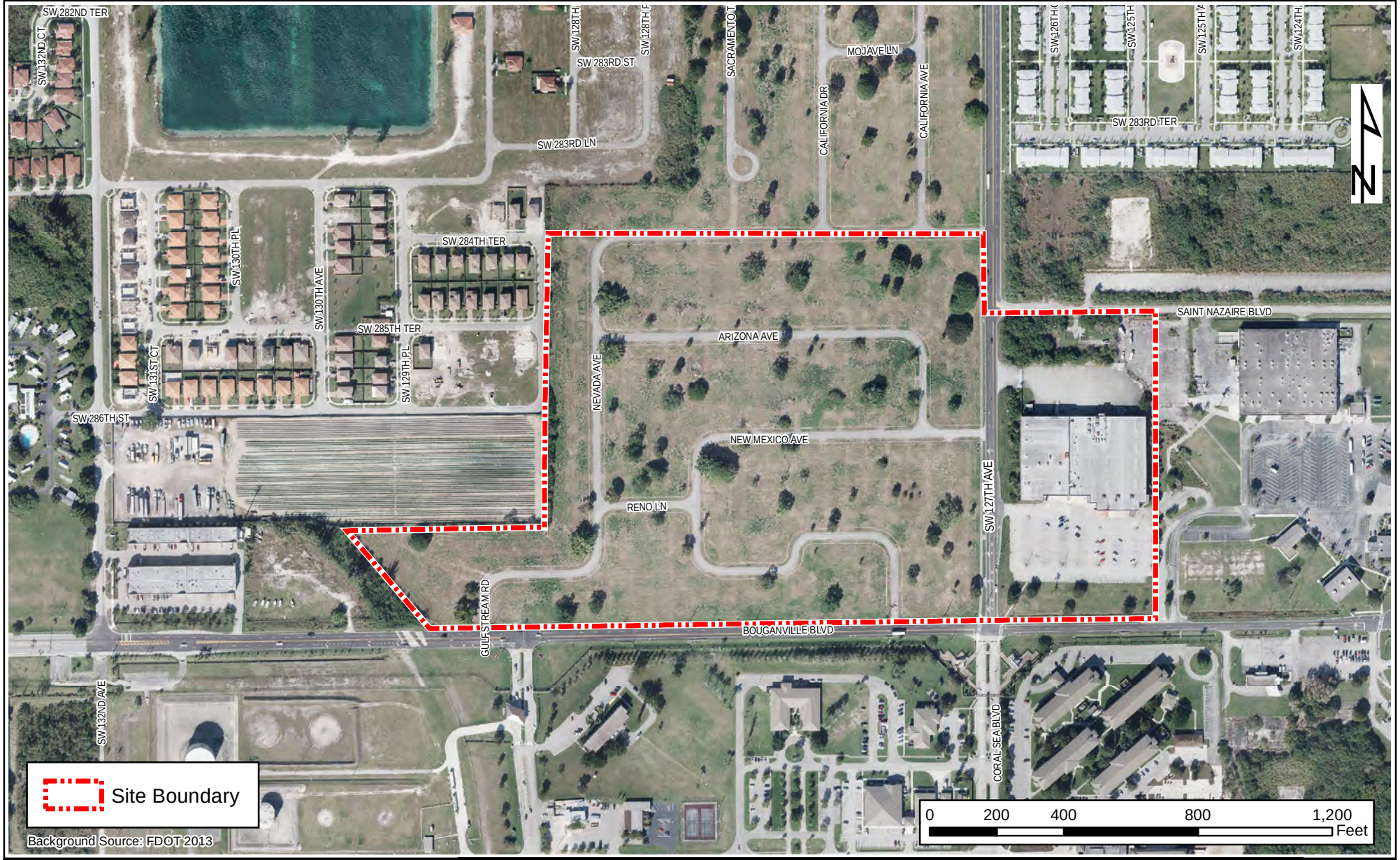
Location Map

SCALE: As shown

DATE: 4/28/2015

FIGURE 1

M:\Projects\2014 Projects\2014-0058-001 Homestead ECC Bat Survey\4_figures and drawings\GIS\Location Map.mxd



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CHECKED BY: GLC | DRAWN BY: KLK | PROJECT NUMBER 2014-0058-001

Proposed Entry Control Complex
Florida Bonneted Bat Survey

Bouganville Blvd (SW 288th Street) and
Coral Sea Blvd (SW 127th Avenue)
Section 01 & 02, Township 57S, Range 39E
Homestead ARB, Miami-Dade County, Florida

Aerial Map
2013 Imagery

SCALE: As shown

DATE: 4/28/2015

FIGURE 2

M:\Projects\2014 Projects\2014-0058-001 Homestead ECC Bat Survey\4_figures and drawings\GIS\Aerial Map.mxd

M:\Projects\2014 Projects\2014-0058-001 Homestead ECC Bat Survey\4_figures and drawings\GIS\Land Use Map.mxd

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CHECKED BY: GLC	DRAWN BY: KLK	PROJECT NUMBER 2014-0058-001

Proposed Entry Control Complex
Florida Bonneted Bat Survey

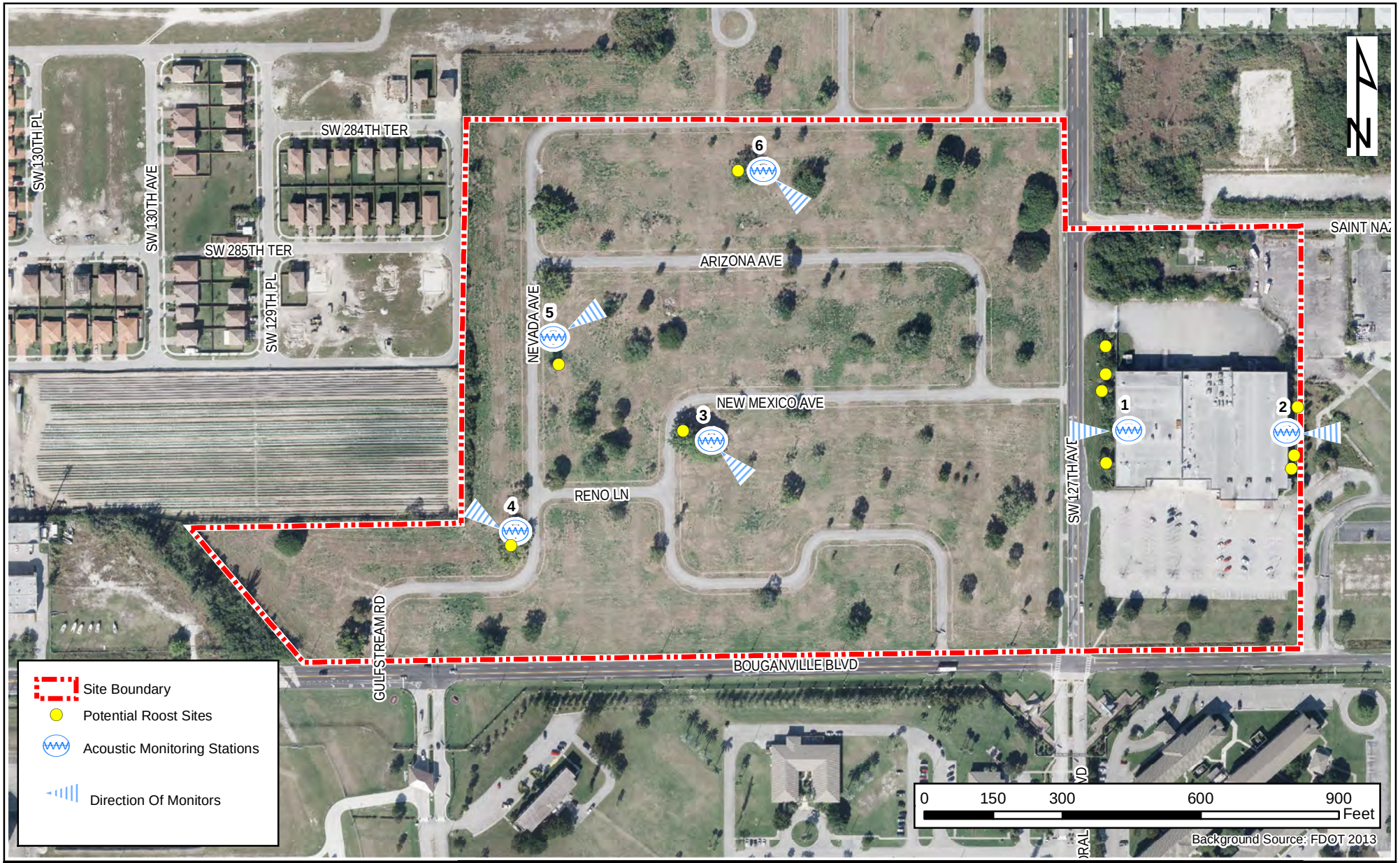
Bouganville Blvd (SW 288th Street) and
Coral Sea Blvd (SW 127th Avenue)
Section 01 & 02, Township 57S, Range 39E
Homestead ARB, Miami-Dade County, Florida

Landuse Map

SCALE: As shown

DATE: 4/28/2015

FIGURE 3



M:\Projects\2014 Projects\2014-0058-001 Homestead ECC Bat Survey\4_figures and drawings\GIS\Monitoring Stations with Potential Roost Sites.mxd

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Proposed Entry Control Complex
Florida Bonneted Bat Survey

Bouganville Blvd (SW 288th Street) and Coral Sea Blvd (SW 127th Avenue)
Section 01 & 02, Township 57S, Range 39E
Homestead ARB, Miami-Dade County, Florida

Acoustic Monitoring Station Map

SCALE: As shown

DATE: 4/28/2015

FIGURE 4

ATTACHMENT A

Proposed Entry Control Complex
Florida Bonneted Bat Survey
Homestead ARB, Miami-Dade County, Florida
CH2MHILL Prime Contract No. W91278-12-D-0026:

PHOTO DOCUMENTATION LOG

Photo 01

View of BX building and parking lot on eastern portion of site

Photo 02

View of the rear of BX building showing the loading docks.

Proposed Entry Control Complex
Florida Bonneted Bat Survey
Homestead ARB, Miami-Dade County, Florida
CH2MHILL Prime Contract No. W91278-12-D-0026:

PHOTO DOCUMENTATION LOG

Photo 03

View of northwest corner of BX building facing east of potential roost sites within Sabal palmettos.

Photo 04

View of southwest corner of BX building displaying Sabal palmettos, potential roosting trees.

Proposed Entry Control Complex
Florida Bonneted Bat Survey
Homestead ARB, Miami-Dade County, Florida
CH2MHILL Prime Contract No. W91278-12-D-0026:

PHOTO DOCUMENTATION LOG

Photo 05

View of vacant portion of site from BX building facing west.

Photo 06

General view of vacant area of site with roads facing north from southeastern edge.

Proposed Entry Control Complex
Florida Bonneted Bat Survey
Homestead ARB, Miami-Dade County, Florida
CH2MHILL Prime Contract No. W91278-12-D-0026:

PHOTO DOCUMENTATION LOG

Photo 07

General view of vacant area of site facing east from southern edge.

Photo 08

General view of song monitor setup on top of the BX building where monitoring stations 1 and 2 were located.

Proposed Entry Control Complex
Florida Bonneted Bat Survey
Homestead ARB, Miami-Dade County, Florida
CH2MHILL Prime Contract No. W91278-12-D-0026:

PHOTO DOCUMENTATION LOG

Photo 09

General view of Ficus citrifolia tree (Monitoring Station 3).

Photo 10

View of song monitor attached to Ficus citrifolia (Monitoring Station 3) located in the central portion of the vacant area of the site.

PHOTO DOCUMENTATION LOG

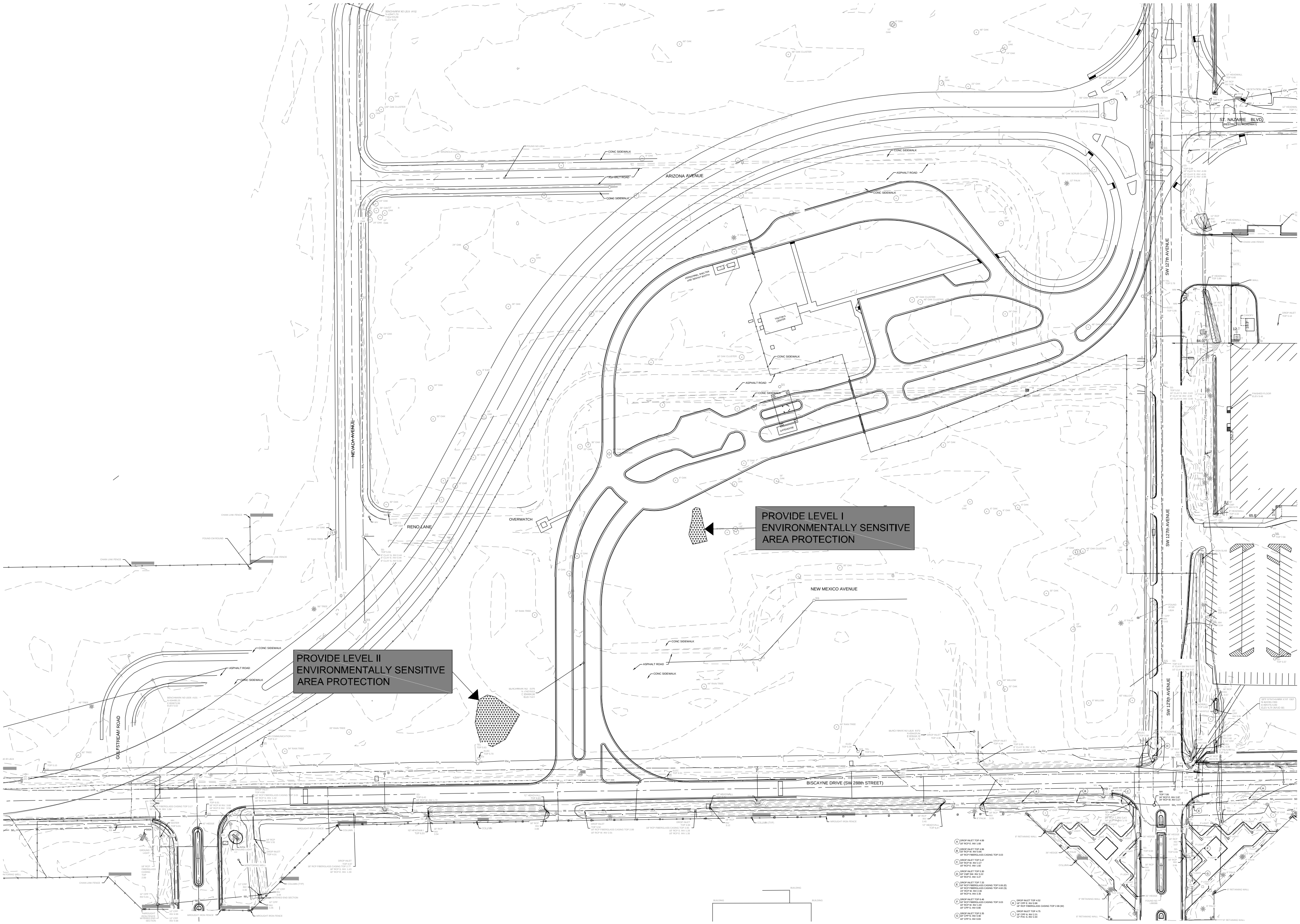
Photo 11

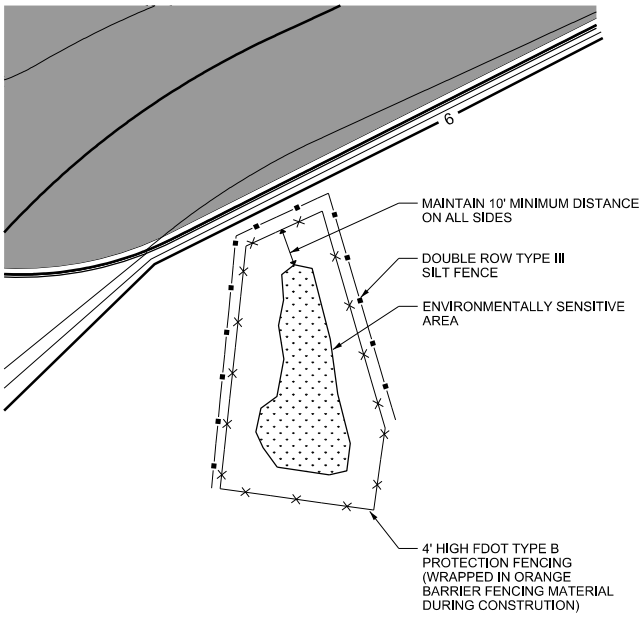
View of potential roost crevices located within a Ficus aurea (Monitoring Station 6) located in the north central portion of the vacant area.

Photo 12

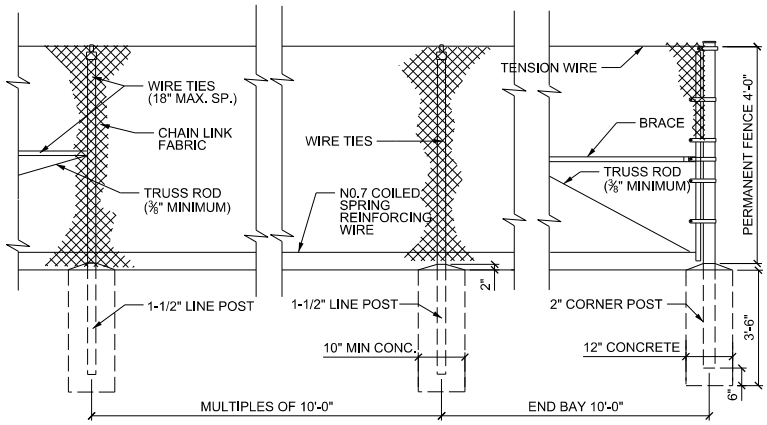
Overall view of Ficus aurea (Monitoring Station 6).

Appendix C
Construction Protective Measures


PROVIDE LEVEL I
ENVIRONMENTALLY SENSITIVE
AREA PROTECTION
PROVIDE LEVEL II
ENVIRONMENTALLY SENSITIVE
AREA PROTECTION
ARIZONA AVENUE
NEVADA AVENUE
RENO LANE
OVERWATCH
NEW MEXICO AVENUE
BISCAYNE DRIVE (SW 288th STREET)
SW 127th AVENUE
ST. NAZAIRE BLVD
GULFSTREAM ROAD
CONC SIDEWALK
ASPHALT ROAD



TYPICAL LAYOUT



FLORIDA DOT FENCE TYPE B

NOTES

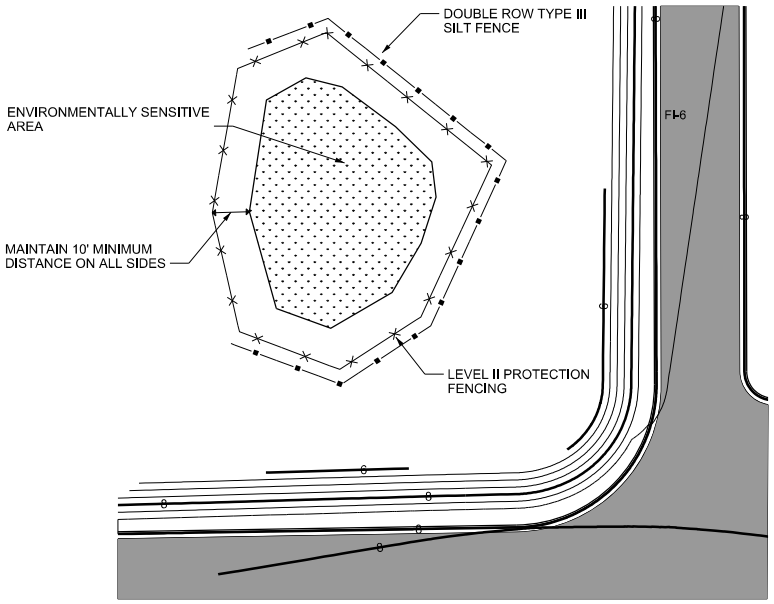
PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR GRADING ACTIVITIES.

1. NEW CHAIN LINK FENCING SHALL BE IN ACCORDANCE WITH FLORIDA DOT FENCE TYPE B. REFER TO FLORIDA DOT DESIGN STANDARDS INDEX NO. 802 FOR MATERIALS AND CONSTRUCTION STANDARDS.
2. MAINTAIN MINIMUM 10' FROM EDGE OF ENVIRONMENTALLY SENSITIVE AREA AND PROTECTIVE FENCING. REFER TO SITE PLANS FOR EXACT BOUNDARY OF ENVIRONMENTALLY SENSITIVE AREAS.
3. DURING CONSTRUCTION, WRAP CHAIN LINK FENCING WITH ORANGE UV RESISTANT BARRIER GUARDIAN SAFETY FENCING. SAFETY FENCING SHALL BE ATTACHED TO CHAIN LINK FENCE FABRIC WITH FENCE TIES. DO NOT REMOVE ORANGE SAFETY FENCING UNTIL CONSTRUCTION COMPLETE. CHAIN LINK FENCING SHALL REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETE. SECTIONS OF THE CHAIN LINK FENCING MAY BE REMOVED ONLY AFTER CONSULTATION WITH THE BASE ENVIRONMENTAL COMPLIANCE OFFICER AND THE CONTRACTING OFFICER.
4. PROVIDE TWO ROWS OF FLORIDA DOT TYPE III SILT FENCING ON OUTSIDE OF CHAIN LINK FENCING DURING CONSTRUCTION ON THE UPSTREAM SIDE OF THE FENCE. THE BOTTOM 12" OF THE FABRIC SHALL BE BURIED IN A 6" TRENCH CUT INTO THE GROUND OR COVERED BY 6" OF FILL MATERIAL, TO PREVENT SEDIMENT ESCAPING UNDER THE FENCE.
5. PROVIDE "ENVIRONMENTALLY SENSITIVE AREA - DO NOT ENTER" SIGNS ON FENCE. SIGNS SHALL BE PLACED WITH AT LEAST ONE SIGN ON ALL SIDES. SIGNS SHALL BE PLACED AT A MAXIMUM OF 15' SPACING ALONG FENCE. LETTERING SHALL BE MINIMUM OF 3" HIGH, CLEARLY LEGIBLE. SIGNS TO BE MADE OF DURABLE WEATHERPROOF MATERIAL.

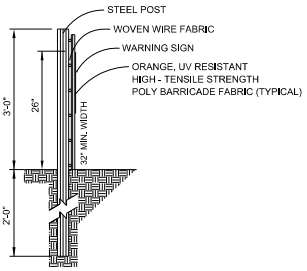
X
X-XXX

SENSITIVE AREA PROTECTION FENCE - LEVEL I

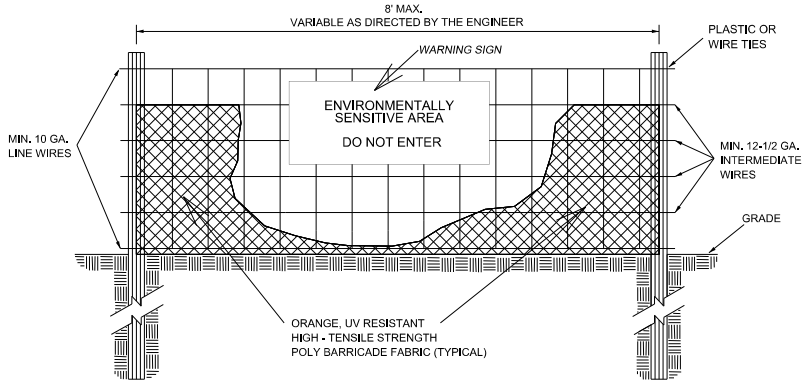
NOT TO SCALE



TYPICAL LAYOUT



SIDE VIEW



FRONT VIEW

NOTES

PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR GRADING ACTIVITIES.

1. MAINTAIN MINIMUM 10' FROM EDGE OF ENVIRONMENTALLY SENSITIVE AREA AND PROTECTIVE FENCING. REFER TO SITE PLANS FOR EXACT BOUNDARY OF ENVIRONMENTALLY SENSITIVE AREAS.
2. PROVIDE TWO ROWS OF FLORIDA DOT TYPE III SILT FENCING ON OUTSIDE OF CHAIN LINK FENCING DURING CONSTRUCTION ON THE UPSTREAM SIDE OF THE FENCE. THE BOTTOM 12" OF THE FABRIC SHALL BE BURIED IN A 6" TRENCH CUT INTO THE GROUND OR COVERED BY 6" OF FILL MATERIAL, TO PREVENT SEDIMENT ESCAPING UNDER THE FENCE.
3. PROVIDE "ENVIRONMENTALLY SENSITIVE AREA - DO NOT ENTER" SIGNS ON FENCE. SIGNS SHALL BE PLACED WITH AT LEAST ONE SIGN ON ALL SIDES. SIGNS SHALL BE PLACED AT A MAXIMUM OF 15' SPACING ALONG FENCE. LETTERING SHALL BE MINIMUM OF 3" HIGH, CLEARLY LEGIBLE. SIGNS TO BE MADE OF DURABLE WEATHERPROOF MATERIAL.

X
X-XXX

SENSITIVE AREA PROTECTION FENCE - LEVEL II

NOT TO SCALE

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

8 July 2015

MEMORANDUM FOR: See attached Distribution List

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUBJECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

As stated in the Description of Proposed Action and Alternatives letter sent on March 5, 2015, Homestead Air Reserve Base (HARB) has prepared a draft Supplemental Environmental Assessment (EA) to analyze the potential impacts and environmental consequences associated with the proposed Entry Control Complex (ECC). In accordance with Executive Order 12372 (Intergovernmental Review of Federal Programs), we respectfully request your input on the Supplemental EA during the 30-day public review and comment period.

If you have any questions about this action or any concerns, please contact:

Michael Andrejko
NEPA Program Manager
482 MSG/CEV
29350 Westover Street, Bldg. 232
Homestead ARB, FL 33039
Phone: (786) 415-7344
Email: michael.andrejko@us.af.mil

LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: Distribution List and CD with Draft Supplemental EA

HARB ECC INTERAGENCY AND INTERGOVERNMENTAL COORDINATION LIST

Federal Agency Contacts

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Environmental Resources Management Department - Craig Tepper
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Hollywood, FL 33024
954.965.4380 x202 (v)
954.962.8727 (fax)
email: ctepper@semtribe.com

Miccosukee Tribe of Indians of Florida
Chairman - Colley Billie
TBD
P.O. Box 440021
Miami, Florida 33194
305.223.8380 (v)
305.553.3644 (fax)

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

8 July 2015

MEMORANDUM FOR: 1st National Bank of South Florida
12520 S.W. 288th Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUBJECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

As stated in the Description of Proposed Action and Alternatives letter sent on March 5, 2015, Homestead Air Reserve Base (HARB) has prepared a draft Supplemental Environmental Assessment (EA) to analyze the potential impacts and environmental consequences associated with the proposed Entry Control Complex (ECC). We respectfully request your input on the Supplemental EA during the 30-day public review and comment period.

If you have any questions about this action or any concerns, please contact:

Michael Andrejko
NEPA Program Manager
482 MSG/CEV
29350 Westover Street, Bldg. 232
Homestead ARB, FL 33039
Phone: (786) 415-7344
Email: michael.andrejko@us.af.mil

LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: CD with Draft Supplemental EA

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

8 July 2015

MEMORANDUM FOR: Homestead Job Corps
12350 SW 285 Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUBJECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

As stated in the Description of Proposed Action and Alternatives letter sent on March 5, 2015, Homestead Air Reserve Base (HARB) has prepared a draft Supplemental Environmental Assessment (EA) to analyze the potential impacts and environmental consequences associated with the proposed Entry Control Complex (ECC). We respectfully request your input on the Supplemental EA during the 30-day public review and comment period.

If you have any questions about this action or any concerns, please contact:

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29350 Westover Street, Bldg. 232
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LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: CD with Draft Supplemental EA

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

8 July 2015

MEMORANDUM FOR: Verde Gardens Apartments
12550 SW 282nd Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUBJECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

As stated in the Description of Proposed Action and Alternatives letter sent on March 5, 2015, Homestead Air Reserve Base (HARB) has prepared a draft Supplemental Environmental Assessment (EA) to analyze the potential impacts and environmental consequences associated with the proposed Entry Control Complex (ECC). We respectfully request your input on the Supplemental EA during the 30-day public review and comment period.

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LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: CD with Draft Supplemental EA

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

5 March 2015

MEMORANDUM FOR: See attached Distribution List

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUJBECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

Homestead Air Reserve Base (HARB) is preparing a Supplemental Environmental Assessment (EA) in accordance with the National Environmental Policy Act to analyze the potential impacts and environmental consequences associated with the proposed Entry Control Complex (ECC) at HARB. The need for the Proposed Action is described in the attached Draft Description of Proposed Action and Alternatives (DOPAA).

This letter and the attached description of the proposed action are being sent as part of the scoping process for the HARB ECC Supplemental EA. The intent of the Supplemental EA is to address the potential environmental impact of the construction and operation of the proposed ECC.

The Supplemental EA is an update to the 2010 EA for the proposed HARB ECC. The Supplemental EA provides an updated description of the ECC and analyses impacts to transportation, socioeconomics, environmental justice, biological resources, and hazardous materials and waste management as these areas have experienced substantive changes in the intervening years since the 2010 EA. Impacts to other resource areas (noise, land use, soils, etc.) where no substantive changes have occurred are discussed in the 2010 EA.

Attached is the Draft DOPAA for the proposed HARB ECC Supplemental EA. The Draft DOPAA is being sent to obtain your input to assure we address and analyze all issues of concern in the Supplemental EA. We respectfully request your review and comments in accordance with Executive Order 12372, Intergovernmental Review of Federal Programs. HARB also will provide a copy of the Draft Supplemental EA during the government and public comment period, anticipated to begin in April 2015. A follow-up letter and a copy of the Draft Supplemental EA will be provided when the public comment period begins. If you have any questions about this action or any concerns, please contact:

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Email: michael.andrejko@us.af.mil

LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: Distribution List and Draft DOPAA

HARB ECC INTERAGENCY AND INTERGOVERNMENTAL COORDINATION LIST

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305.553.3644 (fax)

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County Contacts

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Tribal Governments

Seminole Tribe of Florida
Chairman - James Billie
Environmental Resources Management Department - Craig Tepper
6300 Stirling Road
Hollywood, FL 33024
954.965.4380 x202 (v)
954.962.8727 (fax)
email: ctepper@semtribe.com

Miccosukee Tribe of Indians of Florida
Chairman - Colley Billie
TBD
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Miami, Florida 33194
305.223.8380 (v)
305.553.3644 (fax)

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

4 March 2015

MEMORANDUM FOR: 1st National Bank of South Florida
12520 S.W. 288th Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUJBECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

Homestead Air Reserve Base (HARB) is preparing a Supplemental Environmental Assessment (EA) in accordance with the National Environmental Policy Act to analyze the potential impacts and environmental consequences associated with the construction and operation of the proposed Entry Control Complex (ECC) at HARB.

The Supplemental EA is an update to the 2010 EA for the proposed HARB ECC. The Supplemental EA provides an updated description of the ECC and analyses impacts to transportation, socioeconomics, environmental justice, biological resources, and hazardous materials and waste management as these areas have experienced substantive changes in the intervening years since the 2010 EA. Impacts to other resource areas (noise, land use, soils, etc.) where no substantive changes have occurred are discussed in the 2010 EA.

This letter is part of the scoping process for the HARB ECC Supplemental EA. The intent of this letter is to obtain your input to assure we analyze and address all issues of concern in the Supplemental EA. The following presents a summary of the changes and impacts associated with the proposed HARB ECC:

- **Traffic flow changes**: the new Biscayne Drive would be constructed northeast from SW 288th Street and terminating at a new roundabout at the intersection of Biscayne Drive, SW 127th Avenue, St. Nazaire Boulevard, and the entrance to the HARB ECC. A security perimeter fence would be installed along SW 127th Avenue south of the roundabout and adjacent to the former BX building and north of SW 288th Street south of the BX building. The section of SW 127th Avenue and SW 288th Street within the perimeter fence would be inaccessible to through traffic and demolished (see attached figure).

- **Bus route changes:** Miami-Dade County's Metrobus Route 70 would continue to service the area during construction and operation of the HARB ECC, including the Homestead Job Corps facility, 1st National Bank of South Florida, and the Verde Apartments complex. However, several bus stops may be relocated due to traffic flow changes with the proposed HARB ECC, including the SW 288th Street & SW 127th Avenue bus stop, the SW 288 Street & Ramey Avenue (SW 124 Avenue Road) bus stop, and the Ramey Avenue (SW 124 Avenue Road) & SW 285th Street bus stop. A traffic study is being conducted to analysis impacts to traffic flow and designate new bus stops.

- **Noise:** during construction of the proposed HARB ECC increased noise levels from construction equipment may occur. The construction equipment would operate only during daylight hours and would be temporary during the construction phase of the project.

Attached is a figure showing the proposed design of the HARB ECC. HARB will also provide a copy of the Draft Supplemental EA during the government and public comment period, anticipated to begin in April 2015. A follow-up letter and a copy of the Draft Supplemental EA will be provided when the public comment period begins. If you have any questions about this action or any concerns, please contact:

Michael Andrejko
482 MSG/CEV
29350 Westover Street, Bldg. 232
Homestead ARB, FL 33039
Phone: (786) 415-7344
Email: michael.andrejko@us.af.mil

LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: Figure of proposed HARB ECC design

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

5 March 2015

MEMORANDUM FOR: Homestead Job Corps
12350 SW 285 Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUJBECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

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LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: Figure of proposed HARB ECC design

DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCE RESERVE COMMAND

5 March 2015

MEMORANDUM FOR: Verde Garden Apartments
12550 SW 282nd Street
Homestead, FL 33033

FROM: 482nd MSG/CEV
29350 Westover Street
Bldg. 232
HOMESTEAD, ARB 33039-1299

SUJBECT: Preparation of a Supplemental Environmental Assessment for the Proposed Entry Control Complex at Homestead Air Reserve Base, Homestead, Florida

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LAWRENCE VENTURA, JR., GS-12
Chief, Environmental Flight

Attachments: Figure of proposed HARB ECC design