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Approved for public release; distribution unlimited
MEMORANDUM FOR: Government Organization
Attn: Don Morris
Building 1825
Hanscom AFB, MA 01731

FROM: 66 MSG/CEKV Environmental (Metcalf & Eddy)

SUBJECT: Environmental Assessment for Replacement Acquisition Management Facility (Bldg 1600)

The public comment period for the Environmental Assessment (EA) ended on Thursday 29 May with no comments. During preparation of the EA it was determined that the construction of the new Acquisition Management Facility and demolition of existing Bldg 1600 will not have a significant impact on the natural or human environment. This resulted in a Finding of No Significant Impact (FONSI) and no environmental impact statement needs to be prepared.

1. Please see the following deliverable:
   Environmental Assessment for Replacement Acquisition Management Facility (Bldg 1600)

2. If you have any questions please contact the undersigned at 781-377-4667.

Respectfully submitted,

Edward A. Conroy, P.E.
Environmental Manager

Attachment

Cc: Ken Paton, USACE
DRAFT ENVIRONMENTAL ASSESSMENT

REPLACEMENT ACQUISITION MANAGEMENT FACILITY
(BLDG 1600)

HANSCOM AFB, MASSACHUSETTS

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FINDING OF NO SIGNIFICANT IMPACT

Name of Action: Replacement Acquisition Management Facility (Bldg 1600)

Hanscom AFB proposes to construct a new Acquisition Management Facility within the Electronic Systems Center (ESC) campus to replace an aging structure built in 1953-1955. The new Acquisition Management Facility would be located on-base within the same parcel as the existing building which currently provides this function (Bldg 1600). The project would be constructed in two phases. The first phase would create a new 2- to 3-story, 40,000 square foot office building; the second phase would add a modular 30,000 square foot extension to the proposed building. Also, during the second phase, the existing Bldg 1600 would be demolished. Parking needs would also be provided for in stages, with reconfiguration of the existing parking lots and/or creation of a new lot to provide the 150 to 160 parking spaces required for the facility (inclusive of both phases).

The Environmental Assessment (EA) prepared for the proposed action addresses the site specific impacts of constructing the new Acquisition Management Facility and demolishing the existing Bldg 1600, and evaluates the consequences of the new facility on both the natural and man-made environments. The new Acquisition Management Facility will provide for the relocation of personnel from a rapidly deteriorating building that is beyond its useful life with HVAC, electrical, lighting, and structural deficiencies. The proposed project will provide a modern, aesthetically pleasing, functional, and efficient office space to support acquisition activities within the ESC Campus.

A number of alternatives to the proposed action were evaluated, including: a) taking no action, b) renovating the existing Bldg 1600, c) constructing a new facility but on a different parcel, and d) constructing a new facility on the same parcel but with a different layout than the preferred alternative. None of these alternatives were determined to meet the needs of Hanscom AFB. The no action alternative would require escalating maintenance expenditures and loss of personnel efficiency due to the building’s inadequacies. Renovation of the existing building was determined to be less cost-efficient over the life of the project. No suitable parcel with existing infrastructure and prominence of location was determined to be available, and no alternative layout was identified that would better achieve a balance among operational efficiency, minimization of footprint, and building height constraints than the proposed compact 2- to 3-story building.

If the new Acquisition Management Facility is constructed as proposed, no significant adverse impacts associated with land use, socioeconomics, transportation, noise, air quality, geology/
Preliminary concept drawings have suggested the potential for approximately 24 mature trees to be removed to make way for parking lot(s). While the loss of 24 trees is not anticipated to substantially impact the biological community on HAFB, the design contractor will continue re-evaluating site layouts to determine whether the loss of trees is unavoidable. The contractor would be encouraged to consider parking layouts which would minimize tree clearing and/or incorporate existing trees into natural islands within the parking lot. If the trees are removed, it is anticipated that their ecological function would be replaced, in part, with new tree/shrub plantings that would occur after Bldg 1600 is demolished and that footprint is potentially reclaimed for parkland or open space.

While some environmental impacts would result from this project, they are expected to be minor. The anticipated short-term construction impacts are not atypical compared with other routine construction projects. The function to be provided by personnel within the new facility is routine acquisition management and thus the daily operation of the facility would not generate unusual releases to the environment. Additionally, Hanscom AFB has undertaken, or will employ, a number of pro-active measures to mitigate the project’s potential impact to the environment. The new facility will qualify for certification under the Leadership in Energy and Environmental Design (LEED) Green Building System, reflecting Hanscom AFB’s commitment to being environmentally responsible and providing a healthy place to work. With the incorporation of LEED technologies in the building, and the continued emphasis by Hanscom AFB on “reduce, reuse, recycle”, it is expected that the new Acquisition Management Facility will operate more efficiently and use fewer resources than the building it replaces. Additionally, the project is required to implement a drainage management system that will reduce runoff during a storm and retain water for an orderly discharge, in accordance with Hanscom AFBs drainage requirements. The project’s drainage system would retain more water on site than occurs presently, thereby
reducing the site’s contribution to flashy rises in river levels during precipitation events. Additionally, the retention of stormwater will allow for increased groundwater infiltration, which is expected to support base flow in the Shawsheen River during prolonged periods without substantial precipitation.

It is anticipated that few mitigation measures would be required during construction and operation of the facility. To minimize noise impacts during construction, mufflers would be used on construction equipment and vehicles. In addition, all equipment and vehicles used during construction would be maintained in good operating condition so emissions are minimized, thus reducing the potential for air quality impacts. Dust would be controlled onsite by using water to wet down disturbed areas. The temporary construction activities are not anticipated to substantially impact stormwater runoff; however, during construction, all activities will follow the base best management practices (BMPs) guidelines to minimize sedimentation and erosion during storm events. All hazardous materials used during construction would be handled and disposed of in accordance with Hanscom AFB policies and protocols and all applicable state and federal regulations.

Hanscom AFB has conducted Environmental Assessments for similar building construction/replacement projects, such as the “Environmental Assessment and Conformity Analysis – Fitness Center, Building 1548, Addition and Alterations” which created a new facility with a total of 49,000 square feet (HAFB, 2002). The type of routine construction impacts that would be expected for the new Acquisition Management Facility project have also been described in previous EAs prepared for HAFB, including the “Environmental Assessment – Relocate Acquisition Management Personnel and Renovate Acquisition Management Facility – Bldg 1614” (HAFB, 2000) and the “Environmental Assessment for Housing Privatization at Hanscom AFB” (HAFB, 2003). All of these actions resulted in a Finding of No Significant Impact (FONSI).

Based on the detailed description of effects described in the Environmental Assessment for this proposed action, along with the base’s previous findings for similar actions, I have determined that the construction of the new Acquisition Management Facility and demolition of Bldg 1600 will not have a significant impact on the natural or human environment. For this reason, no environmental impact statement needs to be prepared.

CHRIS L. PERKINS, P.E.
Base Civil Engineer

Date 2 June 08
1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

Hanscom AFB proposes to construct a new Acquisition Management Facility to replace an aging structure built in 1953-1955. The new Acquisition Management Facility would be located on-base within the same parcel as the existing Building (Bldg) 1600, which currently houses the acquisition management personnel, within the heart of the Electronics System Center (ESC) campus. The project would be constructed in two phases. The first phase would create a new 2- to 3-story, 40,000 square foot office building; the second phase would add a modular 30,000 square foot extension to the proposed building. Also, during the second phase, the existing Bldg 1600 would be demolished. The existing parking lots would be reconfigured and/or new lots created on the parcel to provide the 150 to 160 parking spaces required for the facility (inclusive of both phases).

The organizations in the existing facility support the development, acquisition and delivery of C4I electronic systems and equipment for the joint services and Air Force Command and Control. This project provides for the relocation of people from a high maintenance facility that is beyond its useful life. The completion of this project will contribute to an estimated $100,000 that will be saved on annual maintenance costs incurred on the deteriorating facility.

This Environmental Assessment (EA) addresses the Proposed Action and the No-Action Alternative in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ, 1978) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR 989 et seq., Environmental Impact Analysis Process (formerly known as Air Force Instruction [AFI] 32-7061). NEPA procedures were established to ensure environmental information is available to public officials and citizens before decisions are made and before actions are taken.

According to these instructions, the environmental assessment is a written analysis which serves to (1) provide analysis sufficient to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI); and (2) aid federal agencies in complying with NEPA when no EIS is required. If this EA were to determine the proposed action would significantly degrade the environment, significantly threaten public health or safety, or generate significant public controversy, then an EIS would be completed. An EIS involves a comprehensive assessment of project
impacts and alternatives and a high degree of public input. Alternatively, if this EA results in a FONSI, then the action would not be the subject of an EIS. The EA is not intended to be a scientific document. The level and extent of detail and analysis in the EA is commensurate with the importance of the environmental issues involved and with the information needs of both the decision-makers and the general public.

This EA addresses the site-specific impacts of constructing the new office facility, its associated parking lot(s), and demolition of the existing building on Hanscom AFB, and evaluates the consequences of constructing and operating this facility on the natural and man-made environments.

1.2 PURPOSE AND NEED OF THE PROPOSED ACTION

The existing facility (Bldg 1600) was constructed in the 1950s as a Wing Headquarters, and is rapidly deteriorating. The building's existing heating, ventilation, air-conditioning (HVAC) system is inadequate for today's modern needs. The HVAC system does not provide adequate fresh air, and was not designed to compensate for the heat load generated by today's modern electrical equipment, such as personal computers, printers, copiers, and fax machines. The electrical system is also unable to adequately support computer workstations; the building's circuit wire is not compliant with current building code. The interior lighting system, ceilings, flooring and other finishes are not adequate to provide suitable working space for ESC acquisition professionals, nor are they appropriate for the frequent senior level international visitors. The facility contains asbestos and does not meet Life Safety Code requirements. Additionally, the exterior brick facade is failing due to age and wear.

The layout of the existing building is inefficient and inconsistent with its function. The interior architectural layout consists of small rooms with long center corridors. While there are three squadron commanders or equivalents (554 ELSW, 632 ELSS, 653 ELSS) who work from this facility, there is only office space for one commander, thus relegating the others to work from cubicles. The existing building also lacks a place for the Wing Director to address the whole wing.

The purpose of the proposed project is to provide a modern, aesthetically pleasing, functional and efficient office space to support the office activities within the ESC Campus on Hanscom AFB. There is no expected increase in the number of personnel. As the project comes to fruition, existing staff will simply relocate from the old building to the proposed building.
2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION: NEW ACQUISITION MANAGEMENT FACILITY

The proposed action is the construction of a building, in two phases (40,000 square feet + 30,000 square feet), to provide replacement office space. The building is expected to be 2- to 3-story, with a brick exterior, consistent with the architectural context of the ESC campus. The new building will be constructed within the parcel bounded by Barksdale Street, Arnold Street and Eglin Street. As part of the proposed action, the existing parking lot will be reconfigured and supplemental parking will be added. During the second phase, the existing Bldg 1600 will be demolished, with the potential for the building’s footprint to be reclaimed for open space or parkland.

The new facility will provide office space for up to approximately 255 people (at completion of Phase II) conducting Acquisition-type work. The building will have the following executive offices: Wing Headquarters plus three Squadron Headquarters. Correspondingly, the proposed building will include a Wing Conference Room along with three squadron conference rooms and approximately six smaller conference rooms.

The proposed building will qualify for certification under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. LEED Certification is a nationally accepted benchmark for the design, construction, and operation of buildings and provides independent, third-party verification that a building project is environmentally responsible and a healthy place to work.

Facility construction will include all necessary components, such as site preparation/grading, pouring of concrete foundation and floor slab, erection of masonry walls, roof assembly, exterior finishing, utility connections, parking lot reconfiguration/paving, and landscaping. The building will be handicapped accessible, and have systems for fire protection/detection and energy management. The project will be compliant with Department of Defense (DOD) force protection measures, relative to building integrity and safety setbacks.
The project is intended to be designed and constructed in a manner consistent with the following principles of sustainable development:

- Optimization of site potential,
- Minimization of energy consumption,
- Protection and conservation of water,
- Use of environmentally preferred products,
- Enhanced indoor air quality, and
- Optimization of operational and maintenance practices.

2.2 ALTERNATIVES

Alternatives to the proposed action include no action (i.e. continued use of aging building), renovation of the existing facility, construction of a new facility on a different parcel, or construction of a facility having a different configuration/layout from the proposed building.

2.2.1 No Action

The No-Action alternative consists of not constructing the new Acquisition Management Facility and would involve the continued use of the existing Building 1600. If the replacement building were not constructed, ESC would continue to pay expensive maintenance costs and personnel would continue to spend time on building maintenance issues rather than on the mission. Current and additional mission assignments would not be adequately supported due to facility constraints, and there would be an overall loss in organizational efficiency. The existing Bldg 1600 would continue to deteriorate, and the heat load (already exceeding designed capacity) would continue to increase. There would be the potential for non-compliance with Life Safety Code requirements. Complaints from union, support contractor, and federally funded research and development contractors about poor working conditions would escalate, with negative effect on workforce retention and effectiveness. For these reasons, the No-Action alternative has been determined to have a deleterious effect on the ability of Hanscom AFB to meet its mission and is not a prudent alternative.

Due to the rapidly deteriorating condition of the building, continued occupancy of the Bldg 1600 is not preferred. Additionally, extensive renovations were determined to be less desirable economically in the long-term, when compared to construction of a new, modern facility.
2.2.2 Renovation of Existing Building 1600

The renovation alternative consists of reuse of the existing building, with substantial modification to bring the facility up to current building codes. The modifications would likely include complete replacement of the HVAC system and the electrical wiring system. Substantial interior demolition and construction of new partitions would be required, but would only partially overcome the building's inefficient layout. Renovation would also entail removal of asbestos containing material and replacement of the building's exterior façade. Hanscom AFB conducted an economic analysis, comparing the alternatives of new construction, renovation, and status-quo operation. Construction of a new facility was found to be the most cost efficient alternative over the life of the project. For these reasons, renovation of the existing building is not being considered further.

2.2.3 Construction of a New Facility on Another Parcel

As Hanscom AFB is generally built-out, particularly in the area of the ESC campus, and there is little available land for new construction. Development on the base is further constrained by existing airfield operations, explosive safety zones, antenna look angles (line of sight angles), and anti-terrorism/force protection criteria. A suitable parcel, other than the existing, triangular 11-acre site, bounded by Barksdale, Eglin, and Arnold Streets, has not been identified. Moreover, the proposed facility is intended to be in a prominent and highly visible location, which will allow it to be a visual focus point on the ESC Acquisition Campus, reflective of the leadership role to be provided by key occupants in the building, and conducive to welcoming visiting dignitaries. For these reasons, placement of the proposed building within the existing parcel, adjacent to the existing facility, is highly valuable. No alternative parcels capable of meeting the project needs are available.

2.2.4 Construction of a New Facility with a Different Layout

Various alternative layouts have been contemplated as the project evolved through conceptual design. Layouts of a single-story facility were generally identified to be an inefficient use of land relative to the yield of interior square footage. Layouts of more than three stories had the potential to conflict with building height limits and were generally perceived as less efficient from an operations perspective. Thus, a compact 2- to 3-story building has been determined to be the appropriate layout to achieve a balance among operational efficiency, minimization of footprint, and height constraints imposed by existing operations (airfield) or facilities (antennas) on base.
The existing environmental conditions evaluated in this EA are described to provide a baseline against which potential impacts related to construction and operation of the proposed new Acquisition Management Facility can be determined. General conditions on Hanscom AFB are presented for each of the parameters and site-specific detail is included, as available.

3.1 LAND USE

Hanscom AFB is located approximately 18 miles northwest of Boston, Massachusetts, just outside the Route 128/1-95 circumferential expressway. The base is located just west of a major light industrial and office park corridor along the expressway. Hanscom AFB, which occupies approximately 846 acres, is situated in the Towns of Bedford, Lexington, and Lincoln, all of which are primarily suburban residential communities. Adjacent to the base is the Hanscom Field airport of the Massachusetts Port Authority (MassPort) as well as the Minute Man National Historic Park.

The proposed project is located within the northwest quadrant of Hanscom AFB within an area designated for Acquisition Management, although the current land use is open space. The approximately 11-acre site is triangularly shaped and relatively flat. It is situated within a prominent and highly visible location, bounded on the north by Barksdale Street, on the west by Eglin Street, and on the south by Arnold Street. The Bldg 1600 parcel is located along the town boundary and thus is located partially within Lincoln and partially within Bedford.

Surrounding uses include the following: The sprawling single-story Bldg 1614 which houses the 350th Electronic Systems Wing, including MITRE personnel, is located just north of the site across Barksdale Street, and provides office space for approximately 1,000 acquisition management personnel. To the southwest is Bldg 1607, which houses acquisition management personnel.
for 753 ELSG. To the west is the Brighton Marine Health Center (Bldg 1609), which provides a wide variety of outpatient medical services. To the northwest is Hanscom Federal Credit Union (Bldg 1610), one of two community land uses that abut the Bldg 1600 parcel. The base chapel, the second community land use, is located to the south along Arnold Street.

3.2 SOCIOECONOMIC CONDITIONS

Hanscom AFB serves primarily as the Headquarters of the U.S. Air Force Electronics Systems Center (ESC), which manages the development and acquisition of electronic command and control systems. The host unit on Hanscom AFB is the 66th Air Base Wing (ABW), which is part of ESC. The 66 ABW provides services to all the active-duty, Reserve, and National Guard military personnel, DoD civilians and contractors who work and live at Hanscom AFB. Additionally, the 66 ABW supports over 100,000 retired military personnel, annuitants, and spouses living in the seven-state area of New England and New York. Hanscom AFB is also home to a number of “associate” units separate from ESC; the largest of these are the Sensors and Space Vehicles directorates of the Air Force Research Laboratory, which perform research and development services (HAFB, 2005).

The workforce at Hanscom AFB includes military (active-duty), government civilian, and contractors. ESC’s acquisition function represents approximately half of the 5,700-strong workforce. Hanscom AFB’s annual budget approaches $4 billion, with nearly $3.9 million allocated to Acquisition objectives. The government (military, civilian) payroll is approximately $252 million, with an additional $795 million to contractors. The total regional economic impact of Hanscom AFB is estimated to be $2.9 billion (HAFB, 2005).

3.3 UTILITIES

3.3.1 Water Supply

Nearly the entire potable water supply to Hanscom AFB is provided by the Town of Lexington, through a 10-inch main along Hartwell Avenue and a 12-inch main along Wood Street. Lexington receives its water from the Massachusetts Water Resources Authority (MWRA), for which the Quabbin Reservoir serves as the primary source of water. Water demand at Hanscom AFB has generally shown a decreasing trend since the late 1980s, attributable both to personnel decreases and the implementation of conservation measures. The quantity of water that Hanscom AFB can draw from Lexington is limited by contractual agreement to 2 million gallons per day (mgd). However, Hanscom AFB’s annual water demand rarely exceeds one-third of the permitted allocation (HAFB, 2003).
3.3.2 Wastewater

Hanscom AFB discharges sanitary sewage into the MWRA system via two pumping stations. The wastewater is conveyed via a 12-inch force-main down Hartwell Avenue and connects to a 20-inch force main from the Town of Bedford. The capacity of the wastewater line is limited to 1,500 gallons per minute (gpm) or 2.16 million gallons per day, by an agreement with the Town of Bedford and the MWRA, in part because of limitations at Bedford’s Great Road Pumping Station. Wastewater flows from Hanscom AFB generally have averaged slightly more than half this maximum permitted capacity (HAFB, 2003).

3.3.3 Solid Waste

Approximately 51 tons of solid wastes are generated each week by Hanscom AFB. Some of this material is reused on base, but the majority is removed from Hanscom AFB by private contractors and disposed of by incineration or directly hauled to materials recovery facilities for recycling. The major sources of waste include base housing, community operations, offices, and industrial areas. The types of solid waste generated include food, various grades of office paper, newspaper, cardboard, cans, glass and plastic containers, scrap metals, as well as significant quantities of yard waste and construction & demolition debris. On an annual basis, Hanscom AFB generates approximately 1759 tons of municipal solid waste and 185 tons of construction and demolition waste, both of which are incinerated off-base with heat recovery (HAFB, 2008). Additional materials diverted from the waste stream on an annual basis include: 516 tons of wood waste (pallets, packaging), 67 tons of compost/organic materials (tree trunks), 76 tons of metals, 56 tons of general recyclables, and 7 tons of computers/electronics (HAFB, 2008).

3.3.4 Electricity

Hanscom AFB obtains its power from NStar (formerly Boston Edison). Service is provided at 14.4 kilovolts (kV) through three sets of cables to the base substation. Nearly all transmission lines within Hanscom AFB are underground. The annual capacity is approximately 151 million kilowatt hours (kWh), roughly twice the recent annual demand (HAFB, 2003). Hanscom AFB has implemented a basewide Energy Management Control System (EMCS), which includes monitoring and control of energy use. For example, the heat temperature is turned down when buildings are vacant (e.g. overnight) and is turned up approximately one hour before the building becomes occupied (e.g. during regular daytime working hours). More than 85% of the office building space on Hanscom AFB is connected to the EMCS; smart local controls have been implemented in a portion of the remaining small, stand-alone facilities. Backup and emergency power is supplied by approximately 34 stationary emergency generators and 9 mobile generators located throughout the base.
3.3.5 Telecommunications

In addition to standard dial-up telephone service, Hanscom AFB has a fiber optic backbone that services much of the developed portion of the base. An existing communication duct bank crosses the parcel in which Bldg 1600 is located and represents a substantial constraint on the footprint/layout of the proposed building, due to the costs associated with relocation, if necessary.

3.3.6 Steam

The Hanscom AFB central heating plant provides process steam to MIT Lincoln Labs and steam heat to more than 80 percent of the base facilities (excluding the privatized housing), including the existing Bldg 1600, through 39,000 linear feet of steam lines. The central heating plant, which was constructed in 1951, has four water tube type boilers. Originally rated at approximately 53,000 pph steam output each, these boilers were rebuilt and de-rated to 40,000 pph each in 1987. Based on recent testing, in their current condition the actual output of these boilers is between 31,000 and 35,000 pph each. All four boilers are have dual fuel capability and utilize #6 fuel oil as the primary fuel and natural gas as a backup fuel source in accordance with the facility’s Title V air permit. High demand heating in severe winter conditions occasionally requires operation of all four boilers at or near maximum capacity. U.S. Air Force policy is to have N+1 capacity, or the ability to meet peak demand with one boiler offline. Currently, the central heating plant cannot meet this requirement; however, several rehabilitation projects are currently being planned which will restore system capacity. For those buildings on Hanscom AFB which are not connected to the central heat plant, their source of heat includes small oil-fired steam and hot water boilers, electric rooftop units, heat pumps, and a number of small gas, propane, waste oil, or fuel oil-fired unit heaters in mechanical rooms and garages.

3.3.7 Natural Gas

Hanscom AFB is provided natural gas through an 8-inch high pressure main. Interruptible natural gas is provided to the central heating plant as a fuel for the production of steam and chilled water. Firm-supply natural gas is provided to base housing for domestic hot water heaters, gas ranges and dryers. Additionally, natural gas is consumed by various other facilities on base including the child care center, the Officer’s Club, swimming pool, clinic, and elementary school. The existing Bldg 1600 is not supplied with natural gas. For FY2007, the total natural gas usage at Hanscom AFB was 288,059 million cubic feet (MCF). Annual natural gas capacity is 884,040 MCF.
3.4 TRANSPORTATION

Traffic congestion in the vicinity of the base primarily occurs in the peak morning period as workers arrive from the local and regional highway system. Hanscom AFB commuters primarily use Route 2A and Route 4/225 to access Hanscom Drive and Hartwell Avenue to enter the base; both of these state routes interchange with the Route 128/I-95 beltway that rings the Boston area and connects to other radial expressways. These routes are also used by commuters from the area towns, as well as others accessing the many industrial and office parks in the area.

Vehicular traffic enters Hanscom AFB via one of three control points (a fourth gate is closed):

- Wood Street – direct access to MIT Lincoln Laboratory (on-base) as well as the rest of the base; connects to Hartwell Avenue on the north and to Massachusetts Avenue on the south.
- Barksdale – accessed via Hartwell Avenue, which provides direct access to Routes 4/225 and Route 128/I-95.
- Vandenberg – the main gate for visitors, commercial vehicles, and many DoD personnel; access is from Route 2A, Hanscom Drive, and a segment of Old Bedford Road.

Over 70% of the morning traffic entering the base uses the two eastern gates (Wood Street and Barksdale). Despite having the lowest traffic counts, Vandenberg Gate still experiences traffic queuing, because visitors and trucks must stop at the gate or the adjacent visitors’ center for pass clearances to enter the base.

The road network on Hanscom AFB consists of arterials, collectors, and local streets. The major arterials include:

- Barksdale Street from the Vandenberg Gate to Eglin Street,
- Eglin Street from Barksdale Street to Vandenberg Drive,
- Vandenberg Drive from Vandenberg Gate to Marrett Street,
- Marrett Street from Vandenberg Drive to Barksdale Street.

Thus, the Bldg 1600 parcel is located in a prominent location, at the intersection of two arterial roadways.

3.5 NOISE

The primary sources of noise in the vicinity of Hanscom AFB results from normal operation of MassPort’s Hanscom Field airport, military flights at Hanscom AFB, and automobile traffic along the expressway (Route 128/I-95) and various local roads. Even though military flights
constitute approximately 1% of the total aircraft operations in the vicinity, military flights tend to
be noisier aircraft, and MassPort calculates that military flights represent 11% of the aircraft-
generated noise (HAFB, 2003).

Ground-based vehicle operations at Hanscom AFB consist mainly of privately-owned vehicles
and government vehicles. The privately-owned cars are used by regular daily employees and
contractors. Government-owned vehicles include on-road maintenance and utility vehicles and
off-road equipment, such as sweeper vacuums, cranes, lawn mowers, and forklifts (HAFB,
2003). Noise generated independent of aircraft flight and noise on Hanscom AFB, such as
maintenance and shop operations, ground traffic, and construction, is generally comparable to
the noise generated in the surrounding community; therefore, noise generated during aircraft
flight operations represents the most substantial noise source on the base.

3.6 AIR QUALITY

Hanscom AFB is located in an attainment area for the following criteria pollutants: carbon
monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter
(PM₁₀ and PM₂.₅). However, the entire state of Massachusetts is designated by the US EPA as
non-attainment for ozone (MassDEP, 2007). Ozone results from photochemical reactions in the
atmosphere involving precursor pollutants such as Volatile Organic Compounds (VOCs)
and nitrogen oxides (NOₓ). In 1997, US EPA established a stricter ozone standard of 0.08 ppm
averaged over an 8-hour period, but implementation was delayed due to legal challenges to the
standard. US EPA designated Massachusetts as “moderate non-attainment” for the 8-hour
standard effective June 2004. MassDEP is developing an 8-hour Ozone State Implementation
Plan (SIP) which includes strategies for achieving an attainment status for the 8-hour ozone
standard by 2010.

The primary stationary emission sources at Hanscom AFB are the boilers at the central heating
plant. Emissions from these boilers are regulated under Title V of the Clean Air Act
Amendments. Because of the ozone non-attainment status, Hanscom AFB utilizes low NOₓ
burners and performs annual NOₓ RACT testing of these boilers. The base’s Title V permit also
imposes monitoring and record keeping requirements for various “emission units”, such as the
heat plant, but also for large emergency generators, gas-driven chillers, aboveground and
underground storage tanks, and fuel dispensing equipment. Future activities that would generate
additional VOC or NOₓ emissions will be subject to stringent permit limits and associated
emission reduction strategies. The current Title V Permit for Hanscom AFB is effective from 29
August 2002 to 29 August 2007. Hanscom AFB applied for a Title V operating permit renewal
on 28 February 28 2007 and is currently operating under a permit shield as detailed in 310 CMR
Appendix C(13). A draft copy of the new Title V operating permit was received by Hanscom AFB on 13 March 2008 and once finalized will be in effect for five years from the date of issuance. Of the approximately 43 emergency generators located on-base, 5 exceed the 300 kW threshold and are listed as individual emission units in the Title V permit; the remainder of the generators are considered insignificant sources and bundled together for purposes of estimating emissions.

The primary mobile sources of emissions in the vicinity include aircraft operation at MassPort’s Hanscom Field, along with ground vehicles on local and/or base roadways, off-road heavy equipment, and small combustion engines (e.g. lawn mowers, leaf blowers).

3.7 GEOLOGY AND SOILS

3.7.1 Geology

Hanscom AFB is located in an area that was occupied by a Pleistocene-age lake known as Glacial Lake Concord. The series of rounded hills and valleys that exist in the area are the result of bedrock structure and glacial erosion. Exposed areas of bedrock are found in the highly elevated outlying areas. Most of Hanscom AFB is underlain by the Andover granite, with a portion of the northeast part of the Base underlain by the Assabet quartz diorite and the Shawsheen gneiss. The present extent of Glacial Lake Concord deposits outlines the lower elevated area in which Hanscom AFB is situated. The glaciolacustrine (lake bed sediments) that formed the bottom of Glacial Lake Concord were evenly distributed over thousands of years, creating little topographic relief. Buildings and facilities located along Barksdale Street and Vandenberg Drive are built on these lake bed deposits.

3.7.2 Soils

The soils at Hanscom AFB have been substantially disrupted by construction and earth-moving activities. The Soil Conservation Service Interim Report for Middlesex County (March 1991) identifies most of the soils on the base as a combination of Udorthents (soils altered by earth-moving activities) and/or Urban Lane (soils mostly covered by impervious surfaces). The majority of the remaining soils on base (outside the housing area) are loamy sands or fine sandy loams associated with glaciofluvial deposits.
3.8 SURFACE WATER AND GROUNDWATER

3.8.1 Surface Water

The headwaters of the Shawsheen River, a tributary to the Merrimack River, are located on Hanscom AFB. Runoff flows north through a culvert near the intersection of Marrett Street and Vandenberg Drive, and flows along the eastern edge of MassPort's airfield. The river is confined by steep slopes, ranging from 7 to 15 feet high. The Shawsheen River has been designated by MassDEP as a Class B water body and, as such, is protected as habitat for fish, other aquatic life and wildlife, and for primary and secondary contact recreation. The majority of the surface runoff from Hanscom AFB enters a subterranean system of culverts and drains into the Shawsheen River. Surface runoff from the eastern portion of the base drains eastward into Kiln Brook, which also drains into the Shawsheen River.

The Merrimack River watershed is rated by US EPA as having high vulnerability to water quality problems. In highly vulnerable watersheds, aquatic conditions exists well below state water quality goals. Watershed data suggests significant pollution or other stressors are present; therefore, the watershed has a high vulnerability to decline in aquatic health. Ten-year mean water balance calculations indicate that the surface runoff contribution to the stream flow at the Hanscom sub-watershed is the highest (67 percent of stream flow from surface runoff) among all sub-watersheds in the Shawsheen watershed (MRWC, 2001). Significant watershed concerns identified by the Merrimack River Watershed Council include seasonally low baseflow, flash flooding, and water quality impairment.

3.8.2 Groundwater

Groundwater at Hanscom AFB is fairly shallow, averaging 10 to 20 feet below ground surface (bgs), and is commonly encountered from 3 to 7 feet bgs near wetlands, in the lower elevations of the base, or during periods of seasonally high groundwater elevation. Flow in the upper aquifer is mostly controlled by surface drainage features and storm drainage systems. Groundwater flow in the lower and bedrock aquifers typically follow the topography of the area. In many places, the groundwater contains naturally occurring dissolved iron and manganese that exceed limits for drinking water (HAFB, 1998).

3.9 FLOODPLAINS

The Shawsheen River and Kiln Brook each possess 100-year floodplain along some portion of their length. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for Bedford, Lexington, and Lincoln depict two areas of Hanscom AFB that are in the
100-year or 500-year flood zones. One area is along the north boundary of the base; the other is along the abandoned Boston & Maine Railroad tracks. However, no portion of the 100-year or 500-year floodplains is located within the Bldg 1600 parcel.

3.10 BIOLOGICAL RESOURCES

3.10.1 Vegetation

Most of the land area at Hanscom AFB, along with its native vegetation cover, has been altered by the development of base structures, streets, and recreational areas. The Bldg 1600 parcel has been maintained as a lawn and landscaped area for over 50 years. Vegetation within the parcel consists almost exclusively of short, routinely mown lawn. A single row of approximately 20 deciduous landscaping trees lines the southern side of Barksdale Street. In addition, there are three clusters of mature (more than 50-year old) trees scattered within the parcel. To the northwest of Bldg 1600, adjacent to its parking lot, is a cluster of approximately 20 large oak trees. To the east of Bldg 1600 is a cluster of large oak and pine trees. A third cluster of large trees is located just south of the driveway connecting Bldg 1600's parking lot to Eglin Street.

3.10.2 Wetlands

Hanscom AFB contains a diverse network of interconnected wetland systems, occupying approximately 5% of the base. Many of these wetland systems have been subject to the same reconfiguration by human activities which has had a significant impact on the vegetative communities. The remaining wetlands are in various stages of succession, ranging from wet meadows to mature forested swamps. There are no delineated wetland resources within the vicinity of the Bldg 1600 parcel.
3.10.3 Wildlife

Hanscom AFB lacks continuity of undisturbed areas, such as is provided at the Great Meadows National Wildlife Refuge, two miles northwest of Hanscom AFB. While the fragmented nature of the base habitat has created a favorable environment for avian and small mammal species well adapted to humans and development, wildlife abundance and species diversity are relatively low at Hanscom AFB, principally due to extensively developed areas and/or degraded natural habitats. The Bldg 1600 parcel does not provide significant habitat for wildlife due to its developed condition, mowing/maintenance activities, and human traffic.

3.10.4 Threatened and Endangered Species

There are no records of federally listed endangered or threatened species on Hanscom AFB. The Massachusetts Natural Heritage and Endangered Species Program (NHESP) includes portions of Hanscom AFB within “priority sites of rare species habitat and exemplary natural communities”. While habitat for state-listed animal and plant species has been identified within portions of Hanscom AFB, the Bldg 1600 parcel is located within a developed/disturbed portion of the base that is not known to provide suitable habitat for rare species.

3.11 CULTURAL RESOURCES

The Hanscom AFB region contains areas of prominent prehistoric and historic importance. There are hundreds of properties listed in the records of the Massachusetts Historic Commission (MHC) for the four surrounding towns alone. Hanscom AFB is adjacent to the Minute Man National Historical Park (listed on the National Register) and to the Great Meadows National Wildlife Refuge. In addition, there are other significant places, which served as naturally fortified positions from which the militia fired on the British, located within Hanscom AFB. Four prehistoric archaeological sites are located adjacent to the base, and several small prehistoric sites (temporary camps, chipping stations, and lithic workshops) have been reported in the vicinity of the base. However, the 1997 Phase I Archaeological Survey, concentrating on 34 areas previously identified as having moderate to high potential for archaeological resources, concluded that there are no areas of Hanscom AFB that contain significant prehistoric resources.

Hanscom AFB has a number of buildings that are over 50 years old, including Bldg 1600, which was constructed in 1953-1955 and initially housed the Base Headquarters. However, Bldg 1600 has subsequently undergone a number of substantial modifications, resulting in losses to its architectural integrity. Bldg 1600 does not have a significant, unique link to any Cold War era
event, and has been determined to not be eligible for inclusion in the National Register of Historic Places.

3.12 ENVIRONMENTAL RESTORATION PROGRAM / HAZARDOUS WASTE

3.12.1 Environmental Restoration Program (also called Installation Restoration Program)

Hanscom AFB has historically used, generated, and disposed numerous hazardous substances, including fuel, aromatic solvents, PCBs, and chlorinated solvents. In 1984, environmental studies identified 13 sites, related to past practices at Hanscom AFB, warranting further investigation and potential cleanup through the Installation Restoration Program (IRP). Subsequent discoveries increased the number of sites to 22. Each site was evaluated using the Air Force Hazard Assessment Rating Methodology (HARM), which evaluates potential receptors, waste characteristics, and migration pathways in order to determine the relative potential of uncontrolled hazardous waste disposal facilities to cause health or environmental damage. HARM scores ranged from 86 (high hazard potential) to 6 (small hazard potential). Of the 22 identified potentially contaminated sites, 8 are still active and are either regulated by the US EPA under CERCLA or by the Commonwealth of Massachusetts.

There are no active sites in the immediate vicinity of Bldg 1600; however, a closed (inactive) IRP site (#9 – Administration Building Jet Fuel Spill) is located directly northwest of Bldg 1600 and affected the parcel. Former base personnel recalled that a 5,000-gallon spill of JP-4 occurred in 1954. The incident occurred when a tractor ruptured a tank trailer containing JP-4 jet fuel while base personnel were attempting to secure the trailer to its hitch. An emergency situation was declared and a ½ acre site was encircled with a soil berm to contain the spill. Approximately 24 hours after this action, the Base Fire Department was called in to burn off the remaining jet fuel residue. The amount of fuel that entered the groundwater is unknown.

The IRP Phase I Records Search assigned an overall HARM score of 59 to this site. As reported in the “IRP Phase II – Confirmation/Quantification – Stage 1” the sampling performed during the initial site investigations indicated that “Site 9 appears free of contamination by jet fuel.” A “Phase II – Remedial Investigation” conducted in 1986-7 concluded that no further field investigation was required. In 1990, Metcalf & Eddy prepared a
Technical Document to Support No Further Action, and MassDEP concurred that no further investigative or remedial measures were required. Subsequently, on 22 January 1991, the Base Commander signed the Final Report to close-out this site.

### 3.12.2 Hazardous Waste

Hazardous waste generated on the base comes from the normal operation and maintenance activities of the 66 ABW organizations, as well as from the research and development operations at the MIT Lincoln Laboratory and the Air Force Research Library (AFRL). Hazardous wastes, including adhesives, sealants, greases, waste paint and thinners, solvents, and corrosive cleaning compounds, are accumulated at satellite accumulation points (SAPs), transferred to the 90-day accumulation site, with final disposal off-base. Hanscom AFB has both a Hazardous Waste Management Plan, and a Pollution Prevention Plan, targeted at reducing the purchases of industrial toxic substances, eliminating the purchase of ozone depleting chemicals, and reducing the amount of hazardous waste disposed.

Due to age of facilities at Hanscom AFB, asbestos-containing materials (ACM) are commonly encountered, and estimated to be present in 80% of the buildings. Over 15 visual and sampling surveys for ACM have been conducted in Bldg 1600 in the past 20 years. ACM were documented as various pipe and expansion joint insulations, wallboard, as well as in a mastic pipe pitch pocket on roof, under layment floor tiles and mastic, and in roof duct penetration flashing. Between 1990 and 2001, there have been approximately 8 separate asbestos abatement activities in Bldg 1600, which have removed ACM in targeted areas of transite pipe, floor tile and mastic, and pipe insulation.
4.0 SUMMARY OF ANTICIPATED ENVIRONMENTAL IMPACTS

The proposed action would involve the construction of a new Acquisition Management Facility (in two phases) and the demolition of the existing Bldg 1600. Potential impacts associated with the proposed action may result from construction (short-term) and/or operation (long-term) of the new facility, as described in this section.

4.1 LAND USE

4.1.1 Short-Term Impacts

Short-term impacts associated with the construction of the new building would include temporary minor disruption of adjacent land uses due to elevated noise levels, increased dust, interference with roadway access, and visual effects. Demolition of the existing building would result in similar temporary minor disruptions. During the construction phase, where portions of the 11-acre parcel will be used to store equipment (i.e. laydown area), as well as during the interim phase where both the new facility and the existing building (i.e. prior to demolition) are present, there would be a temporary displacement of open space within this administrative campus on base.

4.1.2 Long-Term Impacts

The new Acquisition Management Facility would be compatible with existing and planned land uses. Moreover, the placement of the new facility within this prominent location of the ESC campus has been identified as a priority by Hanscom AFB, to establish a visual focal point for the surrounding ESC campus.

Following demolition of the existing Bldg 1600, there is the opportunity to reclaim that building’s footprint as open space. While design plans are still conceptual, it is envisioned that the net area of open space, following demolition of Bldg 1600, would remain approximately the same as currently extant. Additionally, the quality of the open space may be enhanced by the creation of a passive recreation area, most likely within the eastern portion of the parcel where the mature trees provide shade and contribute aesthetic character. The open space area may be configured to include a dual-purpose water feature that would enhance the park’s visual context while also attenuating stormwater runoff volumes from the parcel.
4.2 SOCIOECONOMIC CONDITIONS

4.2.1 Short-Term Impacts

A slight short-term increase in the revenue generated in the surrounding area may occur due to construction employees utilizing local businesses for supplies and personal use. Construction of the new building, and demolition of the existing building, would not adversely impact the socioeconomic conditions at Hanscom AFB.

4.2.2 Long-Term Impacts

The new Acquisition Management Facility would simply relocate personnel from one building on Hanscom AFB to another. Independent of other activities at Hanscom AFB, the new building is not expected to result in the creation of any new jobs. Thus, no long-term effect on socioeconomic conditions is expected.

4.2.3 Environmental Justice

Under its instructions for the Environmental Impact Analysis Process (32 CFR Part 989), the Air Force must demonstrate compliance with Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, to determine the effects of federal programs, policies, and activities on minority and low income populations. In order for there to be a potential environmental justice impact, a unique low-income or minority population must be present, as well as a significant adverse impact. As described throughout Section 4.0, the proposed new building and demolition of Bldg 1600 is not expected to have significant human health or environmental impacts. Additionally, the parcel is located within the heart of Hanscom AFB, considerably removed from unique populations with respect to poverty or ethnicity. Therefore, the proposed project is consistent with the objectives of Executive Order 12898.

4.3 UTILITIES

4.3.1 Short-Term Impacts

Construction of the new Acquisition Management Facility will require access to base utilities, and there may be brief interruptions in service during utility tie-in. The location of all existing utility lines in the vicinity of the proposed facility would be confirmed prior to construction or demolition activities.
4.3.1.1 Water Supply
A temporary increase in water demand would occur during construction and demolition. Due to the limited number of construction workers, short construction period, and the adequate supply of water to the base, it is not anticipated that the water demand both for workers' personal needs and dust control during construction of the new Acquisition Management Facility or demolition of the existing Bldg 1600 would adversely impact the water supply at Hanscom AFB.

4.3.1.2 Wastewater
There would be an insignificant short-term increase in demand for sewage treatment during construction. Portable toilets would be available during the construction, and waste would be transported to a nearby treatment facility.

4.3.1.3 Solid Waste
Construction of the new facility would generate solid waste, primarily associated with packaging of construction materials. Similarly, as the existing Bldg 1600 is dismantled, material that is not suitable for reuse or recycling would be removed. All solid waste would be handled in accordance with standard base procedures. Any hazardous materials would be disposed in accordance with Hanscom AFB policies and protocols and relevant state and federal regulations (see Section 4.12 on hazardous waste).

4.3.1.4 Electricity
Short-term disruption of power to the immediate area around Bldg 1600 may occur while electrical connections are made to the new Acquisition Management Facility. All electrical lines associated with the existing Bldg 1600 would be removed to the ground surface and capped, as appropriate, as part of demolition activities.

4.3.1.5 Telecommunications
Telephone lines would be extended to the proposed building. No disruption of telephone service in the immediate area of Bldg 1600 is expected. All telephone lines associated with the existing Bldg 1600 would be removed to the ground surface and capped, as appropriate, during demolition.

As an existing fiber optic line crosses the Bldg 1600 parcel, site design and subterranean utility installation and routing would be closely coordinated with base engineering staff to avoid potential impacts or disruption of service.
4.3.1.6 Steam
The construction activities for the Acquisition Management Facility would not require the use of centrally-produced steam. If the Acquisition Management Facility is connected to the steam distribution system, during the interim phase when both Bldg 1600 and the new facility are extant, there would be an increased demand on the central heating plant. At this time, it has not yet been determined whether the new facility would have its own boilers and thus not be dependent on the central heat plant. Connection of the new facility to the central heat plant could place additional stress on a system that occasionally operates at or near maximum capacity; however, several rehabilitation projects for the central heating plant are being planned, which would restore system capacity and more than offset any increased demand in the short period during which both the old and new buildings require heat, assuming these rehabilitation projects are implemented prior to completion of the new Acquisition Management Facility.

4.3.1.7 Natural Gas
No impacts are expected to occur with regard to natural gas on Hanscom AFB. The construction and demolition activities will not require the use of natural gas. Existing natural gas distribution lines will be identified and properly marked, to minimize accident potential.

4.3.2 Long-Term Impacts
Although the new building would require electric, telecommunications, water, and sewage, Hanscom AFB has considerable capacity for these utilities. While the new facility may be connected to the central heating plant, the net demand would be similar to existing conditions, once the existing building is demolished. Should the new facility have its own boilers and not be connected to the steam plant, there would be a corresponding long-term reduction in the demand on the central heating plant. The volume of solid waste generated by the new facility is expected to be approximately the same as the current building, since it would hold approximately the same number of personnel. With the incorporation of LEED technologies in the building, and continued emphasis by Hanscom AFB on “reduce, reuse, recycle”, it is expected that the new Acquisition Management Facility will operate more efficiently and use less resources than the building it will replace.

4.4 TRANSPORTATION

4.4.1 Short-Term Impacts
Impacts to transportation systems at/near Hanscom AFB during construction would be minimal. Increased activity in the vicinity of the Bldg 1600 parcel could temporarily disrupt local (on-
base) traffic. Personal and commercial vehicles operated by the contractor and subcontractors would be on-site or at an area designated by Hanscom AFB. The types of construction vehicles used for the construction of the new facility and demolition of the existing building are not anticipated to be different from those used for other base construction projects. Therefore, the cement trucks and other construction vehicles are not expected to have an impact on base roads.

4.4.2 Long-Term Impacts

The proposed Acquisition Management Facility will not result in the generation of any new long-term trips onto the base. Personnel that currently work in the existing Bldg 1600 would ultimately shift to working in the new facility upon completion. Thus, the volume of traffic would be similar, as would the route and terminus of each vehicle trip.

4.5 NOISE

4.5.1 Short-Term Impacts

Construction of the new facility would result in elevated noise levels as grading and excavation occur and as construction of the building proceeds. Similar elevated noise levels would occur during demolition of the existing Bldg 1600. These elevated noise levels, which would be short-term in duration, are not likely to significantly disrupt the activities in the vicinity of the Bldg 1600 parcel.

4.5.2 Long-Term Impacts

No long-term noise impacts are anticipated to result from operation of the proposed Acquisition Management Facility. The activities which will be carried out in the new facility are not expected to generate significant levels of noise, since they are office-type functions. While the facility will have HVAC equipment and will have a standby generator to support life safety systems (emergency lights, alarms, signage), both of which would produce intermittent noise, the contribution of noise to the surrounding area is expected to be consistent with the persistent nature of existing noise produced from the developed environment. Any noise which is generated, including that from vehicles arriving and departing from the facility’s parking areas, is likely to be lost in the background noise associated with the operation of the nearby airfield.

4.6 AIR QUALITY

The Clean Air Act requires that actions of federal agencies or federally supported activities should not: 1) cause or contribute to any new air quality standard violation; 2) increase the
frequency or severity of any existing standard violation; or 3) delay the timely attainment of any standard or any required interim emission reductions or other milestones.

4.6.1 Short-Term Impacts

Short-term localized air quality impacts may occur, as construction and demolition could generate fugitive dust, particularly during site grading and debris transfer activities. All construction vehicles and some equipment would produce engine emissions that could temporarily affect air quality. However, because the number of vehicles and duration of construction required to perform the work is limited, emissions are not anticipated to cause an adverse impact to regional air quality.

4.6.2 Long-Term Impacts

Operation of the proposed Acquisition Management Facility is not anticipated to have adverse impacts on air quality. If the new facility is connected to the central heating plant, there would not be a need to install boilers in the new building. If the facility is not connected to the central heat plant, there would be a need to install a boiler of up to 2.5 million BTU/hour heat capacity for each phase of the Acquisitions Management Facility. These boilers would be considered an insignificant source and accounted for in the base’s Title V permit. As such, the new boilers are expected to result in a de minimis increase in emissions, which would not be regionally significant. The action does not require a federal conformity determination, as the direct and indirect emissions would not approach the thresholds identified in 40 CFR Part 51 (e.g. annual ozone emissions would be considerably less than 100 tons per year).

The new facility may also include a 20 kW (27 hp) diesel generator to support life safety items, in the event of a primary power failure. The emergency generator is anticipated to be operated once a month for testing and during occasional power outages. The emissions from operation of the generator are expected to be minimal and have no adverse impact on air quality. The generator would also be added to the base Title V permit as an insignificant source.

Since the new facility will be constructed within the same parcel as the existing building, the occupying office personnel will not have to travel further in their vehicles. Thus, the building will not contribute to an increase in mobile emissions.
4.7 GEOLGY AND SOILS

4.7.1 Short-Term Impacts

The construction of the new Acquisition Management Facility, including new parking lot(s), would require soil disturbance. During construction of the foundation, site grading, or utility trenching, there is the potential to encounter a buried drainage system. Historical drawings from the 1950s indicate this drainage system, generally comprised of 12” dumped rock on a 6-inch deep sand and gravel base, spans the northern portion of the site just south of what was then called B Street (now Barksdale Street) with a second rock-lined trench roughly bisecting the site from north to south.

4.7.2 Long-Term Impacts

While there may be areas where substantial fill is required, such as the grass depression in the southern part of the triangular parcel adjacent to the Eglin Street parking lot, there may also be areas where excavation is necessary, to widen or deepen swales, or to construct retention/detention basins for the purpose of slowing and treating stormwater run-off. However, the majority of the 11-acre parcel is fairly level, and the overall resultant changes to surface topography and geology are generally minimal.

4.8 SURFACE AND GROUNDWATER

4.8.1 Short-Term Impacts

Since there are no surface water features within the 11-acre parcel, it is not anticipated that potential construction activities would directly affect surface water resources. However, since the project will require surface disturbance and there will be periods when bare soil is exposed, the potential exists for ground to erode and be carried into the stormwater system during heavy rainfall. Additionally, the widening of the drainage swale just south of Barksdale Street would temporarily remove its vegetative cover, thereby reducing its ability to absorb nutrients or act as a filter for sediment. During construction, all activities would be conducted in accordance with base best management practices (BMPs) to prevent adverse effects to the receiving water (i.e. Shawsheen River) into which the stormwater system empties.

Given the shallow nature of the groundwater at Hanscom AFB, there is a strong likelihood that subsurface excavations will encounter groundwater. The construction contractor will be required to include provisions for dewatering. At a minimum, treatment to reduce suspended solids will be required prior to discharge of construction dewatering.
4.8.2 Long-Term Impacts

Once the new Acquisition Management Facility and its associated parking lot(s) are in place, there will be an increase in impervious surface within the 11-acre Bldg 1600 parcel. However, the Contractor would be required to design and implement a drainage management system that will reduce runoff during a storm and retain water for an orderly discharge, in accordance with Hanscom AFB's drainage requirements. While the specific BMPs have not yet been determined, an overall positive impact on surface water and groundwater is expected. The project's drainage system would retain more water on site than occurs presently, thereby reducing the site's contribution to flashy rises in river levels during precipitation events. Additionally, the retention of stormwater will allow for increased groundwater infiltration, which is expected to support base flow in the river during prolonged periods without substantial precipitation.

4.9 FLOODPLAINS

4.9.1 Short-Term Impacts

As the project is not located within the floodplain, and would not result in the storage/stockpiling of any construction materials within a floodplain, no adverse impacts are expected.

4.9.2 Long-Term Impacts

The proposed Acquisition Management Facility will not be located within a floodplain. Given the project's commitment to reducing stormwater runoff rates, no adverse flooding impact is anticipated.

4.10 BIOLOGICAL RESOURCES

4.10.1 Short-Term Impacts

4.10.1.1 Vegetation

The construction of the Acquisition Management Facility will require grading and excavation that will result in the removal of the existing maintained lawn. The footprint of the new building would not require clearing of any trees. It is expected that the single line of landscaping trees along Barksdale Street would not be affected by construction activities within the parcel. However, the layout for the parking lots has not yet been finalized. Preliminary concept drawings have suggested the potential for approximately 24 mature trees to be removed to make way for parking lot(s). While there is no prohibition against cutting these trees, the contractor
should be encouraged to evaluate parking layouts which would minimize tree clearing to the extent feasible and/or incorporate existing trees into natural islands within the parking lot. Given the limited size of the project area, the loss of some vegetation is not anticipated to substantially impact the biological community on, or in the vicinity of, the Bldg 1600 parcel.

4.10.1.2 Wetlands
As the project is not located within a wetland or wetland buffer zone, no adverse impacts are expected.

4.10.1.3 Wildlife
Construction of the new facility and demolition of the existing building are not expected to substantially impact wildlife in the area, primarily since the Bldg 1600 parcel does not provide significant habitat due to its developed condition, routine mowing, and frequent human traffic.

4.10.1.4 Threatened and Endangered Species
As noted in Section 3.10.1.4, there are no known federal- or state-listed threatened or endangered species present within the Bldg 1600 parcel. Therefore, the proposed project is not anticipated to impact threatened and/or endangered species.

4.10.2 Long-Term Impacts
Operation of the new Acquisition Management Facility has limited potential to result in long-term impacts on biological resources, as noted below.

4.10.2.1 Vegetation
Following construction, areas that are not covered by impervious surfaces (e.g. building, pavement) would be re-seeded or planted, to create an aesthetically pleasing landscaped area within the ESC campus. While a large portion of the parcel will be restored to lawn, similar to the existing condition, there is the opportunity to increase the vegetative diversity through the selective planting of desirable shrubs and trees. The contractor’s landscaping plan will be reviewed by 66 MSG/CEV, with recommendations made to favor native species and to ensure that no non-native species considered to be weedy or invasive by the United States Department of Agriculture (USDA) are selected.
4.10.2.2 Wetlands
Due to the absence of wetlands within the vicinity of the Bldg 1600 parcel, no long-term impacts to wetlands are anticipated.

4.10.2.3 Wildlife
The presence of a new Acquisition Management Facility and associated parking lot(s) is not expected to interfere with wildlife. The site would likely continue to be used periodically by those wildlife species that have adapted to urban environments.

4.10.2.4 Threatened and Endangered Species
No threatened or endangered species are expected to be encountered within the Bldg 1600 parcel; therefore no impacts are anticipated to result from operation of the new facility.

4.11 CULTURAL RESOURCES
4.11.1 Short-Term Impacts
Since no cultural resources are known to exist within the Bldg 1600 parcel, no short-term impacts to cultural resources are anticipated to result from the construction of the Acquisition Management Facility or the demolition of the existing Bldg 1600.

4.11.2 Long-Term Impacts
Although Bldg 1600 is more than 50 years old, it has been remodeled a number of times over the years and does not maintain architectural integrity warranting consideration as a historical building; therefore, its demolition would not represent a significant adverse effect on cultural resources. The operation of the new Acquisition Management Facility is not expected to result in any long-term impacts to cultural resources.

4.12 ENVIRONMENTAL RESTORATION PROGRAM / HAZARDOUS WASTE
4.12.1 Short-Term Impacts
Construction of the new Acquisition Management Facility is not expected to have an adverse effect on ongoing Environmental Restoration Program activities. Since the Bldg 1600 parcel is adjacent to a closed IRP site, there is some potential that contaminated groundwater could be encountered during excavation. In the event that groundwater is observed to have an odor or
sheen, it would be tested for the presence of petroleum hydrocarbons and treated, as necessary, prior to dewatering discharge.

During construction, hazardous materials and waste would likely be used and generated, including: equipment fuel, engine oil, hydraulic oil, grease, and other equipment operation and maintenance material. Refueling of equipment may also take place within the Bldg 1600 parcel. Any hazardous materials used during construction would be used, stored, transported, and disposed in accordance with base, military, state, and federal regulations.

Prior to demolition of Bldg 1600, a licensed Asbestos Inspector will complete a full building demolition asbestos inspection and identify the quantities and locations of all ACM in the building, so that these materials can be properly disposed. Additionally, prior to demolition, all fluorescent lamps and mercury-containing thermostats will be removed from the building for proper disposal, and the HVAC system will be drained of all fluids. In this manner, the construction and demolition debris will be segregated from hazardous materials requiring special disposal in accordance with federal and state regulation, as well as Hanscom AFB policies. No adverse impacts resulting from construction or demolition are anticipated.

4.12.2 Long-Term Impacts

The operation of the new Acquisition Management Facility is not anticipated to have any adverse effect on the base’s Environmental Restoration Program, as it will not directly impact nor impede monitoring of any active ERP sites.

While routine office operations may occasionally require the use of toxic solvents or paints, and operation of emergency generator and HVAC equipment would result in periodic generation of waste petroleum, substantial quantities of hazardous waste are not anticipated. Hanscom AFB has a pollution prevention plan which prohibits the use of all Class I ozone-depleting chemicals, and directs organizations to minimize the use of Class II ozone-depleting chemicals and toxic substances. Consequently, hazardous waste generation is anticipated to be reduced to the maximum extent possible during operation of the new facility. It is not anticipated that soil or groundwater contamination would occur as a result of operating the new facility.
5.0 MEASURES TO REDUCE POTENTIAL FOR IMPACT

While some impacts to the natural and human environment may occur during construction of the Acquisition Management Facility, demolition of Bldg 1600, and/or daily operations within the new office building, these impacts are minor and are not atypical compared with other routine construction projects. Commonly applied Best Management Practices and other measures, identified below, further reduce the likelihood that these activities would have a significant impact on the environment.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BMP or Other Measure to Reduce Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>Creation of a passive recreation area in the location of the (former) Bldg 1600 would offset open space lost to construction of the new facility and enhance the aesthetic character within the ESC campus.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Existing utility alignments will be identified through markings (similar to “DigSafe”) prior to any excavation to prevent damage to existing infrastructure. Implementation of LEED technologies is expected to reduce consumption of water and electricity, and the modern efficient building design is expected to reduce heating/cooling requirements.</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>Compliance with base recycling will minimize the amount of solid waste disposed without beneficial reuse, during both construction and long-term routine daily operation of the facility.</td>
</tr>
<tr>
<td>Noise</td>
<td>Typical construction equipment noise may be reduced by installing mufflers and engine jackets. Long-term sources of noise, such as emergency generators or HVAC equipment will be placed within acoustical structures and/or positioned so that noise is not directed towards sensitive receptors.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>All equipment and vehicles used during construction would be maintained in good operating condition so that emissions are minimized. Dust will be controlled on-site by using water to wet down disturbed areas.</td>
</tr>
<tr>
<td>Surface Water</td>
<td>During construction, silt fence and/or haybales will be placed around catchbasins within the parcel during construction to reduce potential for sediment or eroded materials to transported to the Shawsheen River via the storm sewers. Upon completion, the facility’s stormwater management system will reduce peak flow rates from the parcel to the Shawsheen River.</td>
</tr>
<tr>
<td>Ground Water</td>
<td>If dewatering is necessary during construction, the water will be treated for total suspended solids (TSS) removal prior to discharge to a receiving water. Upon completion, the facility’s stormwater management system will retain stormwater allowing for a greater rate of infiltration to groundwater.</td>
</tr>
<tr>
<td>Vegetation</td>
<td>Design layouts which incorporate, rather than remove, existing mature trees would be favored. The existing trees to remain would be surrounded with an exclusion barrier extending approximately to the tree’s dripline. The addition of select native shrub/tree plantings to the landscaping plan will enhance the diversity of what has previously been almost exclusively lawn.</td>
</tr>
<tr>
<td>Hazardous Waste</td>
<td>All hazardous materials used or encountered during construction, demolition, or operation would be handled and disposed in accordance with Hanscom AFB policies and protocols and all applicable state and federal regulations.</td>
</tr>
</tbody>
</table>
6.0 REFERENCES


7.0 LIST OF PREPARERS

Metcalf & Eddy prepared this document to fulfill the requirements of the National Environmental Policy Act (NEPA) for the proposed action of constructing a new Acquisition Management Facility and demolishing the existing administrative building at Hanscom AFB in Massachusetts. The following persons authored and provided direct oversight for the preparation of this environmental assessment:

MANAGEMENT

Donald C. Morris, P.E., 66 MSG/CE. B.S. in Civil Engineering; As the Environmental Director, provided technical review and oversight for preparation of the environmental assessment.

TASK LEADER

Petras, James. M&E. B.S. Biology; As a Senior Environmental Scientist with diverse experience in preparing environmental assessments and impact reports for federal, municipal, and commercial entities, conducted a survey of the parcel and authored the environmental assessment.

CONTRIBUTING AUTHORS

Best, Thomas. 66 MSG/CE. B.S. in Civil Engineering; As the Environmental Restoration Program manager, assisted in historical research and site assessment for this environmental assessment.

Campbell, Ian. M&E. B.S. in Environmental Studies; As a Project Scientist with broad experience in environmental compliance and air quality permitting, provided input to selected sections of the environmental assessment.

Cravedi, Gregory. 66 MSG/CE. B.S. in Management; As an Environmental Protection Specialist, assisted in historical research, site assessment, and provided technical review of the environmental assessment.

Coolidge, Brian. M&E. B.S. in Cartography; As a Project Scientist with broad experience with GIS and CAD applications, airfield planning, and natural resource protection, performed GIS analyses, and prepared maps/figures for the environmental assessment.

Hoffman, Christina. M&E. B.S. Plant Science, Chemistry; As a Project Scientist with extensive experience with environmental compliance and preparing technical and scientific sections of environmental permitting documents, focusing on compliance with the NEPA, provided technical review and quality assurance of the environmental assessment.

Maravelias, James. M&E. B.S. in Business Administration; As an Environmental Scientist with broad experience in the management and regulation of hazardous waste and materials, provided input to selected sections of the environmental assessment.
The Department of the Air Force Invites Public Comments
On Its Environmental Assessment for a Replacement Acquisition
Management Facility at Hanscom Air Force Base, MA

The United States Air Force announces the availability of a Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the proposed construction of a replacement Acquisition Management Facility and the demolition of the existing building (#1600) currently providing the same function.

The new Acquisition Management Facility would be located on-base within the same parcel as the existing building, which was constructed in 1955. The project will be constructed in two phases. The first phase would create a new 2 to 3-story, 40,000 square foot office building; the second phase would add a modular 30,000 square foot extension. Also during the second phase, the existing Bldg 1600 would be demolished. The new Acquisition Management Facility will replace a rapidly deteriorating building that is beyond its useful life, with a modern, functional, and efficient office space designed to support acquisition activities by Hanscom AFB.

Copies of the Draft EA/FONSI are available for inspection at the main public libraries in Bedford, Concord, Lexington, and Lincoln, and at the Hanscom AFB Environmental Office, Building 1825, at 72 Dow Street. If you have any questions concerning the Draft EA/FONSI, please contact the Environmental Office at Hanscom AFB at 781-377-2904. Written comments on the Draft EA/FONSI will be received until May 29, 2008 and may be mailed to Donald Morris, 66 MSG/CEV, 72 Dow Street, Hanscom AFB, MA 01731 or emailed to Donald.Morris@hanscom.af.mil.
MEMORANDUM FOR 66 ABW/CEG
ATTN: CHRIS L. PERKINS

FROM: ESC/JA

SUBJECT: Draft Environmental Assessment

I have reviewed the Draft Environmental Assessment related to the replacement of the acquisition management facility (Bldg. 1600) prepared for 66 MSG/CE and I find it legally sufficient under 32 CFR 989.

BRIAN T. FISCHENICH, 1LT, USAF
Assistant Staff Judge Advocate