Draft
Environmental Assessment
for
SOCCENT Operations Facility
MacDill AFB, Florida

March 2018

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APPENDICES

1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

This Environmental Assessment (EA) identifies, describes, and evaluates potential environmental impacts associated with the proposed personnel/mission expansion, construction of a new headquarters operations facility, construction of a parking lot, construction of temporary trailers, and the relocation of the grounds maintenance yard in support of Special Operations Command Central (SOCCENT) at MacDill Air Force Base (AFB) (the Proposed Action), as well as alternatives to the Proposed Action, including the Grounds Maintenance Location Alternative, and the No Action Alternative.

1.1 PURPOSE OF THE PROPOSED ACTION

The purpose of the Proposed Action is to add approximately 60 individuals for SOCCENT additional mission expansion, construct a 25,000 ft^2 headquarters operations facility, construct an approximately 30,000 ft^2 parking lot, construct approximately 9,000 ft^2 of temporary trailer office space, and relocate the grounds maintenance yard. The construction of additional office facilities will provide SOCCENT with enough administrative space to overcome existing facility shortfalls and support additional personnel. The relocation of SOCCENT personnel to the SOCCENT campus will consolidate staff and resolve unnecessary exposure and risk to existing satellite facilities.

1.2 NEED FOR THE PROPOSED ACTION

The Proposed Action is needed because demand for Special Operations Forces in the United States Central Command area of responsibility is increasing and SOCCENT has outgrown its current facilities. The 60 new personnel will add to the existing facility shortfall. SOCCENT requires secure facilities to provide command and control capabilities, accommodate and train deploying personnel, and store authorized equipment. Workspaces in existing SOCCENT facilities 1039, 1040, and 1043 do not meet minimum AF square footage standards and have reached fire code capacity limits due to steadily increasing mission loads and personnel. Approximately 78 individuals from these facilities will be moved into the newly constructed facility. Thirty two personnel are located in other buildings (1059 and 1069) on base. Forty

personnel currently work out of leased office space off base. SOCCENT has been directed to consolidate these satellite workspaces into their main headquarters campus to avoid unnecessary exposure and risk, and to more effectively meet mission requirements. Parking is already at capacity. The addition of personnel will require supplemental parking. The proposed location of the new headquarters facility and parking lot will require relocation of the grounds maintenance complex. This EA examines the potential for impacts from the addition of mission personnel, establishment of a new facility, and also from the relocation of the grounds maintenance area. The need for this EA was originally outlined on AF Form 813, Request for Environmental Impact Analysis, a copy of which is included in Appendix A.

1.3 SCOPE OF THE ENVIRONMENTAL REVIEW

This EA examines the potential for impacts to the environment resulting from the military construction (MILCON) of a SOCCENT Operations Facility at MacDill AFB, Florida (Figure 1-1). This environmental analysis has been conducted in accordance with the President's Council on Environmental Quality (CEQ) regulations, Title 40 of the Code of Federal Regulations (CFR) §§1500-1508, as they implement the requirements of the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. §4321, et seq., and 32 CFR Part 989, Environmental Impact Analysis Process.

The federal Coastal Zone Management Act (CZMA) required federal agencies carrying out activities subject to the Act to provide a "consistency determination" to the relevant state agency. The Florida Department of Community Affairs, with input from state and county agencies, determined that the proposed project is consistent with the Florida Coastal Management Program. The Air Force's Consistency Determination and the Florida State Clearinghouse concurrence is contained in Appendix B. This EA was also made available for public review. The public notice and any comments received are included in Appendix F.

1.4 ENVIRONMENTAL PERMIT REQUIREMENTS

It is anticipated that completion of this project would require application for a storm water management permit from the Southwest Florida Water Management District (SWFWMD) for the construction of the proposed SOCCENT Operations Facility and impervious areas of the parking

lots. In addition, since the site is larger than one acre in area, a National Pollutant Discharge Elimination System (NPDES) Construction Generic Permit (CGP) would be required.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section provides a description of the Proposed Action and alternatives to the Proposed Action. The Proposed Action involves the increase in mission personnel, construction of a new SOCCENT Operations Facility, temporary trailers, a parking lot, and the relocation of the grounds maintenance area. Two alternatives to the Proposed Action were considered as part of this EA, including the Grounds Maintenance Location Alternative, and the No Action Alternative.

2.1 DETAILED DESCRIPTION OF THE PROPOSED ACTION

2.1.1 Background

SOCCENT is headquartered at MacDill AFB, Florida and maintains a forward headquarters in Qatar. SOCCENT is a subordinate unified command of US Central Command (CENTCOM). SOCCENT employs Special Operations capabilities in partnership with U.S. government agencies, regional security forces, and CENTCOM component forces to enable and support the goals and objectives of CENTCOM. SOCCENT's mission has continued to expand ever since 9/11. SOCCENT's growth required the construction of their current facilities (1039, 1040, and 1043) in 2011. Continued growth soon pushed these facilities to capacity and beyond. In an effort to meet increased mission requirements with existing resources, SOCCENT has occupied other facilities on base and even leased office space off base.

2.1.2 Proposed Action

The Proposed Action would include the personnel increase for mission requirements, construction of a new SOCCENT Operations Facility, as well as an associated parking lot, construction of temporary trailer office space, and the relocation of the existing grounds maintenance yard. These activities are in the north-central section of the base.

The proposed site selected for SOCCENT Operations Facility, parking lot, and temporary trailer construction is currently developed land on impervious surfaces. The new grounds maintenance yard location is a disturbed laydown yard and maintained/mowed grass. (Figures 2-1 and 2-2).

The Proposed Action includes the addition of 60 new personnel and the consolidation of 150 existing personnel currently working out of other facilities.

The Proposed Action also includes the construction of an approximately 12,500 ft^2 concrete and steel, two-story building which would provide approximately 25,000 ft^2 of usable floor space.

A 30,000 ft^2 parking lot would be constructed on property contiguous to the proposed SOCCENT Operations Facility. The new parking lot would be a permanent asphalt parking lot and would provide approximately 80 parking spaces. The new parking area would be designed to manage storm water, and appropriately sized and permitted storm water retention areas would be constructed adjacent to the parking lots. The site selected for the new parking lot would be along the eastern side of the proposed SOCCENT Operations Facility. Appropriately-sized emergency power generators and fuel storage tanks would be installed. Building standoff distances would meet current DoD antiterrorism construction requirements.

The Proposed Action would include the construction of 9,000 ft^2 of temporary trailer office space southwest of Building 1039.

Construction of permanent parking lots would include permanent asphalt surface, curbing, striping, and storm water treatment/attenuation areas. Construction of new, or significant alteration of existing, impervious surfaces would require application for a project-specific storm water management permit from the SWFWMD. This project would also require an NPDES CGP storm water construction permit.

The Proposed Action also includes the relocation of the existing grounds maintenance complex. A 50,000 ft^2 paved area would be constructed for the grounds maintenance contractor to store equipment. It would also include the installation of a wash rack for rinsing mowers, and the construction of ancillary structures like carports for covering equipment. The existing wash rack would be demolished. The contractor's office trailer would be moved to the new location. The ground maintenance yard would be collocated with other contractor industrial operations, leaving

the areas around SOCCENT, CENTCOM, the Medical Clinic, and Fuels Operations available for future expansion.

2.2 DESCRIPTION OF ALTERNATIVE ACTIONS

Alternative actions considered for further evaluation focus on an alternative location for the construction of the grounds maintenance yard which is being displaced by the facility and parking lot construction. The alternatives retained for further evaluation are identified as the Grounds Maintenance Location Alternative, and the No Action Alternative.

2.2.1 Grounds Maintenance Location Alternative

The Grounds Maintenance Location Alternative would relocate the grounds maintenance yard across the street to the north side of Great Egret Ave.

This alternative includes the same specifications as the grounds maintenance yard portion of the Proposed Action but in a different location.

This alternative provides for a usable grounds maintenance yard with enough room for equipment and associated structures. This location would suffice, although it is in a part of the base that is likely to be needed for other administrative or storage space in the near future so it is preferred to be left open.

2.2.2 Alternatives Eliminated from Further Study

The Existing Facilities Alternative includes the use of existing facilities on base and leasing office space off base to house the sixty new personnel and existing personnel currently working in areas failing to meet Air Force square footage standards. The grounds maintenance yard would not be altered. This alternative provides administrative and storage space for SOCCENT. However, this alternative does not completely meet the need to consolidate satellite offices to eliminate unnecessary exposure and risk, especially in the case of leased space off-base. Mission dictates SOCCENT personnel be collocated with existing operational headquarters staff at the SOCCENT campus. The implementation of this alternative would not meet the Proponent's objectives and has therefore been eliminated from further consideration.

2.2.3 DESCRIPTION OF THE NO ACTION ALTERNATIVE

Under the No Action Alternative, no new facilities would be constructed and the existing facilities would continue to be used. SOCCENT workers would remain in other satellite facilities, including leased office space off base. No temporary trailers would be constructed. No additional parking would be added. Grounds maintenance would remain in its current location.

2.3 COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES

Table 2-1 (back of text) is a summary of the potential environmental impacts of the Proposed Action, the Grounds Maintenance Location Alternative, and the No Action Alternative.

3.0 AFFECTED ENVIRONMENT

This section describes the characteristics of the existing natural and man-made environment that could be affected by the Proposed Action, the Grounds Maintenance Location Alternative, or the No Action Alternative. This section establishes the basis for assessing impacts of the alternatives on the affected environment provided in Section 4.0.

3.1 AIR QUALITY

The Clean Air Act (CAA), as amended in 1977 and 1990, provides the basis for regulating air pollution to the atmosphere. The United States Environmental Protection Agency (USEPA) established National Ambient Air Quality Standards (NAAQS) for six "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur oxides (SO_x), measured as sulfur dioxide (SO_2), lead (Pb), and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}). These standards are the cornerstone of the CAA. Although not directly enforceable, they are the benchmark for the establishment of emission limitations by the states for the pollutants USEPA determines may endanger public health or welfare.

The Environmental Protection Commission of Hillsborough County (EPC) is responsible for issuing and enforcing the CAA Non-Title V Synthetic Minor Air Operation Permit (Permit No. 0570141-020-AO issued 1 August 2017) for MacDill AFB. The 2016 air emission inventory at

MacDill AFB found the installation is not a major source of potential emissions for any criteria pollutants.

The USEPA tracks compliance with the air quality standards through designation of a particular region as "attainment" or "non-attainment." MacDill AFB is located in Hillsborough County within the West Central Florida Intrastate Air Quality Control Region (AQCR). The area encompassed by MacDill AFB is currently classified as being in attainment for all criteria pollutants stipulated under the NAAQS.

3.2 NOISE

The meaning of noise for this analysis is undesirable sound that interferes with speech communication and hearing, or is otherwise annoying (unwanted sound). In June 1980, the Federal Interagency Committee on Urban Noise published guidelines (FICUN 1980) relating day-night average sound level (DNL) values to compatible land uses. Most Federal agencies have identified 65 decibels (dB) DNL as a criterion that protects those most affected by noise and that can often be achieved on a practical basis. The Air Installation Compatible Use Zone (AICUZ) Study (2014) plotted the DNL from 65 to 80 dB for an average day and a busy day at the base. The DNL contours reflect the aircraft operations at MacDill AFB. The DNL 65 dB contour covers the main runway, and extends about one mile southwest over Tampa Bay, and about one mile northeast over South Tampa. Smaller DNL 65 dB contours are centered near the north and south parking ramps. The easternmost 65 dB contour at the northeastern end of the runway is approximately 0.5 miles from the location of the Proposed Action, except for the proposed location of the grounds maintenance yard which lies just outside the contour.

The most recent AICUZ study accounts for the transfer of additional KC-135 aircraft and beddown of US Army Reserve helicopters to the base which have not yet occurred.

3.3 WASTES, HAZARDOUS MATERIALS, AND STORED FUEL

Hazardous wastes generated at MacDill AFB include solvents, fuels, lubricants, stripping materials, used oils, waste paint-related materials, and other miscellaneous wastes. The responsibility for managing hazardous waste lies with the generating organization and 6 CEIE.

Wastes come from approximately 50 locations throughout the base and are managed at satellite accumulation points base-wide.

Approximately 105 operations base-wide use hazardous materials. Hazardous materials on base include various organic solvents, chlorine, freon, paints, thinners, oils, lubricants, compressed gases, pesticides, herbicides, nitrates, and chromates. A detailed tracking and accounting system is in place to identify potentially hazardous materials and to ensure that base organizations are approved to use specific hazardous materials.

The base receives jet fuel (JP-8) at the Defense Fuel Supply Point (DFSP) by pipeline from Port Tampa. Diesel, gasoline, and heating oil are stored throughout MacDill AFB in small to medium-sized Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) ranging in size from 50 to 12,000 gallons.

All generated waste water is treated at the base's privatized waste water treatment plant. The plant is permitted to treat a volume of 1.2 million gallons per day (mgd). Currently, the plant operates at an average of approximately 0.6 mgd. All treated waste water is currently reused on-base by reclamation, principally through spray application at the golf course located at the southeast quadrant of the base.

3.4 WATER RESOURCES

Surface water flows at the base are primarily from storm water runoff. Most of the base drains toward the southern tip of the Interbay Peninsula; however, the easternmost section of the base drains toward Hillsborough Bay.

The FDEP issued a National Pollutant Discharge Elimination System (NPDES) Multi-Sector Generic Permit for Storm water Discharge Associated with Industrial Activity (FLR05E128-004) to MacDill AFB in March 2016. The FDEP issued a Phase II Municipal Separate Storm Sewer System (MS4) permit [FLR04E059 (Cycle 4)] to MacDill AFB in January 2018 In accordance with 40 CFR 112, the base has developed a Spill Prevention Control and Countermeasures (SPCC) Plan and a Facility Response Plan given the location of the base adjacent to navigable waters and shorelines, as well as the amount of fuel storage capacity existing on site.

3.5 FLOODPLAINS

According to information provided by the Federal Emergency Management Agency (FEMA Maps dated 1982-1991), 80 percent of the base is within the 100-year floodplain. The maps indicate that all the residential, industrial, and institutional (medical and education) land uses on the base are within the 100-year floodplain, along with most of the commercial and aviation support areas. The majority of the 20 percent of land that is above the floodplain is designated for airfield operations.

The extent of the floodplain is an important consideration for MacDill AFB because EO 11988, Floodplain Management Guidelines, regulates the uses of these areas. The objective of this presidential order is to avoid, to the extent possible, the long and short-term adverse impacts associated with occupancy and modification of floodplains. To comply with EO 11988, before taking any action, the Air Force must evaluate the impacts of specific proposals in the floodplain.

The proposed new SOCCENT Operations Facility, trailers, parking lot, and alternative grounds maintenance yard sire would be located outside of the 100-year floodplain (Figure 2-1). The preferred grounds maintenance yard site would also be located outside the 100-year floodplain (Figure 2-2).

3.6 CULTURAL RESOURCES

Cultural resources include historic facilities and archaeological sites. There are two historic districts on base, the Hangar District and the Visiting Officer's Quarters District. There are nine known archaeological sites on base. Several historic facilities and archaeological sites are significant enough to be eligible for the National Register of Historic Places. The base consults with the State Historic Preservation Office (SHPO) and three Native American tribes regarding the potential effects of base actions on these resources.

3.7 TRANSPORTATION

MacDill AFB is served by four operating gates at Dale Mabry Highway, Bayshore Boulevard, MacDill Avenue, and Tanker Way. The Tanker Way gate is used as the large vehicle (contractor

trucks, deliver vehicles, RVs) entry point. Large vehicles are inspected and their credentials and destination are confirmed before entering the base.

The transportation system on-base consists of arterials, collectors, and local streets that connect with the off-base network through the four gates. On-base arterial facilities include North and South Boundary Boulevards, Bayshore Boulevard, Marina Bay Drive, and Tampa Point Boulevard. The 2010 traffic study determined that service levels for traffic on-base are generally acceptable.

3.8 SAFETY AND OCCUPATIONAL HEALTH

The MacDill AFB Asbestos Management Plan identifies procedures for management and abatement of asbestos. Prior to renovation or demolition activities, asbestos sampling is performed and, if present, the asbestos is removed in accordance with applicable federal and state regulations.

The only demolition associated with the Proposed Action is Building 1070, the grounds maintenance wash rack. An asbestos survey was completed for this facility in 2010 and no asbestos containing material was found. These files are maintained on-base at 6 CEIE, Building 30.

The Base Civil Engineer assumes that all structures constructed prior to 1978 possibly contain lead-based paint (LBP). When required, LBP abatement is accomplished in accordance with applicable federal and state regulations, and base procedures, prior to demolition activities to prevent any health hazards.

3.9 SOCIOECONOMICS

The Economic Impact Region (EIR) for MacDill AFB is the geographic area within a 50-mile radius of the base subject to significant base-related economic impacts. According to the 2012 Economic Resource Impact Analysis for MacDill AFB the total economic impact of MacDill AFB on the EIR was $4.9 billion with over 41,992 jobs supported.

4.0 ENVIRONMENTAL CONSEQUENCES

The effects of the Proposed Action and alternatives on the affected environment are discussed in this section.

4.1 AIR QUALITY

4.1.1 Proposed Action

Air quality impacts would occur during construction of the SOCCENT Operations Facility and the relocation of the grounds maintenance yard; however, these air quality impacts would be temporary.

Fugitive dust (suspended and PM_{10} particulate matter) and construction vehicle exhaust emissions would be generated during construction. Dust generated by equipment and construction activities would fall rapidly within a short distance from the source. If required, areas of exposed soil could be sprayed with water daily to suppress dust.

The anticipated pollutant emissions for the Proposed Action have been calculated given the general size and scope of the project. These estimates are presented in Appendix D and are compared to Hillsborough County Emissions Inventory totals in Table 4-1 below.

An emergency generator would be installed to provide emergency power in the event of a power outage. This generator would be permitting through the EPC by modifying the base operating permit (Air Permit No. 0570141-020-AO). Based upon the Air Force method for calculating the installation's potential to emit (PTE), this additional generator would not significantly affect permitting thresholds or the ability of the installation to comply with permit conditions.

Table 4-1 Proposed Action Air Emissions at MacDill AFB

Pollutant	Proposed Action Annual Emissions (tpy)[a]	Hillsborough County Emissions Inventory[b] (tpy)	Net Change (%)	*De minimis* Values[d] (tpy)	Above/ Below *De minimis*
CO	2.13	6,517	0.327	100	Below
VOC	0.5	34,880	0.014	100	Below
NO_x	4.85	58,191	0.083	100	Below
SO_x	0.36	65,890	0.006	100	Below
PM_{10}[c]	3.18	22,379	0.142	100	Below
Pb	--	53	--	25	--

[a]Includes sum of both construction of SOCCENT Operations Facility, trailers, parking lot, and relocation of grounds maintenance facilty.
[b]Based on stationary permitted emissions presented in 1997 Ozone Emissions Inventory, EPC.
[c]PM10 estimated as 50 percent of the 1990 tpy reported for TSP
[d]Source: 40 CFR 93.153, November 30, 1993
tpy Tons per year
% Percent

4.1.2 Grounds Maintenance Location Alternative

The principal activity of this alternative is simply the location of the construction activity. The construction activities with the potential to affect air quality, especially earthwork and demolition, would be the same from the Proposed Action.

4.1.3 No Action Alternative

Because the status quo would be maintained, there would be no impacts to air quality under the No Action Alternative.

4.1.4 Cumulative Air Quality Impacts

The Proposed Action would not have adverse cumulative impacts on air quality. Air emissions from construction of the SOCCENT Operations Facility and relocation of the grounds maintenance yard would be negligible with respect to regional criteria pollutant emissions. Air emissions from other ongoing or future development projects at MacDill AFB would be temporary, intermittent, and minor.

4.2 NOISE

4.2.1 Proposed Action

The closest noise sensitive receptors in the vicinity of the proposed SOCCENT Operations Facility construction site (within 500 feet) include the occupants of Buildings 1074, 1068, 1080, 1090, 1092, 1043, 1078, 1041, 1040, 1039, 1194, and 1066. Facilities within proximity to the grounds maintenance yard relocation include Buildings 864, 865, 880, 890, 895, and 897.

The adjacent receptors would probably experience noise impacts from construction and/or construction-related vehicles. The magnitude of these impacts would be directly related to the proximity of the occupied facility to the construction or demolition site. In addition, the impacts vary according to the activity occurring on any particular day, and impacts would cease when construction is completed. Based on a cumulative average construction noise level of approximately 85 dB at 50 feet from the center of the project site (depending upon the current stage of the project), occupants of the nearest buildings would be negatively impacted. However, these impacts are temporary and considered minor.

4.2.2 Grounds Maintenance Location Alternative

This Alternative places the grounds maintenance yard very close to the SOCCENT Operations Facility construction site. No additional buildings or occupants would be affected by construction noise beyond those already potentially impacted by activity at the main site. Under this Alternative, no noise impacts would occur near the Tanker Way gate or contractor area. Noise impacts for this Alternative would be temporary and considered minor.

4.2.3 No Action Alternative

Under the No Action Alternative no noise impacts would occur.

4.3 WASTES, HAZARDOUS MATERIAL, AND STORED FUEL

The following section describes sanitary wastewater treatment, solid waste collection and disposal, hazardous material and waste management, and stored fuels management.

4.3.1 Proposed Action

A short term increase in the generation of solid waste would occur during construction activities for the Proposed Action. A long term increase in the generation of solid waste would occur after construction because of the additional personnel. The base has sufficient resources to manage the short term and long term increase in solid waste and the local landfills have sufficient capacity to accept the solid waste in the short term and long term.

The construction of restroom facilities are included in the Proposed Action. Implementation of the Proposed Action is not anticipated to result in a significant change in the total volume of waste water to the base sanitary sewer system. During project design, a determination would be made as to the need to upgrade the capabilities of the existing sanitary sewer lift station servicing the area of the Proposed Action. The area of the grounds maintenance yard relocation is not currently serviced by the base sanitary sewer system and an analysis of the existing on-site septic system would have to be conducted to determine if any modifications are required.

Hazardous wastes/materials, such as paint, adhesives, and solvents, may be on site during the construction work for the Proposed Action. All construction related hazardous wastes/materials, including petroleum products, would be removed and disposed of according to base procedures, as well as applicable state and federal regulations. In general, the amount of hazardous materials/wastes would not change due to the additional administrative personnel. No impacts from hazardous materials or waste are anticipated from completion of the project.

The Proposed Action was evaluated for the potential for impacts to and/or from documented hazardous waste clean-up sites [both Environmental Restoration Account (ERA) and non-ERA funded sites] at MacDill AFB. The Proposed Action is located within Solid Waste Management Unit (SWMU) 21. SWMU-21 has soil contaminated with Benzo(a)pyrene Equivalent. The SWMU-21 Site Summary is attached for reference (Appendix E). SWMU-21 has Land Use Controls (LUCs) which include restrictions for residential development and potable water sources. Construction contractors working in these areas must take necessary precautions to protect their workers accordingly. Produced groundwater may not be discharged back to the site without proper sampling and coordination with the Environmental Restoration Program (ERP) office and FDEP. Contaminated soil must be handled properly and must remain on site or be

disposed of properly in an appropriate facility. The boundaries of SWMU-21 are shown in Figure 2-1.

The new grounds maintenance yard location is located within SWMU-28. The SWMU-28 Site Summary is attached for reference (Appendix E). SWMU-28 has groundwater contaminated with arsenic and soils contaminated with arsenic and Benzo(a)pyrene Equivalent. The site is being monitored for natural attenuation and has LUCs for soil and groundwater. Construction contractors working in these areas must take necessary precautions to protect their workers accordingly. Produced groundwater may not be discharged back to the site without proper sampling and coordination with the Environmental Restoration Program (ERP) office and FDEP. Any contaminated soil removed from the site must be disposed of properly. Contaminated soil may not be moved to another area of the site. The boundaries of SWMU-28 are shown in Figure 2-2.

Proposed Action should not affect or be affected by any hazardous waste clean-up sites.

The SOCCENT Operations Facility will have an emergency generator with associated above ground fuel storage tank (AST). The generator and fuel storage tank would be permitted through the EPC. The additional fuel would be insignificant compared to the amount of fuel currently stored on base. Therefore, the Proposed Action would have no impact on stored fuels management.

4.3.2 Grounds Maintenance Location Alternative

There are no differences in the impact of an alternative grounds maintenance location on solid waste, hazardous materials, or hazardous waste generation. The alternative grounds maintenance location is not in an ERP site.

4.3.3 No Action Alternative

Under the No Action Alternative, no impacts to wastes, hazardous materials, or stored fuel would occur since construction or associated improvements would not be implemented.

4.4 WATER RESOURCES

4.4.1 Proposed Action

Some soil erosion would occur during construction and demolition activities; however, implementation of a sediment and erosion control plan, including use of best management practices (BMPs) such as silt fencing and hay bales, would dramatically reduce erosion and avoid potential storm water violations. As previously stated, the Proposed Action would disturb more than one acre of soil and would therefore require an NPDES CGP permit from the FDEP.

Under the Proposed Action, there are no direct or indirect discharges to groundwater. Construction of the new impervious surfaces would include appropriately sized storm water treatment/attenuation areas. The storm water retention areas would collect surface water runoff from the impervious surfaces and allow it to infiltrate into the ground, recharging the groundwater in the surficial aquifer. Design of the storm water management system would be permitted by the SWFWMD and would therefore be required to demonstrate a no net increase in the post-development discharge of pollutants to receiving waters.

Implementation of the Proposed Action would result in additional personnel which would be accompanied by a slight increase in potable water usage.

4.4.2 Grounds Maintenance Location Alternative

As with the Proposed Action, some soil erosion would occur during construction activities; however, implementation of a sediment and erosion control plan including use of BMPs would dramatically reduce erosion and avoid potential storm water violations. There would be no long-term impacts to water resources upon completion of this alternative. No long-term impacts to surface waters would result.

Under this alternative, the same water quality requirements and potential effects would exist. The location of the grounds maintenance facility would not affect potential effects to water quality.

4.4.3 No Action Alternative

The No Action Alternative would not add any impervious surfaces or disturb soils; therefore, would not result in significant impacts to water resources.

4.5 FLOODPLAINS

In accordance with the requirements of EO 11988, the Air Force must demonstrate that there is no practicable alternative to carrying out the Proposed Action within the floodplain. The Proposed Action and the Grounds Maintenance Location Alternative are not within the 100-year coastal floodplain. Consequently, there are no impacts to the floodplain.

4.6 CULTURAL RESOURCES

4.6.1 Proposed Action

The Proposed Action takes place at two separate locations, the SOCCENT Operations Facility site and the grounds maintenance yard relocation site.

The SOCCENT Operations Facility site does not involve any historically significant facilities. It is currently paved and has been developed since the early days of the installation in the 1950s. A Phase I Cultural Resources Assessment Survey (CRAS) was accomplished in this area of the base in 2017, but no shovel tests were conducted on paved surfaces. It is assumed that any cultural resources that may have been present in these areas were disturbed during development. This site is over 3,000 feet from the nearest known archaeological site.

The grounds maintenance yard relocation site does not contain any historically significant facilities. It is currently a disturbed contractor laydown area but has been developed since the early days of the installation in the 1950s. A pesticide degradation facility was present on the site but was demolished some years ago. A Phase I CRAS was conducted in this area in 2015 and did not find any cultural resources. This site is 2,500 feet from the nearest known archaeological site.

Consequently, no impacts cultural resources would result from the Proposed Action.

4.6.2 Grounds Maintenance Location Alternative

The alternative location for the grounds maintenance is not near any historically significant facilities and is currently open land. However, this site has been disturbed and was developed in the early days of the installation in the 1950s. A Phase I CRAS was conducted in this area in 2017. The probability model indicated this site had a low likelihood of containing archaeological resources. Ten percent of "low probability" areas were surveyed with shovel tests per standard survey guidelines. No shovel tests were conducted in the alternative grounds maintenance location site. Consequently, no impacts to cultural resources would result from this Alternative.

4.6.3 No Action Alternative

Under the No Action Alternative, no impacts to cultural resources would occur.

4.6.4 Agency Consultation

MacDill AFB has determined, in accordance with 36 CFR 800.3(a)(1), that the proposed federal action is an undertaking and it does not have the potential to affect historic properties. Consultation with the SHPO under Section 106 was accomplished and the agency concurred with the Air Force's determination that the Proposed Action or Alternatives did not have a potential to affect cultural resources (Appendix C).

Native American tribes with an interest in the land currently occupied by the installation were consulted on the Proposed Action and Alternatives. Consultation letters were sent to the Seminole Nation of Oklahoma, the Seminole Tribe of Florida, and the Miccosukee Tribe of Indians of Florida. The tribes did not object to the project. The tribal consultation documents are attached for reference (Appendix C).

4.7 TRANSPORTATION

4.7.1 Proposed Action

An increase in traffic in the north-central portion of the base would result during implementation of the Proposed Action, due to the increase in construction-related activities. These negative impacts are considered to be minor and short-term.

Upon completion, the Proposed Action would result in a slight increase in the number of vehicles entering the base, as a result of the additional personnel. The transportation infrastructure, including entry and exit gates would be able to accommodate the slight increase in traffic. Implementation of the Proposed Action would not result in a significant impact on base transportation.

4.7.2 Grounds Maintenance Location Alternative

Implementation of the Grounds Maintenance Location Alternative would result in the same minor adverse short-term traffic impacts resulting from construction-related traffic entering and exiting the base. Construction traffic may have a slightly larger impact on base transportation since the alternative location is in a more populated part of the base. Overall, this Alternative would not result in a significant impact on base transportation.

4.7.3 No Action Alternative

Under the No Action Alternative no significant impacts to transportation would be incurred.

4.8 SAFETY AND OCCUPATIONAL HEALTH

4.8.1 Proposed Action

The proposed construction activities for the project would pose safety hazards to the workers similar to those associated with typical industrial construction projects, such as falls, slips, heat stress, and machinery injuries. Construction would not involve any unique hazards and all construction methods would comply with Occupational Safety and Health Administration (OSHA) requirements to ensure the protection of workers and the general public during

construction. Diligent, but not controlling, governmental oversight of contractor activities would help assure OSHA compliance.

The demolition portion of the project is not anticipated to encounter ACM since these materials were not identified during completion of limited surveys. In addition, the demolition may encounter LBP. Prior to initiating demolition activities, the demolition contractor shall hire a qualified independent environmental consulting firm to perform a comprehensive asbestos and LBP survey for the existing facility. Once the surveys have been completed, if any hazardous materials have been identified, the demolition contractor shall hire a qualified environmental abatement subcontractor to remove and dispose of the ACM and LBP. The same environmental firm shall perform environmental monitoring during the abatement work in accordance with Air Force, USEPA, and other applicable environmental regulations. All waste disposal manifests shall be turned over to the government upon completion of the demolition work.

The Proposed Action would involve construction activities near an ERP site (SWMU 21 and SWMU 28); however, appropriate measures have been included in the project to reduce the potential for contact with contaminated media and to protect workers from exposure. None of the constituents of concern at the site represent an immediate threat to life and health. Consequently, no impacts to safety and occupational health would be incurred with implementation of the Proposed Action.

4.8.2 Grounds Maintenance Location Alternative

As with the Proposed Action, this alternative would pose safety hazards to the workers similar to those associated with typical industrial construction projects, such as falls, slips, heat stress, and machinery injuries. Construction would not involve any unique hazards and all construction methods would comply with OSHA requirements to ensure the protection of workers and the general public during construction.

There are no existing structures on this site, so no asbestos or LBP sampling would be required. This Alternative does not involve any contaminated soil or groundwater sites.

4.8.3 No Action Alternative

No impacts on safety and occupational health would be incurred under the No Action Alternative.

4.9 SOCIOECONOMICS

4.9.1 Proposed Action

The Proposed Action would cost approximately $XXXX million to complete, based on 2018 cost estimates. This action would result in an approximately XX percent increase in the nearly $586 million in annual expenditures MacDill AFB provides to the local economy, constituting a significant short-term beneficial impact.

4.9.2 Grounds Maintenance Location Alternative

This Alternative would cost the same as the Proposed Action and would therefore contribute a similar amount to the local economy, resulting in a significant short-term economic benefit.

4.9.3 No Action Alternative

Under the No Action Alternative, no expenditure would occur. Therefore, there would be no economic impact to the local region.

4.10 OTHER ITEMS WITH NO POTENTIAL IMPACTS

In addition to the resources discussed in the previous sections, the potential impacts to the biological resources, geology and soils, environmental justice, and Airspace and Airfield Operations were evaluated. Based upon this evaluation, there are no potential impacts likely to any of these resources resulting from the implementation of the Proposed Action or any of the considered alternatives. Coordination with the U.S. Fish and Wildlife Service has been completed to insure compliance with the Endangered Species Act. Agency correspondence letters are included in Appendix C.

The Proposed Action or any of the Alternatives would also not affect minority or low-income populations. There are no minority or low-income populations in the area of the Proposed Action or the Alternatives; thus, there will not be disproportionately high or adverse impacts on such populations. No adverse environmental impacts would occur outside MacDill AFB. Therefore, no adverse effects on minority and low-income populations would occur with implementation of the Proposed Action, or from implementation of any of the Alternatives, at MacDill AFB.

4.11 CUMULATIVE IMPACTS

As indicated in Table 2.1, the Proposed Action, when examining it as a portion of the total proposed and/or ongoing construction projects on MacDill AFB, would result in minor beneficial cumulative impacts to socioeconomics, due to an approximately XX percent increase in the annual expenditures MacDill AFB provides to the local economy.

When examining it as a portion of the total proposed and/or ongoing construction projects on MacDill AFB, the Proposed Action would have no significant cumulative impacts to air quality, noise, waste management, water resources, floodplains, transportation, safety and occupational health, biological resources, geology and soils, cultural resources, environmental justice, or airspace and airfield operations, as outlined in Table 2-1 and Table 4-2.

5.0 CONCLUSIONS

Based upon the analyses presented in this environmental assessment, it appears the Proposed Action alternative would not have a significant affect upon the quality of the human environment.

6.0 MANAGEMENT REQUIREMENTS

6.1 AIR QUALITY

Use reasonable precautions to control the emissions of unconfined particulate matter during construction activities in accordance with Florida Administrative Code (FAC) Rule 62-296. Ensure that all hazardous materials used during construction comply with the MacDill AFB Hazardous Materials Management Program's requirements for low volatile organic compound content.

6.2 HAZARDOUS MATERIALS/WASTES

Ensure hazardous materials are approved and tracked through MacDill AFB's Hazardous Materials Management Program. Coordinate characterization and disposal of any hazardous or special waste with MacDill AFB's Environmental Compliance Program. Coordinate with MacDill AFB's Pollution Prevention Program to ensure recycling of demolition wastes, if

possible. Ensure that any soil removed from SWMU 21 and 28 are tested for contaminants of concern and, if contaminated, properly disposed.

6.3 WATER RESOURCES

Submit appropriate water quality permit applications for active construction sites and post-construction storm water management systems. Ensure BMPs, such as silt screens and placement of hay bales, are employed during construction to prevent erosion and storm water violations during all construction activities. Ensure that the new construction complies with all applicable water and energy conservation requirements.

6.4 SAFETY AND OCCUPATIONAL HEALTH

Ensure construction activities comply with OSHA standards or more stringent standards if applicable. Ensure that a site specific health and safety plan is prepared prior to initiating construction at SWMU-21 and 28 and ensure that all workers completing excavation or dirt moving activities in this area have 40-hour HAZWOPER training and the annual 8-hour refresher course.

6.5 BIOLOGICAL RESOURCES

Ensure that any ground surface area disturbed during construction are re-seeded or revegetated with native flora.

7.0 PERSONS CONTACTED

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9.0 REFERENCES

Advisory Council on Historic Preservation. 1986. *36 CFR Part 800: Protection of Historic Properties*. U.S. Government Printing Office, Washington, D.C.

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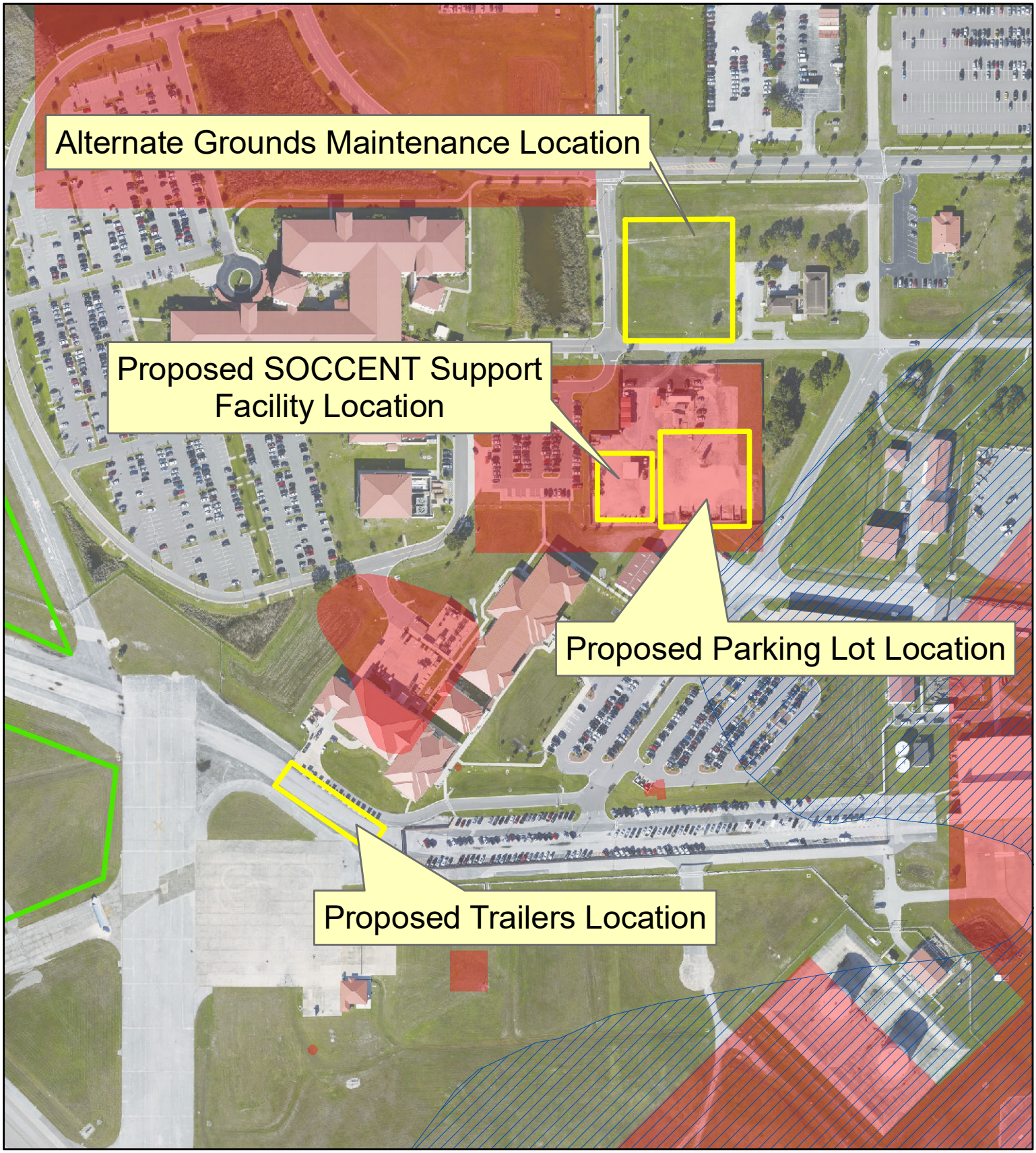
FIGURES

Figure 1-1: Project Locations

Figure 2-1: Project Locations and Development Constraints



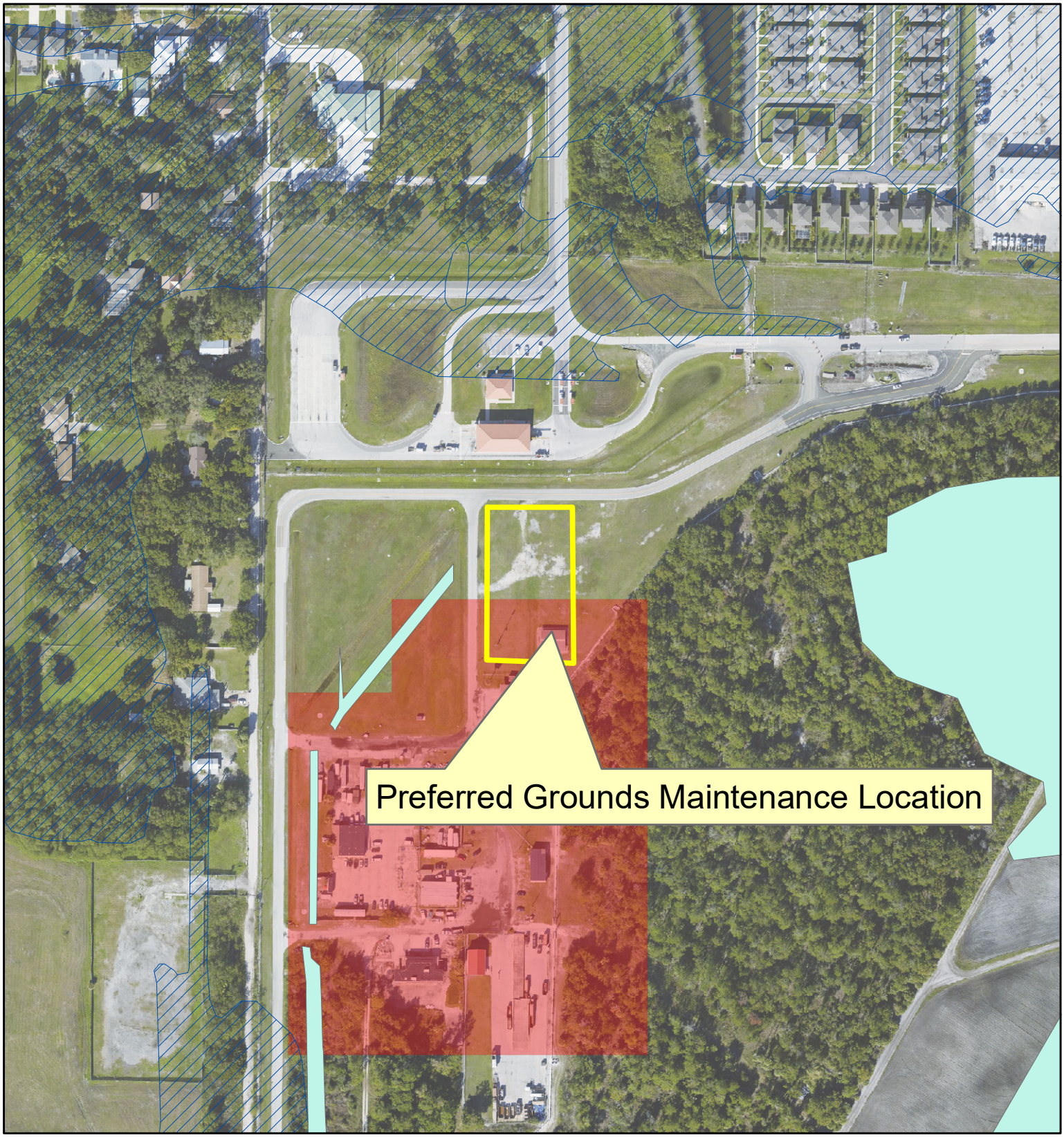
Legend

- Burrowing Owl Habitat
- Project Locations
- 100 Year Floodplain
- Environmental Restoration Sites

N

0 75 150 300 450 600 Feet

Figure 2-2: Preferred Grounds Maintenance Location and Development Constraints



Legend

- Wetlands
- 100 Year Floodplain
- Project Locations
- Environmental Restoration Sites

N

0 75 150 300 450 600 Feet

TABLES

Table 2-1 Comparison of Environmental Consequences

Construction of SOCCENT Support Facility

Environmental Resources	Alternative A - Proposed Action	Alternative B - Grounds Maintenance Location	Alternative C - No Action Alternative
Air Quality	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Noise	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Hazardous Materials/Wastes/Stored Fuels	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Water Resources	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Floodplains	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Cultural Resources	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Transportation	Short-term - *Minor Adverse* Long-term - *Minor Adverse* Cumulative - *Minor Adverse*	Short-term - *Minor Adverse* Long-term - *Minor Adverse* Cumulative - *Minor Adverse*	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Safety and Occupational Health	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - *Minor Adverse* Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Socioeconomics	Short-term - *Minor Beneficial* Long-term - *Minor Beneficial* Cumulative - *Minor Beneficial*	Short-term - *Minor Beneficial* Long-term - *Minor Beneficial* Cumulative - *Minor Beneficial*	Short-term – No impact Long-term - No Impact Cumulative - No Impact
Biological Resources	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Geology and Soils	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Environmental Justice	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact
Airspace and Airfield Operations	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact	Short-term - No Impact Long-term - No Impact Cumulative - No Impact

Table 4-2 Installation Development Projects FY18-FY22

Project Number	Project Title	Estimated Total Area Impacted (SF)	Project Description
NVZR153713	ADAL Fuel Cell Maintenance Dock Building 1071	30,500	Renovate approximately 17,000 SF of Building 1071 and construct a new 13,500 SF addition to improve Fuel Cell Maintenance.
NVR173702	Construct MARCENT HQ Facility	59,700	Construct an approximately 60,000 SF facility within the existing CENTCOM Complex, and demolish Buildings 535 and 548.
NVZR153704	Construct CENTCOM Support Facility	134,400	Construct a multi-story CENTCOM Support Facility and demolish Buildings 529, 530, 531, 550, 1047, 3070, 3071, 3072, and 3541.
NVZR133713	Construct Youth Center	44,000	Construct a Youth Activity Center to consolidate functions currently operating in Building 307.
NVZR103712	Construct Alert Facility/Alert Ramp Improvements	86,000	Construct a 2-story 30,000 SF building with an additional alert ramp to create room for 12 KC-135 aircraft.
NVZR160038 & NVZR160034	Construct Wastewater Treatment Plant (WWTP) Administration Building and Storage Facility	40,000	Construct an administration building and adjacent warehouse along the shoreline at the WWTP for administrative and operational functions. Install new electrical utilities to upgrade service to the WWTP.
NVZR080003	Construct FAM Camp Annex	800,000	Clear wooded areas to add RV parking pads, an activity center, and other amenities for the FAM Camp.
NVZR173708	Construct New Fire Station	10,000	Construct a new fire station with larger bays and drive-thru access near the Base Theater.
NVZR053706	Construct Fuels Management Facility	10,500	Demolish Building 1062 and construct a new Fuel Management Facility, including a laboratory, resource control center, and offices.
NVZR150072	Construct Screen Enclosure CDC MFAC	35,000	Construct additions to several Child Development Center buildings to provide enclosed recreational areas to children.
NVZR150063	Construct Parking Lot Building 1071	140,000	Construct a new parking lot and an associated stormwater management system near Building 1071.
Unknown/IDP	SOCOM Main HQ Replacement Facility (Building 501)	210,000	Construct a new SOCOM HQ facility.

Project Number	Project Title	Estimated Total Area Impacted (SF)	Project Description
NVZR150072	Construct Screen Enclosure CDC MFAC	35,000	Construct additions to several Child Development Center buildings to provide enclosed recreational areas to children.
NVZR150063	Construct Parking Lot Building 1071	140,000	Construct a new parking lot and an associated stormwater management system near Building
Unknown/IDP	SOCOM Main HQ Replacement Facility (Building 501)	210,000	Construct a new SOCOM HQ facility.
NVZR093705	Extend Great Egret Avenue	60,000	Extend Great Egret Ave to S. Boundary Blvd.
NVZR173706	Construct LRS Vehicle Maintenance Complex	32,000 (Building) / 293,000 (Parking / Roadway)	Demolish Buildings 119, 175, 178, 500, 510, and 3175 to clear site for new construction. New construction would consist of multiple buildings and a parking lot to support Logistics Readiness, Maintenance and Operations Squadron. Approximately 975 feet of Marina Bay Drive would be realigned, and two box culverts would be added.
Unknown / IDP	Construct SOCOM Parking Lot	43,500	Construct a new parking lot with approximately 400 parking spaces near the SOCOM facility.
NVZR143705	Add COCOM Essential Power Upgrade	Unknown	Construct a new 37.5 megawatt (MW) electrical substation at Tanker Way Gate.
NVZR173711	SOCCENT Support Facility	25,000	Construct a new secure support facility to provide command and control capabilities,
NA	Construct Multi-Use Access Trails	30	Survey, design, and permit a series of access trails throughout approximately 1,500 acres of
NA	Dredge Hole Fill & Seagrass Restoration	10	Survey, design, model, and obtain permits for the placement of fill material in two historic dredge holes

APPENDIX A

AIR FORCE FORM 813

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS	Report Control Symbol RCS: ***18-0206***

INSTRUCTIONS:	*Section I to be completed by Proponent. Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I – PROPONENT INFORMATION **LOG ID#: 20180206**

1. TO *(Environmental Planning Function)*	2. FROM *(Proponent Organization and functional address symbol)*	2a. TELEPHONE NO.
6 CES/CEIEC	6 CES/CEP	DSN 968-0855

3. TITLE OF PROPOSED ACTION

SOCCENT Support Facility

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

SOCCENT has outgrown its current facility. Personnel are housed in satellite and off-base facilities. Additional personnel are needed to meet growing mission requirements. Additional administrative space and parking is required to accommodate the personnel.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) *(Provide sufficient details for evaluation of the total action)*

Construct 12,500 ft2 footprint headquarters operations facility, add 60 new personnel, consolidate scattered personnel, construct office trailers, construct parking, relocate grounds maintenance yard.

6. PROPONENT APPROVAL (Name and Grade)	6a. SIGNATURE	6b. DATE
Michael Cooley	\\ELECTRONICALLY SIGNED\\	20180206

SECTION II – PRELIMINARY ENVIRONMENTAL SURVEY *(Check appropriate box and describe potential environmental effects including cumulative effects) (+=positive effect; 0=no effect; - = adverse effect; U=unknown effect)*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*		X		
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*			X	
9. WATER RESOURCES *(Quality, quantity, source, etc.)*			X	
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity distance, bird/wildlife aircraft hazard, etc.)*			X	
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*			X	
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*		X		
13. CULTURAL RESOURCES *(Native American burial sites, archaeological, historical, etc.)*		X		
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*		X		
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	X			
16. OTHER *(Potential impacts not addressed above.)*		X		

SECTION III – ENVIRONMENTAL ANALYSIS DETERMINATION

17.		
		PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX)
	X	PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

CATEX A2.3.11 - actions similar to other actions which have been determined to have insignificant impact in a similar setting as established in an environmental impact statement (EIS) or an EA resulting in a Finding of No Significant Impact (FONSI). The Additional KC-135 Aircraft at MacDill AFB Environmental Assessment FONSI/FONPA was signed 20 June 2017.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade)	19 a. SIGNATURE	19 b. DATE
MICHAEL FLACH, GS-12 6 CES/CEIE		

APPENDIX B

CZMA CONSISTENCY STATEMENT

APPENDIX B
CONSISTENCY STATEMENT

This consistency statement will examine the potential environmental consequences of the Proposed Action and ascertain the extent to which the consequences of the Proposed Action are consistent with the objectives of Florida Coastal Management Program (CMP).

Of the Florida Statutory Authorities included in the CMP, impacts in the following areas are addressed in the EA: beach and shore preservation (Chapter 161), historic preservation (Chapter 267), economic development and tourism (Chapter 288), public transportation (Chapters 334 and 339), saltwater living resources (Chapter 370), living land and freshwater resource (Chapter 372), water resources (Chapter 373), environmental control (Chapter 403), and soil and water conservation (Chapter 582). This consistency statement discusses how the proposed options may meet the CMP objectives.

CONSISTENCY DETERMINATION

Chapter 161: Beach and Shore Preservation

No disturbances to the base's canals are foreseen under the Proposed Action or Alternative Actions.

Chapter 267: Historic Preservation

The Air Force and the Florida State Historic Preservation Officer have determined that the Proposed Action will have no effect on historic properties associated with the Base.

Chapter 288: Economic Development and Tourism

The EA presents the new employment impact and net income impact of the Proposed Action and alternative. The options would not have significant adverse effects on any key Florida industries or economic diversification efforts.

Chapter 372: Saltwater Living Resources

The EA addresses potential impacts to local water bodies. Water quality impacts were surveyed for existing conditions at the Proposed Action and alternatives. Results indicate that no impacts would result from the Proposed Action or alternatives.

Chapter 372: Living Land and Freshwater Resources

Threatened and endangered species, major plant communities, conservation of native habitat, and mitigation of potential impacts to the resources are addressed in the EA. The Proposed Action and alternatives would not result in permanent disturbance to native habitat and should not significantly impact threatened or endangered species.

Chapter 373: Water Resources

There would be no impacts to surface water or groundwater quality under the Proposed Action or alternatives as discussed in the EA.

Chapter 403: Environmental Control

The EA addresses the issues of conservation and protection of environmentally sensitive living resources; protection of groundwater and surface water quality and quantity; potable water supply; protection of air quality; minimization of adverse hydrogeologic impacts; protection of endangered or threatened species; solid, sanitary, and hazardous waste disposal; and protection of floodplains and wetlands. Where impacts to these resources can be identified, possible mitigation measures are suggested. Implementation of mitigation will, for the most part, be the responsibility of MacDill AFB.

Chapter 582: Soil and Water Conservation

The EA addresses the potential of the Proposed Action and alternatives to disturb soil and presents possible measures to prevent or minimize soil erosion. Impacts to groundwater and surface water resources also are discussed in the EA.

CONCLUSION

The Air Force finds that the conceptual Proposed Action and alternative plans presented in the EA are consistent with Florida's CMP.

APPENDIX C

AGENCY COORDINATION LETTERS AND COMMENTS

APPENDIX D

AIR EMISSION CALCULATIONS FOR PROJECT

SOCCENT Support Facility
Project Summary

Includes:

1	100% of SOCCENT Support Facility	0	ft^2

Assumptions:
All land disturbance/grading area includes building construction, utility installation, landscaping, and paving operations.

Total Building Construction Area:	21,500	ft^2	
Total Demolished Area:	1,000	ft^2	If project includes any demolition, include here
Total Paved Area:	80,000	ft^2	
Total Disturbed Area:	159,000	ft^2	Total Disturbed Area is usually larger than the building being demolished unless the facility demolished is multi-story. If larger, do not use the sum from above, replace with your own value in cell "C14".
Construction Duration:	1.0	year(s)	If construction duration is less than a year, change the value.
Paving Duration:	2.0	months	
Annual Construction Activity:	230	days/yr	

Project Proposed for CY 2018

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Combustion Emissions (tpy)	4.85	0.50	2.13	0.36	0.35	0.34
Fugitive Dust Emissions (tpy)	0.00	0.00	0.00	0.00	2.84	0.36
Total Project Emissions (tpy)	**4.851**	**0.500**	**2.129**	**0.365**	**3.185**	**0.696**
Hillsborough County Emissions (tpy)	58,191	34,880	6,517	65,890	22,379	7,221
Project Percentage (%)	0.0083%	0.00143%	0.03267%	0.000554%	0.0142%	0.0096%
Regionally Significant? (more than 10%)	**no**	**no**	**no**	**no**	**no**	**no**

Combustion Emissions

Emission Factors Used for Construction Equipment

References: Guide to Air Quality Assessment, SMAQMD, 2004; and U.S. EPA NONROAD Emissions Model, Version 2005.0.0
Emission factors are taken from the NONROAD model and were provided to e²M by Larry Landman of the Air Quality and Modeling Center (Landman.Larry@epamail.epa.gov) on 12/14/07. Factors provided are for the weighted average US fleet for CY2007.
Assumptions regarding the type and number of equipment are from SMAQMD Table 3-1 unless otherwise noted.

Grading

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Bulldozer	1	13.60	0.96	5.50	1.02	0.89	0.87
Motor Grader	1	9.69	0.73	3.20	0.80	0.66	0.64
Water Truck	1	18.36	0.89	7.00	1.64	1.00	0.97
Total per 10 acres of activity	3	41.64	2.58	15.71	0.83	2.55	2.47

Paving

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Paver	1	3.83	0.37	2.06	0.28	0.35	0.34
Roller	1	4.82	0.44	2.51	0.37	0.43	0.42
Truck	2	36.71	1.79	14.01	3.27	1.99	1.93
Total per 10 acres of activity	4	45.37	2.61	18.58	0.91	2.78	2.69

Demolition

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Loader	1	13.45	0.99	5.58	0.95	0.93	0.90
Haul Truck	1	18.36	0.89	7.00	1.64	1.00	0.97
Total per 10 acres of activity	2	31.81	1.89	12.58	0.64	1.92	1.87

Building Construction

Equipment[d]	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary							
Generator Set	1	2.38	0.32	1.18	0.15	0.23	0.22
Industrial Saw	1	2.62	0.32	1.97	0.20	0.32	0.31
Welder	1	1.12	0.38	1.50	0.08	0.23	0.22
Mobile (non-road)							
Truck	1	18.36	0.89	7.00	1.64	1.00	0.97
Forklift	1	5.34	0.56	3.33	0.40	0.55	0.54
Crane	1	9.57	0.66	2.39	0.65	0.50	0.49
Total per 10 acres of activity	6	39.40	3.13	17.38	3.12	2.83	2.74

Note: Footnotes for tables are on following page

Architectural Coatings

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c]	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Air Compressor	1	3.57	0.37	1.57	0.25	0.31	0.30
Total per 10 acres of activity	1	3.57	0.37	1.57	0.07	0.31	0.30

a) The SMAQMD 2004 guidance suggests a default equipment fleet for each activity, assuming 10 acres of that activity, (e.g., 10 acres of grading, 10 acres of paving, etc.). The default equipment fleet is increased for each 10 acre increment in the size of the construction project. That is, a 26 acre project would round to 30 acres and the fleet size would be three times the default fleet for a 10 acre project.
b) The SMAQMD 2004 reference lists emission factors for reactive organic gas (ROG). For the purposes of this worksheet ROG = VOC. The NONROAD model contains emissions factors for total HC and for VOC. The factors used here are the VOC factors.
c) The NONROAD emission factors assume that the average fuel burned in nonroad trucks is 1100 ppm sulfur. Trucks that would be used for the Proposed Actions will all be fueled by highway grade diesel fuel which cannot exceed 500 ppm sulfur. These estimates therefore over-estimate SO2 emissions by more than a factor of two.
d) Typical equipment fleet for building construction was not itemized in SMAQMD 2004 guidance. The equipment list above was assumed based on SMAQMD 1994 guidance.

PROJECT-SPECIFIC EMISSION FACTOR SUMMARY

Source	Equipment Multiplier*	Project-Specific Emission Factors (lb/day)					
		NO_x	VOC	CO	SO_2**	PM_{10}	$PM_{2.5}$
Grading Equipment	1	41.641	2.577	15.710	0.833	2.546	2.469
Paving Equipment	1	45.367	2.606	18.578	0.907	2.776	2.693
Demolition Equipment	1	31.808	1.886	12.584	0.636	1.923	1.865
Building Construction	1	39.396	3.130	17.382	3.116	2.829	2.744
Air Compressor for Architectural Coating	1	3.574	0.373	1.565	0.071	0.309	0.300
Architectural Coating**			11.950				

*The equipment multiplier is an integer that represents units of 10 acres for purposes of estimating the number of equipment required for the project.
**Emission factor is from the evaporation of solvents during painting, per "Air Quality Thresholds of Significance", SMAQMD, 1994
Example: SMAQMD Emission Factor for Grading Equipment NOx = (Total Grading NOx per 10 acre)*(Equipment Multiplier)

Summary of Input Parameters

	Total Area (ft^2)	Total Area (acres)	Total Days	
Grading:	159,000	3.65	3	(from "GRADING" below)
Paving:	80,000	1.84	9	
Demolition:	1,000	0.02	1	
Building Construction:	21,500	0.49	230	
Architectural Coating	21,500	0.49	20	(per SMAQMD "Air Quality of Thresholds of Significance", 1994)

NOTE: The 'Total Days' estimate for paving is calculated by dividing the total number of acres by 0.21 acres/day, which is a factor derived from the 2005 MEANS Heavy Construction Cost Data, 19th Edition, for 'Asphaltic Concrete Pavement, Lots and Driveways - 6" stone base', which provides an estimate of square feet paved per day. There is also an estimate for 'Plain Cement Concrete Pavement', however the estimate for asphalt is used because it is more conservative. The 'Total 'Days' estimate for demolition is calculated by dividing the total number of acres by 0.02 acres/day, which is a factor also derived from the 2005 MEANS reference. This is calculated by averaging the demolition estimates from 'Building Demolition - Small Buildings, Concrete', assuming a height of 30 feet for a two-story building; from 'Building Footings and Foundations Demolition - 6" Thick, Plain Concrete'; and from 'Demolish, Remove Pavement and Curb - Concrete to 6" thick, rod reinforced'. Paving is double-weighted since projects typically involve more paving demolition. The 'Total Days' estimate for building construction is assumed to be 230 days, unless project-specific data is known.

Total Project Emissions by Activity (lbs)

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Grading Equipment	124.92	7.73	47.13	2.50	7.64	7.41
Paving	408.31	23.45	167.21	8.17	24.98	24.24
Demolition	36.51	2.16	14.44	0.73	2.21	2.14
Building Construction	9,061.15	719.86	3,997.93	716.76	650.68	631.16
Architectural Coatings	71.48	246.47	31.31	1.43	6.19	6.00
Total Emissions (lbs):	9,702.37	999.67	4,258.02	729.59	691.70	670.94

Results: Total Project Annual Emission Rates

	NO_x	**VOC**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Total Project Combustion Emissions (lbs)	**9,702.37**	**999.67**	**4,258.02**	**729.59**	**691.70**	**670.94**
Total Project Combustion Emissions (tons)	**4.8512**	**0.4998**	**2.1290**	**0.3648**	**0.3458**	**0.3355**

Construction Fugitive Dust Emissions

Construction Fugitive Dust Emission Factors

	Emission Factor	Units	Source
General Construction Activities	0.19	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.42	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006

$PM_{2.5}$ Emissions

$PM_{2.5}$ Multiplier (10% of PM10 emissions assumed to be PM2.5)	0.10	EPA 2001; EPA 2006

Control Efficiency
(assume 50% control efficiency for PM10 and PM2.5 emissions) 0.50 EPA 2001; EPA 2006

Project Assumptions

New Roadway Construction (0.42 ton PM_{10}/acre-month)

Duration of Construction Project	2	months
Area	1.8	acres

General Construction Activities (0.19 ton PM_{10}/acre-month)

Duration of Construction Project	12	months
Area	1.8	acres

	Project Emissions (tons/year)			
	PM_{10} uncontrolled	PM_{10} controlled	$PM_{2.5}$ uncontrolled	$PM_{2.5}$ controlled
New Roadway Construction	1.54	0.77	0.15	0.08
General Construction Activities	4.13	2.07	0.21	0.10
Total	**5.68**	**2.84**	**0.36**	**0.18**

Construction Fugitive Dust Emission Factors

General Construction Activities Emission Factor

0.19 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM_{10}/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM_{10}/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM_{10}/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM_{10}/acre-month) and 75% of the average emission factor (0.11 ton PM_{10}/acre-month). The 0.19 ton PM_{10}/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM_{10}/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particulate (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District as well as the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas.

New Road Construction Emission Factor

0.42 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM_{10}/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

$PM_{2.5}$ Multiplier **0.10**

$PM_{2.5}$ emissions are estimated by applying a particle size multiplier of 0.10 to PM_{10} emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM_{10} and $PM_{2.5}$ **0.50**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas (EPA 2006). Wetting controls will be applied during project construction.

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999.* EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants.* Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1).* Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

Construction (Grading) Schedule

Estimate of time required to grade a specified area.

Input Parameters

Construction area: 3.65 acres/yr (from "COMBUSTION" above)

Qty Equipment: **3.00** (calculated based on 3 pieces of equipment for every 10 acres)

Assumptions.

Terrain is mostly flat.
An average of 6" soil is excavated from one half of the site and backfilled to the other half of the site; no soil is hauled off-site or borrowed.
200 hp bulldozers are used for site clearing.
300 hp bulldozers are used for stripping, excavation, and backfill.
Vibratory drum rollers are used for compacting.
Stripping, Excavation, Backfill and Compaction require an average of two passes each.
Excavation and Backfill are assumed to involve only half of the site.

Calculation of days required for one piece of equipment to grade the specified area.

Reference: Means Heavy Construction Cost Data, 19th Ed., R. S. Means, 2005.

Means Line No.	Operation	Description	Output	Units	Acres per equip-day)	equip-days per acre	Acres/yr (project-specific)	Equip-days per year
2230 200 0550	Site Clearing	Dozer & rake, medium brush	8	acre/day	8	0.13	3.65	0.46
2230 500 0300	Stripping	Topsoil & stockpiling, adverse s	1,650	cu. yd/day	2.05	0.49	3.65	1.78
2315 432 5220	Excavation	Bulk, open site, common earth,	800	cu. yd/day	0.99	1.01	1.83	1.84
2315 120 5220	Backfill	Structural, common earth, 150' l	1,950	cu. yd/day	2.42	0.41	1.83	0.75
2315 310 5020	Compaction	Vibrating roller, 6 " lifts, 3 passe	2,300	cu. yd/day	2.85	0.35	3.65	1.28
TOTAL								6.12

Calculation of days required for the indicated pieces of equipment to grade the designated acreage.

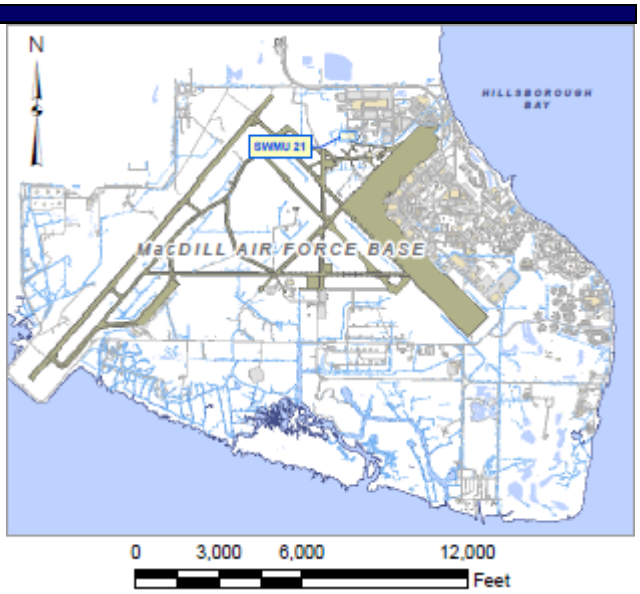
(Equip)(day)/yr: 6.12
Qty Equipment: 3.00
Grading days/yr: **2.04**

APPENDIX E

ERP SITE SUMMARIES

Site Summary: SWMU 21
Environmental Restoration Program, MacDill AFB, FL

Site ID:	SWMU 21 (SS021)
Site Name:	Old Refuel Area and Civil Engineer Storage
Site Acreage:	2.8
Institutional Controls:	Land Use Controls for soils and Groundwater-No monitoring



Contaminants of Concern (CoCs):

Groundwater:	None
Soils:	Benzo(a)pyrene Equivalent
Surface Water:	None
Sediments	None

Point of Contact:

Tish Matty, Program Manager
6 CES/CEVR
7621 Hillsborough Loop Dr. (Bldg 30)
MacDill AFB, FL 33621
P: 813-828-0776
C: 813-833-1997

Physical Setting:

SWMU 21 is the current Civil Engineering storage area and Grounds Maintenance area. The site is located in the north-central portion of the Base and is bordered to the north by Great Egret Avenue, to the east by an unpaved road leading to aircraft taxiways, to the south by Site 26 (Engine Test Cell), and to the west by the new Base clinic. The storage yard is approximately 340 feet by 600 feet. A fence surrounds the perimeter of this storage area, with locked gates located along Great Egret Avenue. An interior north-south fence bisects the storage area. The western storage area is the Civil Engineering storage yard. This area is mainly covered with grass with some gravel. The eastern storage area is used to store lumber and roofing materials; a large open structure is located in the center of this area and is being used to store lumber. The eastern area is covered mainly by asphalt. A section of the western storage area has been fenced and houses the Grounds Maintenance area.

Buildings Located on Site:

1070, 1074, 1075, 1076, 1083, 1084

Site History:

The Old Refuel Area and Civil Engineer Storage (approximately 2.8 acres), was utilized as an aircraft refueling area until the early 1950s. Past activities at the site include Civil Engineering storage and the Military Police vehicle impound area. A hardstand used to anchor aircraft was previously located on the southeast portion of the site. Two 550-gallon aboveground storage tanks were present onsite around 1994; no underground storage tanks have been identified on the site. Transformers suspected of containing polychlorinated biphenyls (PCBs) and heavy equipment have been stored onsite. Investigation activities at SWMU 21 were performed in 1988 and from 1993 through 1997 to determine the nature and extent of contamination at the site and assess potential risks to human health and the environment. No CoCs were found in groundwater, surface water and sediment exceeding Cleanup Target Levels (CTLs). The soil investigation found Benzo(a)pyrene Equivalent and dibenz(a,h)anthracene to have exceeded the industrial criteria. As a result, a soil removal was performed in September 1998. Soils were removed to a depth of two feet in three locations. Soils exceeding residential criteria for PAHs were left in place, thereby, requiring LUCs. In 2010, a request was made to convert the west side of the site into a parking lot for the new SOCCENT Headquarters/Commandant Facilities. As a result, the U.S. Army Corps of Engineers, Omaha District collected soil samples across the entire site, and all soil containing BAP Eq at concentrations above the residential SCTL of 0.1 mg/kg on the west side of the site was removed in 2011 just before construction began on the parking lot. All information from this removal is provided in the Source Removal Report – SOCCENT C&CEG Facility, Envirotek, January 2012. The new parking lot for the SOCCENT Headquarters/ Commandant Facilities was completed in early 2012. Civil engineering has relocated their storage facilities previously located on the northwest half of the site to another area of the Base. The eastern fenced portion of the site is currently being used by a grounds maintenance subcontractor for storage and stock piles of sand and gravel. It also houses their office trailer. The storm water retention ponds are currently under construction. The approved remedy in the SoB for SWMU 21 is LUCs for soils due to Benzo(a)pyrene Equivalent concentration exceedances above the residential SCTLs. Annual LUC Surveillance has been conducted at this site since 2002.

Remedial Actions to Date:

1998-Soils exceeding FDEP industrial soil standards were excavated and treated offsite, while soils containing concentrations below industrial criteria but above residential criteria remain on site.
2011- Soils containing BAP Eq at concentrations above the residential SCTL of 0.1 mg/kg on the west side of the site were excavated prior to construction of the parking lot for the SOCCENT Headquarters/ Commandant Facilities.

Exit Strategy:

Institutional Controls = LUC for soil

Requirements for Handling of Contaminated Media

In accordance with 6 CES/CEVR, Environmental Restoration Program, the following requirements shall apply:

The Contractor shall be aware that this project is located within the boundary of (a) known contaminated site(s); please coordinate with your company's Health and Safety Department to ensure compliance with OSHA regulations. The Site Summary (attached) includes information on the nature of the contaminant(s) at the site(s), as well as the media affected (groundwater, soil, or sediment).

1.) When excavating on (a) site(s) known to have soil/sediment contamination, any material excavated as a result of construction activity must be backfilled to the location from which it was removed. If there is not enough space in the excavation area to replace all the removed material, the soil/sediment must be stockpiled in a manner as not to spread contamination; i.e., staging in a roll off container or piling on a layer of polyethylene plastic sheeting (if this method is used, soil must also be covered with plastic to prevent rain from spreading contamination). Prior to removal from site, the staged material must be analyzed, at the Contractor's expense, by a certified lab. The attached Site Summary document lists the contaminant information for the site and should be provided to the lab when arranging for analysis. The Contractor shall provide the results of lab analysis to 6 CES/CEVR for interpretation prior to any action. The soil/sediment resulting from construction activity on a contaminated site may never be placed on another area of the site or used for backfill anywhere else on the installation. Upon notice from 6 CES/CEVR, the Contractor will be required remove the stockpiled material from the site and arrange for transport to an appropriate receiving facility;

   a) If test results are below FDEP Soil Cleanup Target Levels (SCTLs), the soil/sediment must be hauled off-site and transported, at the Contractor's expense, to a landfill/facility that accepts Class III wastes, in accordance with Florida Administrative Code (F.A.C.) 62-701, *Solid Waste Management Facilities*.

   b) If soil/sediment is found to exceed FDEP SCTLs, the soil/sediment must be hauled off-site and transported, at the Contractor's expense, to a landfill/facility that accepts Class II waste, in accordance with F.A.C. 62-701, *Solid Waste Management Facilities*. In addition, the Contractor must coordinate with 6 CES/CEVR for signatures on the non-hazardous waste profiles/manifests that are required for transport.

2.) When excavating on (a) site(s) known to have groundwater contamination, groundwater extracted as a result of excavation must be contained and analyzed, at the Contractor's expense, by a certified lab. The attached Site Summary document lists the contaminant information for the site and should be provided to the lab when arranging for analysis. In addition, the Contractor must request that the lab analyze the dewater product for the following parameters to comply with F.A.C. 62-621.302, *Generic Permit for the Discharge of Produced Groundwater From Any Non-Contaminated Site Activity*:

	Screening Values for Discharges into:	
Parameter	Fresh Waters	Coastal Waters
Total Organic Carbon (TOC)	10.0 mg/l	10.0 mg/l
pH, standard units	6.0 – 8.5	6.0 – 8.5
Total Recoverable Mercury	0.012 µg/l	0.025 µg/l
Total Recoverable Cadmium	9.3 µg/l	9.3 µg/l
Total Recoverable Copper	2.9 µg/l	2.9 µg/l
Total Recoverable Lead	0.03 µg/l	5.6 µg/l
Total Recoverable Zinc	86.0 µg/l	86.0 µg/l
Total Recoverable Chromium (Hex.)	11.0 µg/l	50.0 µg/l
Benzene	1.0 µg/l	1.0 µg/l
Naphthalene	100.0 µg/l	100.0 µg/l

The Contractor shall provide the results of lab analysis to 6 CES/CEVR for interpretation prior to any action. Produced groundwater is never to be discharged back to the site. Upon notice from 6 CES/CEVR, the Contractor will be required to dispose of dewater product in one of the following ways:

a) If the test results are **below** FDEP Groundwater Cleanup Target Levels (GCTLs) and DOES NOT EXCEED the parameters for Coastal Waters, in accordance with F.A.C. 62-621.302, the Contractor may discharge the groundwater to stormwater drainage system;

b) If the test results are **below** FDEP Groundwater Cleanup Target Levels (GCTLs), but EXCEEDS the parameters for Coastal Waters, in accordance with F.A.C. 62-621.302, the contaminated groundwater must be transported off-site for disposal/treatment at the Contractor's expense, in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, Appendix A, Standard Operating Procedure (SOP) Number 4, Investigation Derived Waste (IDW) Management;

c) If the test results are **above** FDEP GCTLs, the contaminated groundwater must be transported off-site for disposal/treatment at the Contractor's expense, in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, Appendix A, Standard Operating Procedure (SOP) Number 4, Investigation Derived Waste (IDW) Management;

d) If the test results are **above** FDEP GCTLs and there is only petroleum contaminates in the groundwater, than a *Generic Permit for Discharge from a Petroleum Contaminated Site* may be obtained from FDEP in order to treat the contaminated groundwater and discharge it to the stormwater drainage system in accordance with the requirements of the FDEP.

3.) The Contractor shall consider any drill cuttings or slurries generated from excavation activities within a known contaminated site to be Investigation Derived Waste (IDW), and must be disposed of in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, Appendix A, Standard Operating Procedure (SOP) Number 4, Investigation Derived Waste (IDW) Management.

4.) Groundwater monitoring wells may be located in the project area. Approximate well locations are provided upon project design; however, more wells may exist in the project area than are shown. The Contractor shall survey the site prior to start of work for exact locations of all wells. Great care must be taken to protect all the wells found in the project area; as such wells must be identified and clearly marked;

a) If any of these wells are damaged during this project, the Contractor shall either repair or abandon and reinstall the well at the Contractor's expense, in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, Appendix A, Standard Operating Procedure (SOP) Number 6, Well Installation, Development, and Abandonment Procedures. The determination as to whether the well can be repaired or must be properly abandoned and a new well installed will be made by MacDill AFB Environmental Restoration Personnel.

b) If the work is such that damage to a well is unavoidable, the well must be properly abandoned prior to construction activities and a new well installed at the Contractor's expense upon completion of construction activities. The Contractor shall coordinate the well abandonment and reinstallation activities with MacDill AFB Environmental Restoration Personnel (ERP) to ensure that well locations are acceptable to regulators before construction activities take place.

c) Wells must be abandoned/reinstalled by a Florida licensed driller and surveyed by a Registered Land Surveyor in the State of Florida. Well locations are to be surveyed to within 1 foot accuracy using Florida State plane, West Zone, North American Datum, 1983 (NAD 83). Ground surface elevations and top of concrete pad elevations will be surveyed to within 0.1 ft accuracy; and top of casing elevations will be surveyed to within 0.01 ft accuracy. Elevations will be referenced to the National Geodetic Vertical Datum of 1929 (NGVD-29).

d) All field logs, permits and survey forms must be provided to 6 CES/CEVR at the completion of well abandonment/installation. The Contractor must coordinate with 6 CES/CEVR to obtain well tag specifications and ordering information.

Updated By: **Kristy Snyder**

Date Updated: **15 January 2014**

Site Summary: SWMU 28
Environmental Restoration Program, MacDill AFB, FL

Site ID: SWMU 28 (OT028)

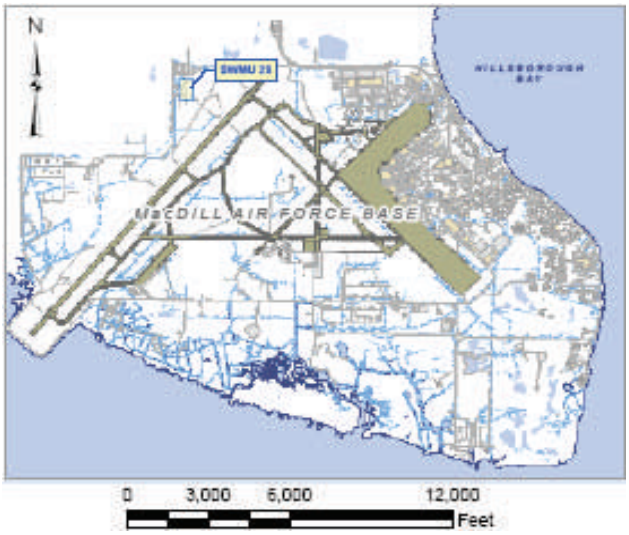
Site Name: Entomology Shop

Site Acreage: 9.4

Site Status: Remedial Action-Optimization

Institutional Controls: Land Use Controls for soils and Groundwater

Site Closure: 9/30/2037



Contaminants of Concern (CoCs):

Groundwater: Arsenic

Soils: Arsenic, Benzo(a)pyrene Equivalent

Surface Water: None

Sediments None

Point of Contact:

Tish Matty, Program Manager
6 CES/CEVR
7621 Hillsborough Loop Dr. (Bldg 30)
MacDill AFB, FL 33621
P: 813-828-0776
C: 813-833-1997

Physical Setting:

SWMU 28, the Entomology Shop, Buildings 864 and 865, and Wash Area is located in the north-central section of the Base, approximately 1,800 ft northwest of the main runway. An active waste transfer station is located just south of the SWMU 28 boundary. Permanent structures on-site include Building 864, the Entomology Building, which is used to store and mix pesticides for application around the Base, and Building 865, the Entomology Administration Building.

Buildings Located on Site:

864, 864 A, 864 HT, 864 S1, 865, 868, 880, 880 S1, 880 S2, 880 T1, 880 T2, 880 T3, 880 T4, 885

Site History:

Since 1982, workers have washed pesticide and herbicide application equipment at SWMU 28. Currently building 864, the Entomology Shop, is used to store and mix pesticides and herbicides, as well as store and maintain spray application equipment. Until 1992, equipment wash water was not collected or contained. In June 1992, an equipment wash rack was constructed near the northwest corner of Building 864. Spent water flowed via a drain in the wash rack area to a storage tank near the building. The water was then piped to an evaporation bed northeast of Building 864. Former onsite structures included a 100-foot by 100-foot livestock quarantine area, which was located 200 feet west of Building 864, and a railroad spur, which ran north-south along the site's eastern border. The cattle holding area has been removed, and only a small mound exists at the location of the former railroad tracks.

Investigation activities were initiated in 1990 with ground water and soil sampling. Further investigation activities at SWMU 28 were performed from 1994 through 2004 to determine the nature and extent of contamination at the site and assess potential risks to human health and the environment. No CoCs were found in surface water or sediment exceeding Cleanup Target Levels (CTLs). The soil investigation found arsenic and polynuclear aromatic hydrocarbons (PAHs) exceeding residential Soil Cleanup Target Levels (SCTLs), but less than industrial SCTLs. The groundwater investigation found arsenic exceeding Groundwater Cleanup Target Levels (GCTLs). The approved remedy in the SoB for SWMU 28 is MNA of groundwater for arsenic, groundwater use restrictions, and LUCs for soils due to arsenic and benzo(a)pyrene Equivalent equivalent concentration exceedances above the residential SCTLs. Annual groundwater monitoring for arsenic is currently being conducted at SWMU 28 along with annual nonresidential LUC surveillance.

Remedial Actions to Date:

Monitored Natural Attenuation

Exit Stategy:

Institutional Controls with MNA. ICs = LUC for soils and groundwater based on site-specific risk assessment.

Requirements for Handling of Contaminated Media

a. Dewatering on Contaminated Sites. Produced groundwater is not to be discharges back to the site. The Contractor must contain and test all removed groundwater, and share test results with 6 CES/CEVR prior to any action. Based on the test results, the Contractor has the following options:

1. If the test results are below FDEP Groundwater Cleanup Target Levels (GCTLs), the Contractor may discharge the groundwater to stormwater drainage system in accordance with the requirements of the FDEP;

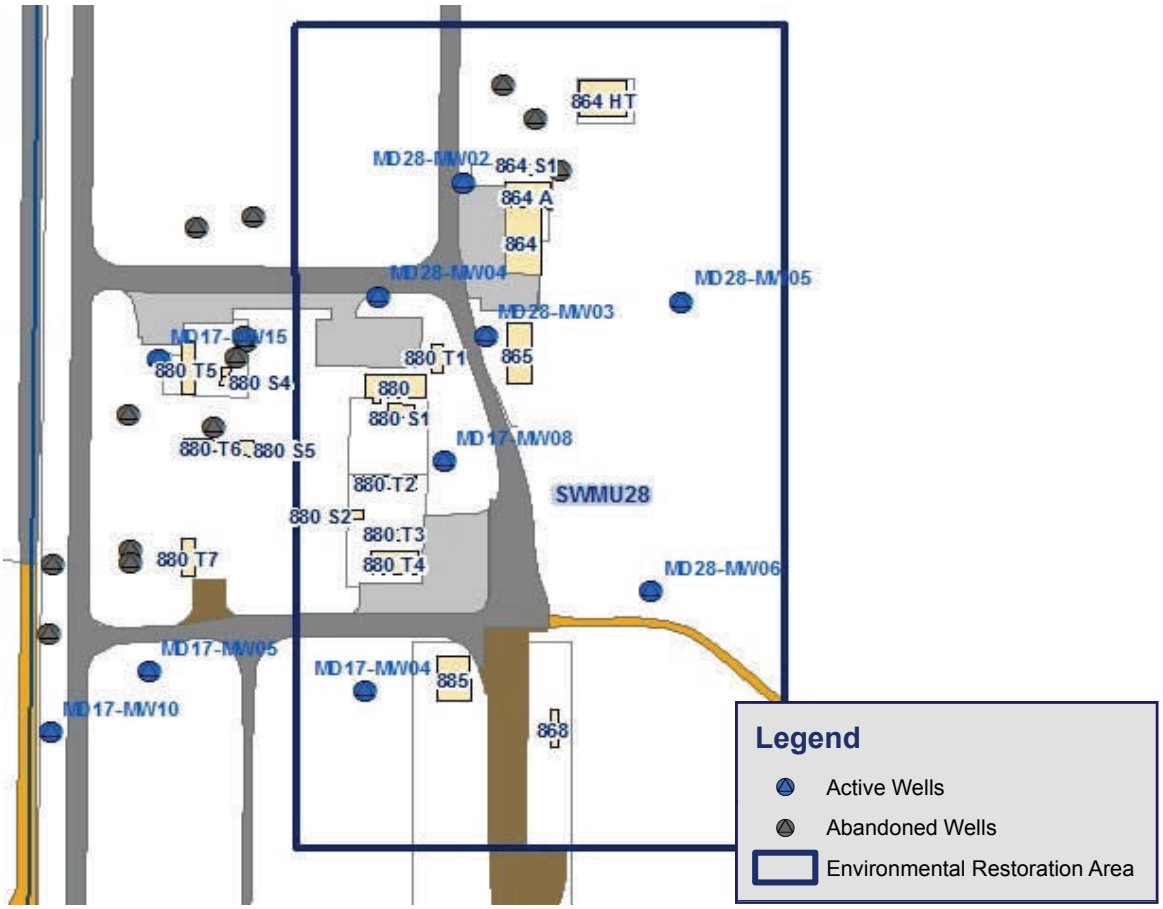
2. If the test results are above FDEP GCTLs, the contaminated groundwater must be transported offsite for disposal/treatment;

b. Soil Removal on Contaminated Sites. On sites where contamination has been left in place above residential FDEP Soil Cleanup Target Levels (SCTLs), the soil may be placed back where it was excavated from. If there not enough space in the excavation area to replace all the removed soil, it must be hauled off site for treatment and disposal at the contractor’s expense. The contaminated soil may not be placed on another area of the site.

Groundwater Monitoring Well Procedures:

1. The government has tried to identify as many wells as possible, however, more wells may exist in the project area than are shown in the MacDill GeoBase system. Therefore, the contractor must survey the site prior to start of work for exact locations of all wells. Great care must be taken to protect and not damage all the wells found in the project area in accordance with FAR 52.236-9. If any of these wells are damaged during this project, it is the contractor's responsibility to either repair or abandon and reinstall the well in accordance with the MacDill AFB Basewide Environmental Restoration Work Plan, at their expense. The determination as to whether the well can be repaired or must be properly abandoned and a new well installed will be made by MacDill AFB Environmental Restoration Personnel. Appendix A of the MacDill AFB Basewide Environmental Restoration Work Plan, Standard Operating Procedures (SOP) Numbers 4 and 6 are attached to this specification. SOP Number 4 is Investigation Derived Waste (IDW) Management and SOP Number 6 is Well Installation, Development, and Abandonment Procedures.

2. If the work is such that damage to a well is unavoidable, the well must be properly abandoned prior to construction activities and a new well installed upon completion of construction activities at the contractors expense. Groundwater monitoring well abandonment and installation shall be performed in accordance with procedures mentioned above. The contractor shall coordinate the well abandonment and reinstallation activities with MacDill AFB Environmental Restoration Personnel (ERP) to ensure monitoring requirements and schedules are acceptable to regulators before construction activities take place. MacDill AFB ERP will determine the location of any replacement wells to be installed.



Updated By: Kristy Snyder **Date Updated: 28 July 2010**

APPENDIX F

PUBLIC NOTICE DOCUMENTS