FINDING OF NO SIGNIFICANT IMPACT (FONSI)
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
Construction of a new fire station, demolition of Buildings 530 and 606 and relocation of the Hazardous Cargo Area at Grand Forks Air Force Base, North Dakota.

An Environmental Assessment (EA) was prepared to evaluate potential environmental impacts of the Proposed Action and alternatives for construction of a new fire station, demolition of Buildings 530 and 606 and relocation of the Hazardous Cargo Area (HCA) at Grand Forks Air Force Base (AFB or Base), North Dakota. The EA is attached to this Finding of No Significant Impact and Finding of No Practicable Alternative document and is incorporated by reference per 40 Code of Federal Regulations (CFR) 1502.21.

Purpose and Need for Proposed Action

Grand Forks AFB is proposing to construct a new fire station, demolish buildings 530 and 606 and relocate the Hazardous Cargo Area (HCA). The purposes of the project are to consolidate fire protection activities to provide effective base fire protection, provide a modern, efficient layout to meet life safety codes for standard of living according to the USAF Fire Station Design Guide, provide adequate space for fire hoses to dry in the winter, provide adequate vehicle-to-stall clearance for parking large emergency response vehicles, provide antiterrorism and force protection requirements, and provide efficient HVAC and utilities infrastructure. The proposed location at the HCA will provide use of the existing flight line fence in a location close to the airfield, ensure responders meet USAF and DoD airfield response time requirements (3 minutes for aircraft emergencies) for fire protection with a location that is centrally located on the flight line, and eliminate the need for a secondary fire station.

Demolition of 530 and 606 will remove excess buildings and utilities that represent sources of potential contamination, such as asbestos and lead-based paint, PCB light ballasts, and mercury thermostats and light bulbs. Removal of these buildings will provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS). Demolition will also allow funds now expended on maintenance and repairs to be used more efficiently on functioning facilities.

The proposed HCA will be relocated to an area on the north taxiway using an existing piece of concrete for those situations when explosives or other dangerous materials will be loaded on cargo aircraft and existing aprons cannot be used without violating quantity-distance safety criteria. No new construction is proposed; only a re-delegation of area. Historically, there has been no recorded use of the existing HCA in the last ten years and known future missions do not have a requirement. Relocating the HCA and QD arcs will release previously restricted prime flight line property for future hangar space and enable the new fire station to be sited centrally along the runway, closer to the airfield and use existing flight line fence.

The alternative action analyzed in this EA is the Prior Approved Fire Station site. This location has been analyzed in two prior EAs in 2003 and 2006. In the early months of 2009, new information pertaining to the prior approved fire station site at the corner of 10th Avenue and Eielson Street came to light. The site is adjacent to the existing road to the Combat Arms Training and Maintenance (CATM) located north of the proposed site. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the fire station

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

This EA has been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality and Air Force Environmental Impact Analysis Process, to assess the potential environmental impacts to construct a new fire station, demolish buildings 530 and 606 and relocate the hazardous cargo area located in Grand Forks County, North Dakota. Relevant resource areas analyzed in the EA include Air Quality; Noise; Wastes, Hazardous Materials and Stored Fuels; Water Resources; Biological Resources; Socioeconomic Resources Cultural Resources; Land Use; Transportation Systems; Airspace/Airfield Operations; Safety and Occupational Health; Environmental Management and Environmental Justice. In addition to the Proposed Action, the Alternative Action and the No Action Alternative were analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
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proposed at the prior approved fire station site will need additional requirements including a new automotive flight line gate barrier with break-away fence, new road to allow separate access to the CATM range without impact to the landfill caps, re-location of over 1200 feet of flight line fences, fill and foundation materials to compensate for a three feet lower difference in elevation, and new pavement to the flight line taxiway to support the heavier weight of large crash vehicles. It will include risks of leaving gates open as work-arounds in severe adverse cold weather conditions or equipment malfunctions, a gate design not conducive to meeting AF standard mandatory response times, and it does not straddle the airfield flight line fence. This location will require wetland mitigation for 0.03 wetlands determined to be jurisdictional by the USACE, from access driveways crossing the stormwater ditch on the east and on the south of the site. GFAFB will mitigate the losses with new wetlands construction or restoration at either a wetland mitigation bank or a suitable location on base. A formal mitigation plan will be developed during final design and application for a Section 404 permit made to the USACE.

Some alternative locations considered but eliminated included the current fire station, the secondary fire station, north of the three bay hangar, locations west of the runway, south of the existing fire station, east of the existing fire station, and the northern part of the airfield. Most cause failure of response vehicles to meet AF response times for fire calls, are surrounded with existing facilities development, fail to provide sufficient space for a new fire station 25 percent larger than the existing, have no direct route to the runway, are reserved for future hangar/ ramp space, have airfield operating clear zone requirements, or do not optimize airfield observations.

The proposed new HCA was selected on the north end of the taxiway due to the avoidance of any occupied buildings or area of activity.

The accompanying EA evaluates the No actions:

1. No construction of a new fire station on Grand Forks AFB
2. No demolition of the old fire station (530)
3. No demolition of the old missile transfer facility (606)
4. No relocation of the existing hazardous cargo area

The accompanying EA evaluates the Proposed actions:

1. construction of a new fire station at the New Fire Station Site
2. demolition of the old fire station (530)
3. demolition of the old missile transfer facility (606)
4. relocation of the existing hazardous cargo area to the proposed hazardous cargo area

The accompanying EA evaluates the Alternative actions:

1. construction of a new fire station at the Prior Approved Fire Station Site
2. renovation and reutilization of the old fire station (530)
3. renovation and reutilization of the old missile transfer facility (606)
4. elimination of the existing hazardous cargo area

Summary of Environmental Consequences

Under the No Action Alternative, there will be no change to the baseline conditions for the resources evaluated. The proposed relocation of the HCA involves no construction or demolition or movement of equipment and therefore poses no impact to environmental resources.

Air Quality - Implementation of the Proposed Action and Alternative Action will have temporary, insignificant impacts from short-term emissions of pollutants from mobile sources

equipment and vehicular traffic. Best management practices (BMPs) to reduce fugitive emissions, such as watering disturbed areas and roads, will be implemented to reduce the amount of these emissions. By using LEED standards for construction of the new fire station, long-term positive impacts to air quality are anticipated as a result of the Proposed Action. No significant impacts to air quality will result because of demolition activities. As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Noise - Significant impacts from noise will not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Best management practices (BMPs) to reduce noise levels, such as wearing hearing protection, ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction and demolition activities are not conducted during early morning or late evening hours, will be implemented. Short-term impacts associated with construction and demolition activities will be insignificant, temporary and cease at the completion of these activities.

Wastes, Hazardous Materials and Stored Fuels - The increase in hazardous and solid wastes from construction of a new fire station and demolition of buildings 530 and 606 will include an estimated four million pounds of debris. Inert construction debris will be disposed at an approved inert landfill and solid waste debris at an approved municipal landfill. Petroleum-contaminated soils (PCSs) generated will be treated at the land treatment facility (IT-183) located on the airfield. Regulated Asbestos Containing Materials and PCBs will be removed prior to demolition and disposed at an approved landfill. Non-friable ACM and lead-based paint debris can be disposed as inert construction debris with approval of the Department of Health. Underground storage tank, piping and grit chamber will be removed during building demolition. Batteries, pesticides, mercury devices and fluorescent light bulbs will be disposed as Universal Waste. Ignitable, corrosive, reactive and toxic wastes will be disposed as Hazardous Waste. Appropriate efforts to reduce, reuse and/or recycle waste materials will be accomplished. Insignificant impacts to hazardous materials and waste management, solid waste management, asbestos-containing material abatement and lead-based paint abatement are expected.

Water Resources – There is non-jurisdictional wetland in the immediate footprint of the construction area of the new fire station site (Corp project number NWO-2005-60039-BIS). The 2004 wetland inventory revealed the presence of wetlands at the site of the proposed action. The wetland being affected by proposed activities is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway with no culvert. United States Army Corps of Engineers North Dakota verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005, from the ND Regulatory office. Jurisdictional determinations are valid for five years, and as such is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the USACE does not require a Section 404 application for a permit under the Clean Water Act and subsequently no mitigation for this specific project under this law is required.

The base has 301 acres of identified wetlands contained within 192 separate wetland areas. Because of the extent of the wetland within the HCA and the proximity to pavement, the project cannot avoid directly impacting wetlands. The area surrounding the new fire station site will be re-contoured to a more gradual slope with drainage to convey surface water runoff. Because this

wetland will be impacted, a FONPA will be prepared and submitted for review and approval by the Director, Installations and Mission Support prior to implementing the impacting activity.

Short-term impacts to water resources will be avoided or minimized through implementation of BMPs to minimize impacts to surface hydrology, such as silt fences and traps, detention basins, buffer strips or other features used in various combinations, (i.e., erosion control measures), daily inspection of heavy equipment, bacteriological disinfection of new water lines, excavation, filtering and discharging of surface water, stabilization and seeding the site immediately upon completion, as part of the Proposed Action. Provided BMPs are followed, there will be insignificant impacts on stormwater, surface water, waste water, water quality and floodplains.

Biological Resources –BMPs and control measures, including silt fences, storm drain covers, covering of stockpiles and keeping construction equipment in construction areas, re-establishing disturbed areas, will be implemented to ensure that impacts to biological resources be kept to a minimum. BMPs will be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species. The proposed new fire station site, as well as 606 and 530, are in a semi-improved/improved areas where grounds are maintained by the grounds maintenance contractor. Due to the abundance and mobility of species present at this location and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed will be able to find similar habitat in the local areas. The location of the proposed and alternative actions are not near the Turtle River, lagoons and grassland west of the airfield where threatened and species of concern are most likely to appear. Construction and demolition will have insignificant impacts to vegetation, wildlife and state-threatened and endangered species.

Socioeconomic Resources - The Proposed Action will not involve relocation of personnel to the region of influence (ROI). No population growth fluctuations are anticipated in the foreseeable future of this construction and demolition project. The implementation of the Proposed Action will provide a short-term, beneficial impact to local retailers during the construction and demolition phase of the project from secondary retail purchases in the local communities. The economic benefits will be local and short-term with no permanent employment positions created; therefore, there will be no significant changes to employment and income potential in the ROI.

Cultural Resources - There are no eligible or potentially eligible National Register of Historic Places (NRHP) archeological sites, but there are potentially eligible NRHP cold-war buildings on Grand Forks AFB. GFAFB had Section 106 consultation with SHPO to demolish buildings 530 and 606 as described in this EA. SHPO ND correspondence with a "No Historic Properties Affected" determination is included in the EA.

In the unlikely event any archaeological artifacts are discovered during the construction of the fire station or demolition of 530 and 606, the operator or contractor will be instructed to halt operations and immediately notify GFAFB Cultural Resource Manager who will notify the SHPO. Borrow material is to be derived from an archeological-approved source of the SHPO. No significant impacts to cultural resources will result because of proposed activities.

Land Use – Relocation of the HCA and removing the QD arcs from the mission area will free up prime real estate and alleviate mission impacts. The proposed construction will not change the land use, since the new fire station is in the area designated for Airfield operations. Demolition of substandard buildings 530 and 606 will provide future real estate on the flight line adjacent

location. The proposed action has no adverse impact to land use, but does have positive impact to land use with a more efficient location for the new fire station.

Transportation Systems – The proposed operation will have insignificant adverse impact to transportation systems on base due to vehicles traveling to and from the new fire station construction site and buildings 530 and 606 demolition sites in both the proposed and alternative actions. The site will provide direct access to the flight line and base transportation system through the construction of access roads as part of the Proposed Action.

Airspace/Airfield Operations - The Proposed Action will have a positive impact to aircraft safety and airspace compatibility with the new fire station location that more centrally serves the flight line from north to south to meet airfield response time requirements. No significant adverse impacts to airspace and airfield operations will result because of construction and demolition activities.

Safety and Occupational Health – The demolition of 606 and 530 will resolve potential health issues related to mercury, PCBs, asbestos and lead-based paint. Implementation of the Proposed Action will result in long-term benefits to personnel health and safety by improving the living and working conditions in the new fire station facility and removing health hazards in 530 and 606. Provided best management practices are used, the Proposed Action will have positive impact on safety and occupational health.

Environmental Management – Provided best management practices (BMPs) are followed, the Proposed Action will not impact environmental management, including installation restoration program sites or geology. BMPs will be implemented to prevent increased runoff, erosion and sedimentation from soils exposed in approximately eight acres during demolition and construction activities. No significant impacts will be expected following grading and revegetation in the project areas.

Environmental Justice - EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. There is no minority or low-income populations within or immediately adjacent to the area of the Proposed Action or Alternatives and, thus, there will be no disproportionately high, significant or adverse impact on such populations.

Cumulative Impacts. The potential environmental impacts resulting from the incremental impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions were considered for the cumulative impacts analysis. The Master Space Plan described in the General Plan for Grand Forks AFB was developed to guide development for the next 15 to 20 years. Under the plan, substandard facilities will be demolished and replaced with new construction that meets AMC standards, including demolition of the existing fire station (530) and the missile transfer building (606). The Proposed Action will be concurrent with capital improvement projects specified in the General Plan. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. A major mission change from KC135 refueling tankers to the Unmanned Aircraft System (UAS) with military population decline is anticipated in the foreseeable future of Grand Forks AFB and is currently being analyzed by an EIS. Other associations with Air National Guard, Department of

Homeland Security and other organizations involved in the UAS mission may prove to be healthy growth in the long-term future of GFAFB. The Proposed Action will be limited to the east-central area of the flight line and will not have significant adverse impacts to resources on Grand Forks AFB, Grand Forks County, or the state of North Dakota.

There is non-jurisdictional wetland in the immediate footprint of the construction area of the new fire station site USACE ND verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005, from the ND Regulatory office, is valid for five years, and is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the USACE does not require a Section 404 application for a permit under the Clean Water Act, and subsequently no mitigation for this specific project under this law is required. Implementing the Proposed Action will potentially result in filling of approximately 5.36 acres of non-jurisdictional wetlands which is considered an unavoidable, adverse impact. Because this non-jurisdictional wetland will be impacted by the construction at the new fire station site, a FONPA will be prepared and submitted for review and approval by the Director, Installations and Mission Support prior to implementing the impacting activity. Overall, the analysis for this EA indicates that construction of the proposed fire station will not result in, or contribute to, significant, adverse, cumulative impacts in the region.

Public Review and Interagency Coordination
The Draft EA and Draft Finding of No Significant Impact/Finding of No Practicable Alternative were furnished to the agencies listed in Section 6.0 of the EA and were made available at the Grand Forks AFB public web site. Notices of Availability were published in the Grand Forks Herald on June 20 and 23 and the Grand Forks AFB web site from June 20 to July 20, 2009. All interested agencies, groups, and persons were invited to submit written comments on the Draft FONSI/FONPA and EA from June 20 to July 20, 2009. Comments from interagencies are included in the EA Appendix. No comments were received from the public.

Finding of No Practicable Alternative
Considering the information contained herein, including the attached EA, in accordance with Executive Order 11990, Protection of Wetlands, and pursuant to the authority delegated by the Secretary of the Air Force Order 791.1, I find that there is no practicable alternative to completing the Proposed Action within wetland areas, due to the number of wetland areas on the base. Both action alternative sites occur on wetlands. The Proposed Action, as designed, includes all practicable measures to minimize harm to wetlands.

Finding of No Significant Impact
In accordance with the regulations of the Council on Environmental Quality implementing the National Environmental Policy Act of 1969 and the Air Force Environmental Impact Analysis Process, 32 CFR 989, I conclude that the Proposed Action will have no significant impact on the quality of the environment and that the preparation of an Environmental Impact Statement is not warranted.

JOHN H. BONAPART, JR., SES
Deputy Director, Installations &
Mission Support

18 SEP 09
Date

Draft Final Environmental Assessment

Construct New Fire Station
Demolish Buildings 530 and 606
Relocate Hazardous Cargo Area
at Grand Forks AFB, North Dakota

Prepared by

Grand Forks Air Force Base, North Dakota

319 CES/CEAO

525 Tuskegee Airmen Blvd

Grand Forks AFB ND 58205-6434

August 2009

COVER SHEET

Agency: United States Air Force (USAF), 319 Civil Engineer Squadron

Action: (1) Construct a new fire station

(2) Demolish building 530

(3) Demolish building 606 and

(4) Relocate the hazardous cargo area

at Grand Forks Air Force Base (AFB or Base), North Dakota.

Contacts:

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Designation: **Environmental Assessment (EA)**

Abstract:

This EA has been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality and Air Force Environmental Impact Analysis Process, to assess the potential environmental impacts to construct a new fire station, demolish buildings 530 and 606 and relocate the hazardous cargo area located in Grand Forks County, North Dakota. Relevant resource areas analyzed in the EA include Air Quality; Noise; Wastes, Hazardous Materials and Stored Fuels; Water Resources; Biological Resources; Socioeconomic Resources; Cultural Resources; Land Use; Transportation Systems; Airspace/Airfield Operations; Safety and Occupational Health; Environmental Management; and Environmental Justice.

In addition to the Proposed Action, the Alternative Action and the No Action Alternative were analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area.

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ACRONYMS, ABBREVIATIONS and TERMS

AAM	Annual Arithmetic Mean
AC	Alternating Current
ACG	Architectural Compatibility Guidelines
ACM	Asbestos Containing Material
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
aka	also known as
AMC	Air Mobility Command
APZ	Accident Potential Zone
ARPA	Archeological Resource Protection Act
ARW	Air Refueling Wing
AST	Above Ground Storage Tank
ATC	Air Traffic Control
AT/FP	Antiterrorism Force Protection
ATR	Air Traffic Radio
Ave	Avenue
AWWA	American Water Works Association
BASH	Bird Aircraft Strike Hazard
Bldg	Building
Blvd	Boulevard
BMP	Best Management Practice
BMX	Bike Motocross
BOD	Biochemical Oxygen Demand
BRAC	Base Realignment And Closure
BTU	British Thermal Unit
CAA	Clean Air Act
CATM	Combat Arms Training and Maintenance
CDC	Child Development Center
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES	Civil Engineer Squadron
CEV	Environmental Management Flight
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
dB	decibel
dBA	Decibels Adjusted
DNL	Day-Night Average A-Weighted Sound Level

DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EQSD	Explosive Quantity Siting Distance
ERP	Environmental Restoration Program
ESA	Endangered Species Act
F	Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
ft	Feet
ft^3/s	feet cubed per meter
FW	Fighter Wing
GATR	Ground-to-Air Transmitter and Receiver
GFAFB	Grand Forks Air Force Base
GPP	Green Procurement Program
HAP	Hazardous Air Pollutants
hr	Hour
HCA	Hazardous Cargo Area
HM	Hazardous Material
H_2S	Hydrogen Sulfide
HVAC	Heating, Ventilation and Air Conditioning
HW	Hazardous Waste
IAW	in accordance with
IRP	Installation Restoration Program
INRMP	Integrated Natural Resources Management Plan
KV	Kilovolt
KVA	Kilovolt-Ampere
LT	Long-Term
LEED	Leadership in Environmental and Energy Design (US Green Building Council)
MBTA	Migratory Bird Treaty Act
MFH	Military Family Housing
MILSTD	Military Standard

mph	Miles Per Hour
MSDS	Material Safety Data Sheet
MSA	Munitions Storage Area
MSL	Mean Sea Level
$\mu g/m^3$	Micrograms Per Meter Cubed
MUX	Multiplex(er)
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
ND	North Dakota
NDAAQS	North Dakota National Ambient Air Quality Standards
NDAC	North Dakota Administrative Code
NDDH	North Dakota Department of Health
NDPDES	North Dakota Pollutant Discharge Elimination System
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Act
NHPA	National Historic Preservation Act
NO_X	Nitrogen Oxides
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
O_3	Ozone
QD	Quantity Distance
OSHA	Occupational Safety and Health Act
OWS	Oil Water Separator
P2	Pollution Prevention
Pb	Lead
PCS	Petroleum-Contaminated Soil
PEM	Palustrine Emergent Wetland
PM_{10}	Particulate Matter 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter 25 Microns in Diameter
POL	Petroleum Oil Lubricant
PPE	Personal Protective Equipment
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assessment and Quality Control
RACM	Regulated Asbestos Containing Materials
RCRA	Resource Conservation and Recovery Act
RCS	Report Control Symbol

RH	Relative Humidity
RI/FS	Remedial Investigation/Feasibility Study
ROI	Region of Interest
RV	Recreational Vehicle
SAGE	Strategic Air Ground Equipment
SAIC	Science Applications International Corporation
SARA	Superfund Amendments and Reauthorization Act
SATAF	Site Activation Task Force
SF	Square Feet
SNG	Synthetic Natural Gas
SO_2	Sulfur Dioxide
SO_X	Sulfur Dioxide
St	Street
ST	Short-Term
SWMU	Solid Waste Management Unit
TO	Technical Order
tpy	Tons Per Year
TSCA	Toxic Substance Control Act
TSI	Thermal System Insulation
UAS	Unmanned Aircraft System
UHF	Ultra High Frequency
UPS	Uninterruptible Power Supply
US	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VHF	Very High Frequency

EXECUTIVE SUMMARY

Proposed Action

The 319th Civil Engineer Squadron (CES) of the United States Air Force (USAF) proposes to (1) construct a new fire station, (2) demolish the existing fire station (building 530), (3) demolish the missile transfer building (606) and (4) relocate the hazardous cargo area on Grand Forks Air Force Base (AFB), North Dakota. Grand Forks AFB encompasses 5,161 acres of land in the central portion of Grand Forks County in eastern North Dakota.

Purpose and Need

The purpose of the proposed new fire station is to consolidate fire protection activities for U.S. Air Force (USAF) aircraft and facilities, improve firefighting response time and improve morale and retention of military and civilian firefighters at Grand Forks AFB. The existing fire station (building 530) was built in 1957 and does not meet life safety codes or standards of living according to the USAF Fire Station Design Guide. Demands on the existing fire station have increased as fire fighting techniques and equipment evolved. Fire fighting trucks are now larger than the existing building was designed to house. In addition, the existing fire station neither meets current life safety codes nor provides a standard of living in accordance with the USAF Fire Station Design Guide. To meet USAF and Department of Defense airfield response time requirements (3 minutes for aircraft emergencies) for fire protection, use of a satellite station is required. The satellite facility (building 657) was built in 1988 and is cramped and inefficient due to physically separated operations that defeat the goal of providing effective fire protection. A modern, efficient fire station is needed to house all authorized airfield and base structural firefighting vehicles, equipment and on-duty firefighters living in the fire station. Also included are landscaping improvements, sodding, site drainage, parking and sidewalks.

Renovating building 530 to AF standards would exceed the 70% AF programming rule. The Air Force program policy in AFI32-1032 states that maintenance and repair do not change the nature of a facility, but simply ensure it can continue to be used effectively. Repair does not normally increase the volume or foot print of a building, although it may result in greater usable floor space due to reconfiguration of the interior. If proposed repairs exceed 70 percent of a facility's replacement cost, an economic analysis must accompany the DD Form 1391 (Military Construction Project Data) documenting that repair is more cost effective than constructing a new facility. MAJCOM Civil Engineers must approve requests to perform facility repairs which exceed 70% of the facility's replacement cost. In no case shall the cost of facility repairs exceed the replacement cost of the facility. This policy will not apply where a facility is being repaired in lieu of replacement because it is on the national or state historic register. Building 530 is not on the national or state historic register. The requirements of the new fire station space are 25% greater than the existing footprint of building 530.

The Proposed Action to construct a new fire station and demolish the existing fire station (530) has been evaluated previously in two Environmental Assessments. The first, original, Final EA was completed in August 2003 for constructing a new fire station, a radar approach control facility (RAPCON) and an air traffic control tower, as project number JFSD990072. The

proposed site for the new fire station was the corner north of 10th Avenue and west of Eielson Street which was approved by the Facility Board on January 19, 2001. A Finding of No Significant Impact was signed on October 2, 2003, by the Grand Forks AFB Environmental Protection Committee Chairman. It is identified within this document as the Prior Approved Fire Station Site.

In the fall of 2004, new information pertaining to wetlands in the proposed location of the new fire station became available. The fire station was removed from the RAPCON/ATC tower project and given new project number JFSD200501 in October 2004. The location itself remained the Prior Approved Fire Station Site as identified on Figure 2.1 within this EA. A second Final EA was completed in March 2006 for constructing a new fire station in an undeveloped area containing wetland areas, again at the same corner north of 10th Avenue and west of Eielson Street. A Finding of No Significant Impact and a Finding of No Practicable Alternative was signed on March 15, 2006, by the Deputy Director, Installations and Mission Support, Air Mobility Command.

In the early months of 2009, new information pertaining to the proposed location at the corner of 10th Avenue and Eielson Street came to light. The site is adjacent to the existing road to the Combat Arms Training and Maintenance (CATM) located north of the proposed site. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the Prior Approved Fire Station Site at 10th and Eielson would need a new automotive flight line gate barrier with a break-away fence, a new road to allow separate access to the CATM range, relocation of over 1200 feet of flight line fences, a higher elevation construction site with fill and foundation materials to compensate for a three foot difference in elevation and new pavement to the flight line taxiway to support the heavier weight of large crash vehicles. In light of these significant expenses, a proposal was made by AFCEE Programming to relocate the existing hazardous cargo area and re-site the new fire station at a new location 1500 feet to the west of the Prior Approved Fire Station Site (the original proposed location at the corner north of 10th Avenue and west of Eielson Street). This location is called the New Fire Station Site within this document.

The Proposed Action to relocate the hazardous cargo area and construct the new fire station in the New Fire Station Site has several positive attributes. The new fire station would straddle the airfield flight line fence which is the preferred and common practice at Air Force bases, as well as the current practice at the existing fire station (530) at Grand Forks AFB. The New Fire Station Site would eliminate the need for a costly automated gate. It would also eliminate troublesome gate maintenance and operations because of the cold temperatures and snow covered grounds. It would be more centrally located to the flight line north and south ends, than the existing fire station (530) now nearer the south end of the runway. This would lead to better response time to the airfield and functionality of the trucks with more direct routes out of both sides of the vehicle bays. This location would have no gates to impede the flow of truck response to the airfield or the industrial area or the military housing area. Another positive aspect of this location versus the site at 10th and Eielson (the Prior Approved Fire Station Site) would be the reduced amount of fill and foundations materials needed for construction, as the site is three feet higher in elevation, than the corner site near 10th Ave and Eielson St. There

would be reduced pavement cost by avoiding the need for a new access road to the taxiway, which would require high-strength to support the large crash response vehicles and fire trucks. The New Fire Station Site has better underlying grounds to support a new fire station than the Prior Approved Fire Station Site at 10th Ave/Eielson St., lending to greater sustainability and maintenance of the pavements. Security would be improved by avoiding a variety of gate options and subsequent concern about guaranteed operability of gates. It would eliminate risks of having to leave gates open as work-arounds in severe adverse weather conditions or equipment malfunctions. It would eliminate the need for a secondary fire station. Security of entries to the building would be continuously camera-monitored from the 24 hours/day, 7 days/week alarm room.

To accommodate the proposed New Fire Station Site, it is proposed that the existing hazardous cargo area be located north along the taxiway. By moving the hazardous cargo area to the north taxiway, thereby moving the QD arc to the north taxiway, over 35 acres of prime flight line land area would become available for UAS mission growth, new hangar construction and other new missions. The relocation of the HCA is a redesignation from one existing concrete area to another existing concrete area on the taxiway. No new construction is proposed. The proposed hazardous cargo area on the taxiway is adequate to support the infrequent requirement to house hazardous cargo transient planes. There have been no hazardous cargo transient planes in the past ten years at Grand Forks AFB.

A new hazardous cargo area is proposed to be relocated to the site indicated on the north taxiway in Figure 2.1. With this action, the existing hazardous cargo area would be de-sited pending approval by AMC and DDESB. Historically, there has been no recorded use of the existing hazardous cargo area in the last ten years and known future missions do not have a requirement for a permanent HCA. However, transient aircraft containing hazardous cargo need a designated hazardous cargo area for parking aircraft. Removing the QD arcs from the existing hazardous cargo area would free up prime airfield real estate directly north and west of the existing three-bay hangar. This QD arc removal would also alleviate mission impacts to siting a new hangar in this area - a future development plan that has been validated by past SATAFs. The most recent SATAF proposed a new hangar and ramp for the Global Hawk aircraft of the UAS family. This area is called the Reserved Future Hangar Space in Figure 2.1. If a future mission required a separate hazardous cargo area, a project would be programmed for a new hazardous cargo area with proposed alternative locations. This proposed action with alternative locations would be evaluated in a future environmental assessment. Eliminating the HCA is also an alternative discussed later in this EA.

The proposed hazardous cargo area has a 1250 foot explosive quantity distance radius and is based on a C-5 aircraft template. Access for K loaders and other equipment used in loading/unloading aircraft parked on the taxiway is required. Airfield equipment for weather and communications within the 1250 foot radius have been reviewed and coordinated with Airfield Management. In the Proposed Hazardous Cargo Area, the 7 to 1 transitional slope would allow for a vertical height of approximately 22 feet in the center of the taxiway which would be under the tail height of either a C-17 or C-5. However, the arc reaches the runway and would need an operational waiver. Taxiing aircraft are exempt from this requirement, but a parked aircraft may

need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

Demolition of buildings 530 and 606 would remove outdated facilities and infrastructure that are no longer needed in accordance with the base facilities Master Space Plan. It would remove excess buildings and utilities that represent sources of potential contamination, such as asbestos and lead-based paint. Demolition of these buildings would allow funds now expended on maintenance and repairs to be used more efficiently on functioning occupied facilities. Demolition of these buildings would provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS). Renovating buildings 530 or 606 to AF standards would exceed the 70% AF programming rule. If proposed repairs exceed 70 percent of a facility's replacement cost, an economic analysis must accompany the DD Form 1391 (Military Construction Project Data) documenting that repair is more cost effective than constructing a new facility. MAJCOM Civil Engineers must approve requests to perform facility repairs which exceed 70% of the facility's replacement cost. In no case shall the cost of facility repairs exceed the replacement cost of the facility. This policy will not apply where a facility is being repaired in lieu of replacement because it is on the national or state historic register.

Alternatives Considered but Eliminated for Detailed Study

1. Fire Station Construction

a. One alternative considered but eliminated was rebuilding the fire station in the current location of the existing fire station at 690 Steen Blvd. The location is near the south end of the flight line. Because of this southerly location, the fire response vehicles routinely fail to meet Air Force three minute response times for aircraft emergency fire calls. Not only is the existing fire station near the south end of the flight line (4800 feet from the center of the runway), but they are also 4500 feet from the southwest corner of military family housing. All housing is north of Steen Blvd. and east of J Street on the east side of the base. The current building is 2,245 square meters (SM) and the proposed building is 2,820 SM, a proposed increase of 25 percent. The location is surrounded by the airfield lighting vault, two squadron operations/aircraft maintenance units (Squad Ops/AMU) and the airfield operations center, and leaves little room for growth along the flightline. See Figure 1.2 and 2.5.

b. Another location to be considered but eliminated is the location of the secondary fire station (657) at 814 B Street. This location is adjacent to Charlie Ramp; however it offers no direct route to the runway with planes parked on the ramp. It is also constrained for space, as the new RAPCON is currently being built adjacent to the east, plus it is surrounded by the AFFF pump house, flight line supply and two squadron operations AMUs. This leaves little room for growth. The size of the secondary fire station is 270 SM, a facility only 10% of the 2,820 SM proposed for the new fire station. See Figure 1.2 and 2.5.

c. Alternative sitings along the east side of the runway were considered but these locations were hindered by existing facilities development and explosive quantity siting distance (EQSD) arcs. An alternative siting of the fire station on the south side of 10th Avenue, across from the prior approved fire station site was considered. This is the only available open space that is sufficient in size and unencumbered by safety concerns, on the east side of the airfield and centrally located. However, this 35 acre alternative site is an area that is reserved for future expansion of aircraft hangars for the Global Hawk and Predators of the UAS family. The most recent SATAF visitors recommended a hangar and ramp for Global Hawk aircraft in this area. See Figure 2.1 for location of Reserved Future Hangar Space.

d. Another area considered but eliminated is north of the existing hazardous cargo area. This area straddles the flight line, but is further north of the center of the runway and reduces the goal to meet airfield response times. This area would require additional construction of roads and streets designed to carry the heavy weight of fire response vehicles than the proposed action which currently has existing concrete designed to carry the heavy weight of loaded aircraft. The most recent SATAF visitors recommended and proposed a new warehouse for snow control equipment storage and maintenance in this area, making it more centrally located to the runway, for snow removal.

e. Other alternatives considered but eliminated in earlier studies included locations west of the runway, south of the existing fire station, east of the existing fire station, and the northern part of the airfield, as described below.

(1) Relocation of the new fire station west of the runway would not provide direct access to the transportation system in the main cantonment area or adequate response time for fire protection of base facilities. Airfield operating clear zone requirements would restrict the locations available on the west side of the runway to the southwestern corner of the base. If a location in that area were selected, emergency response times would be unacceptable in the areas other than airfield operations, including industrial, administrative, community, medical, outdoor recreation, training, barracks and family housing.

(2) Siting the fire station in the southern and northern portions of the runway would preclude the requirement to be centrally located for minimizing firefighting response time and optimizing airfield observations. Relocation of the fire station east of the current location would preclude direct access to the flight line due to the requirement to cross a primary road, Eielson Street. Although there are open areas large enough to site the Fire Station, none of them would enable the firemen to provide three minute response for aircraft emergencies. At most times, emergency response times would be unacceptable in the areas other than airfield operations, including industrial, administrative, community, medical, outdoor recreation, training, barracks and family housing.

2. Hazardous Cargo Area Relocation

a. The proposed hazardous cargo area was selected on the north end of the taxiway due to the avoidance of any occupied buildings or area of activity. Another area considered but eliminated

was the south end of the taxiway. The potential QD arc crossed into too many areas of activity on the Bravo ramp to be considered as a viable or reasonable selection.

b. Another area considered but eliminated was the Alpha ramp area. The Alpha ramp is no longer connected to the runway. Any consideration of Alpha ramp as a hazardous cargo area would need a programmed construction project describing the purpose and need for a full time HCA for parked aircraft containing hazardous or dangerous cargo. This proposed action would need accomplishment of a full environmental assessment. This alternative is not reasonable at this time when the small amount of hazardous cargo aircraft can be easily served by the proposed action to move the HCA to the north taxiway, or the alternative action to eliminate the HCA, and are much more cost effective, with zero construction costs involved.

Grand Forks Air Force Base must decide whether to construct a new fire station on Grand Forks AFB at the existing hazardous cargo area, resite the proposed hazardous cargo area and demolish buildings 530 and 606.

Description of Proposed Action and Alternatives

Alternative 1 - No Action Alternatives - Status Quo

1. The No Action Alternative would be to not construct a new fire station. Inadequate fire protection for aircraft and facilities in accordance with USAF standards would be provided with the existing fire station. Infrastructure improvements to improve the effectiveness of the Base's mission, enhance quality of life, replace inefficient and inadequate facilities, and correct current deficiencies would not be initiated.

2. The No Action Alternative would leave the existing fire station (building 530) in place at the west end of Steen Blvd. No demolition would take place. The building would continue to require funding to maintain and operate, while continuing to age and deteriorate, and contain potential asbestos and lead-based paint, mercury thermostat and light bulbs, and PCB light ballast risk.

3. The No Action Alternative would leave the missile transfer building (606) in place at 711 10th Avenue as a pickled, i.e. mothballed, cold storage building. The building would continue to require funding to maintain and operate, while continuing to age and deteriorate, and contain potential asbestos and lead-based paint, mercury thermostat and light bulbs, and PCB light ballast risk.

4. The No Action Alternative would leave the hazardous cargo area (HCA) in the existing location. The QD Arc would remain and continue to limit any activities or construction within the 1250 foot explosive quantity distance radius.

Alternative 2 - Proposed Actions

1. Grand Forks AFB proposes to construct a new fire station, as well as landscaping improvements, site drainage, parking and pavements. See Figure 1.4 and Figure 2.1 for location of proposed fire station. The location is called the New Fire Station Site within this document.

The proposed construction of 2,820 square meters includes a consolidated crash and structural fire station to house fire protection vehicles, equipment, personnel, alarm center and all support areas. It would include reinforced masonry walls, brick exterior, sloped standing seam metal roof, underground utilities and communications infrastructure, pavements, emergency vehicle access roads and pavements, landscaping, parking lot, site improvements, and all other necessary work. The proposed location would allow use of the existing flight line fence. It would provide adequate space for fire hoses to dry in the winter and adequate clearance for parking large emergency response vehicles. It would provide an efficient layout to meet life safety codes for standard of living according to the USAF Fire Station Design Guide. Antiterrorism and force protection requirements would be incorporated IAW DOD Unified Facilities Criteria. The ground elevation is 893 feet. The Grand Forks AFB Facilities Board approved the construction of a new fire station on 18 Jun 07 as project number JFSD200501.

2. It is proposed to demolish the existing fire station (530), as well as remove asbestos, lead-based paint, light ballasts, light tubes, mercury thermostats and tanks plus site restoration. Building 530 is substandard, and renovation to AF standards would exceed the 70% AF programming rule. Demolition of building 530 would remove an outdated facility and infrastructure that are no longer needed in accordance with the Grand Forks AFB Master Space Plan. Demolition would eliminate future environmental hazards within the deteriorating building. Demolition of this building would provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS). See photo of building 530 in Figure 2.2.

With the construction of a new fire station, the secondary fire station (657) would not be needed to meet response times to the north end of the runway and the building would be offered to another function which requires aircraft ramp access. This 2,911 SF currently provides stalls for two fire response vehicles plus offices, bunkroom, kitchen and restrooms for three personnel on duty 24 hours/day, 7 days/week. The size does not provide adequate space to become the primary fire station. However, the building is in good condition and could provide industrial and office space to a user who needs access to the flight line Charlie ramp.

3. Demolish the missile transfer building (606), as well as remove asbestos, lead-based paint, light ballasts, light tubes, mercury thermostats and tanks plus site restoration. Building 606 is substandard, and renovation to AF standards would exceed the 70% AF programming rule. Demolition of building 606 would remove an outdated facility and infrastructure that are no longer needed in accordance with the Grand Forks AFB Master Space Plan. Demolition would eliminate future environmental hazards within the deteriorating building. Demolition of this building would provide open space on the road for fire and emergency response vehicles responding to airfield, industrial and housing fires and emergencies in without hindrance. See photo of building 606 in Figure 2.2.

4. Relocate the hazardous cargo area to a site on the north ramp, as shown in Figure 2.1. The proposed location is convenient to the flight line. The QD arc does not cross any buildings or areas of occupation. The relocation is a redesignation of one concrete area along the flight line to another concrete area on the north taxiway and does not involve any construction or

renovation. The designation on the north taxiway will enable the airfield operations to have a readily available site for transient aircraft requiring parking when loaded with hazardous cargo. The new siting location at the proposed hazardous cargo area was coordinated as an out-of-cycle facilities board action and was approved in March 2009. Hazardous cargo aircraft are infrequent at Grand Forks AFB; in fact there have been none in the past ten years. The proposed Unmanned Aircraft System (UAS) mission at Grand Forks does not include explosive and hazardous cargo or munitions. In the future, if mission changes should dictate the need for construction of a permanent hazardous cargo area, an environmental assessment shall be completed for that proposed action and alternatives. A map of the location of this proposed construction is located in Figure 2.1 and Figure 2.5 below. Figure 2.1 includes the New Fire Station Site (proposed action 2), the Prior Approved Fire Station Site (alternative 3), Existing Hazardous Cargo Area to be De-sited (proposed action 2), Proposed Hazardous Cargo Area (proposed action 2), and Reserved Futures Hangar Space (35 acres). Photo of the proposed location is shown in Figure 2.3 and Figure 2.4.

Alternative 3 – Alternative Actions

1. Construct the new fire station on the corner of 10th Avenue and Eielson Street, as originally proposed and assessed in an EA/FONSI in 2003 and again by EA/FONSI/FONPA on March 15, 2006. A map showing the location of this Prior Approved Fire Station Site is also shown in Figure 2.1. The ground elevation is 890 feet. This alternative is a less cost effective location than the Proposed Action as described earlier in the Purpose and Need section. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the Prior Approved Fire Station Site at 10th Ave. and Eielson St. would need a new automotive flight line gate barrier with a break-away fence, a new road to allow separate access to the CATM range, relocation of over 1200 feet of flight line fences, a higher elevation construction site with fill and foundation materials to compensate for a three foot difference in elevation and new pavement to the flight line taxiway to support the heavier weight of large crash vehicles. This location is 1500 feet to the east of the New Fire Station Site in the Proposed Action. Security would require a variety of gate and fence options and subsequent concern about guaranteed operability of gates. It would include risks of leaving gates open as work-arounds in severe adverse weather conditions or equipment malfunctions. Grand Forks AFB has had a history of maintenance problems with the gates along the fence line due to freezing temperatures, ice accumulation along the rails, and snow accumulations blocking traffic and requiring removal at all hours. The gate design system associated with this alternative is not conducive to meeting AF standard mandatory response times. This location would not straddle the airfield flight line fence as desired by AF standards. This location was evaluated in 2003 and 2006 because it was the nearest available space near the center of the flight line, when there was an explosive zone surrounding the original hazardous cargo area. At that time, Planning and Programming personnel did not consider the possibility or feasibility of relocation of the hazardous cargo area and therefore moving the QD arc explosive zone. This location would require wetland mitigation for 0.03 acres wetlands determined to be jurisdictional by the USACE. The impacts would be predominantly from access driveways crossing the stormwater ditch on the east and on the south of the site. Potential impacts to wetlands adjacent to the site would be minimized through use of erosion control best management practices. Typical erosion control measures such as silt fence and ditch checks would be used to prevent the release of construction site

sediment to adjacent wetlands and drainage ditch. Mitigation would involve construction of new wetlands or wetland restoration. Grand Forks AFB would mitigate the losses at either a wetland mitigation bank or a suitable location on base. A formal mitigation plan would be developed during final design of the fire station. Application for a Section 404 permit shall be made to the USACE. A Finding of No Significant Impact (FONSI) and a Finding of No Practicable Alternative (FONPA) was signed on March 15, 2006, by the Deputy Director, Installations and Mission Support, Air Mobility Command, for this Prior Approved Fire Station Site.

2. Designate and/or renovate the existing fire station (530) for a purpose and use other than a fire station whose renovation would exceed the 70% AF programming rule for AF standards. Redesignation and/or renovation of the building into an industrial area would provide access to the flight line. Some reasonable uses would involve overflow storage of snow removal equipment and/or transient alert vehicles and equipment.

3. Renovate the existing missile handling building (606) for a purpose and use other than a missile handling building. It can be used for cold storage as is, or reconnected with electricity and HVAC for heated storage. Renovation of building 606 in the current location would impede the vehicle traffic flow, such as fire response vehicles. Because building 606 partially blocks the width of the road, there may be a need to widen the road or construct a new section of road to drive around building 606.

4. Eliminate the requirement for a designated hazardous cargo area on or adjacent to the flight line at Grand Forks AFB. Eliminating the requirement would reduce the restricted space on base. In the case of a transient aircraft requiring an HCA to park an aircraft with munitions, the Wing Commander could authorize an operational waiver for parking the plane in a temporary hazardous cargo area. Taxiing aircraft are exempt from this requirement, but a parked aircraft may need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

Impacts by Resource Area

Insignificant impacts would be expected from implementing the Proposed Action. For the purposes of this project, short-term uses of the environment include direct construction-related disturbances occurring over the projected 7-month timeframe (or slightly longer) for the project. Long-term uses of the human environment include those impacts occurring after construction activities area completed. If the project was not constructed, existing uses would likely continue.

Under the No Action Alternative, there would be no change to the baseline conditions for the resources evaluated.

Air Quality - Implementation of the Proposed Action would have temporary, insignificant impacts from short-term emissions of pollutants from mobile sources equipment and vehicular traffic. Equipment removed from buildings 530 and 606 and new equipment added to the new fire station must be added or deleted from the base Air Pollutant Emission Inventory and ensure the existing Title V permit is updated. Purchase of any new generators/boilers requires permit to construct and is subject to air compliance under the Title V permit (Chapter 33-15-14, N.D.A.C). All new generators must meet new standards of 40 CFR Part 60, Subpart IIII regarding new limits on equipment emissions and must obtain certification. Additions of major sources require compliance with Prevention of Significant Deterioration (PSD) regulations. Best management practices (BMPs) to reduce fugitive emissions, such as watering disturbed areas and roads, would be implemented to reduce the amount of these emissions. By using LEED standards for construction of the new fire station, long-term positive impacts to air quality are anticipated as a result of the Proposed Action. No significant impacts to air quality would result because of demolition activities. The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to air quality. As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Noise - Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Noise levels will be minimized by wearing hearing protection, ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction and demolition activities are not conducted during early morning or late evening hours. The relocation of the existing hazardous cargo area to the proposed hazardous cargo area involves no construction or demolition and there would be no impact to noise. Short-term impacts associated with construction and demolition activities would be insignificant, temporary and cease at the completion of these activities.

Wastes, Hazardous Materials and Stored Fuels - Significant impacts to hazardous materials and waste management, solid waste management, installation restoration program sites, asbestos-containing material abatement and lead-based paint abatement are not expected. The increase in hazardous and solid wastes from construction of a new fire station and demolition of buildings 530 and 606 would include an estimated four million pounds of debris. Solid waste debris would be disposed of in an approved location, such as the Grand Forks Municipal Landfill twelve miles east of the base. Inert construction debris would be disposed at an approved location, such as the inert landfill, permit number IT-198, four miles northeast of the base. Petroleum-contaminated soils (PCSs) generated from proposed action would be treated at the land treatment facility (IT-183) located on the southwest side of the airfield. Mercury, PCB and asbestos-containing materials must be removed and disposed by applicable environmental laws and regulations. Regulated Asbestos Containing Materials must be removed prior to a demolition and disposed at an approved landfill. Non-friable ACM and lead-based paint debris can be disposed as inert construction debris with approval of the Department of Health. Polychlorinated Biphenyls (PCBs) and PCB Items would be removed prior to demolition IAW 40 CFR 761 and disposed at an EPA landfill approved for disposal of PCBs. An underground storage tank and piping for gray water from floor drains located outside 606 and a grit chamber located inside Building 530 would be removed during building demolition actions in accordance with federal, state and local

regulations. Batteries, pesticides, mercury devices and lamps such as fluorescent light bulbs can be stored and disposed as Universal Waste. Ignitable, corrosive, reactive and toxic wastes must be stored and disposed as Hazardous Waste. Workers must be protected from exposure and must be properly trained in the removal and disposal of hazardous materials and wastes. Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. All solid waste materials would be managed and transported in accordance with the state's solid and hazardous waste rules. The relocation of the existing hazardous cargo area to the proposed hazardous cargo area involves no construction or demolition and there would be no impact to petroleum products, hazardous materials and hazardous waste.

Water Resources – There are non-jurisdictional wetlands in the immediate footprint of the construction area of the new fire station site (Corp project number NWO-2005-60039-BIS). The 2004 wetland inventory revealed the presence of wetlands at the site of the proposed action. The wetland being affected by proposed activities is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. United States Army Corps of Engineers North Dakota verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005, from the North Dakota Regulatory office. Jurisdictional determinations are valid for five years, and as such is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the United States Army Corps of Engineers does not require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404), and subsequently no mitigation for this specific project under this law is required.

The North Dakota Game and Fish Department commented that no significant adverse effects on wildlife or wildlife habitat, including endangered species, would result from our project provided any unavoidable wetland impacts are mitigated in kind on an acre-for-acre basis. The base replied to the Game and Fish that the specific 5 .36 acre wetland affected by the proposed actions is a non-jurisdictional wetland, and as such the United States Army Corps of Engineers of North Dakota regulatory office does not require mitigation for this unavoidable wetland loss. Fiscal policy does not allow the base to mitigate wetland loss associated with this construction, and therefore will not be accomplished.

Prairie pothole wetlands existed on the installation and were filled prior to creation of the Grand Forks AFB infrastructure. Because of the extent of the wetland within the HCA and the proximity to pavement, the project cannot avoid directly impacting wetlands. The area surrounding the new fire station site would be re-contoured to a more gradual slope with drainage to convey surface water runoff. Because this wetland would be impacted, a FONPA must be prepared and submitted for review and approval by the Director, Installations and Mission Support prior to implementing the impacting activity.

Short-term impacts to water resources would be avoided or minimized through implementation of BMPs, such as silt fences and traps, detention basins, buffer strips or other features used in various combinations, (i.e., erosion control measures), as part of the Proposed Action. If an excavated area fills with groundwater, water would need to be pumped from the excavation, filtered and discharged as surface water. Proper stabilization and seeding the site immediately

upon completion of the construction would provide beneficial vegetation, controlling erosion. Prior to introducing a new line to the water main, it should be disinfected IAW AWWA standards to include bacteriological testing by the contractors. Provided best management practices (BMPs) are followed, there would be insignificant impacts on stormwater, surface water, wastewater, water quality and floodplains. The relocation of the existing hazardous cargo area to the proposed hazardous cargo area involves no construction or demolition and there would be no impact to water resources.

Biological Resources –BMPs and control measures, including silt fences, storm drain covers, covering of stockpiles and keeping construction equipment in construction areas, would be implemented to ensure that impacts to biological resources be kept to a minimum. Disturbed areas should be re-established as soon as possible. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion and promote the establishment of native plant species. All trees and shrubs that need removal shall be either relocated on site if appropriate and/or replaced one for one following guidance in AFI 32-7064 and the base INRMP. BMPs to limit possible weed seed transport from infested areas to non-infested sites, avoiding activities in or adjacent to heavily infested areas, removing seed sources and propagules from site prior to conducting activities, limiting operations to non-seed producing seasons, washing or otherwise removing all vegetation and soil from equipment before transporting to a new site will help control noxious weeds on federal properties IAW Public law 93-629, the federal noxious weed act (7 USC 2801 et seq.) and executive order 13112. Construction and demolition would have insignificant impacts to vegetation, wildlife and state-threatened and endangered species. The proposed construction area, as well as 606, is in a semi-improved area where grounds are maintained by the grounds maintenance contractor. Building 530 is located in an improved area. Due to the abundance and mobility of these species present at this location and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local areas. The location of the proposed fire station, the proposed hazardous cargo area, the alternative Prior Approved Fire Station Site and buildings 530 and 606 are in improved and semi-improved areas of the base, and not near the Turtle River, lagoons and grassland west of the airfield where threatened and species of concern are most likely to appear.

Socioeconomic Resources - The Proposed Action would not involve relocation of personnel to the region of influence (ROI); therefore, no change to the population would be expected. The economic benefits would be local and short-term with no permanent employment positions created; therefore, there would be no long-term or significant changes to employment and income potential in the ROI. Secondary retail purchases would make an additional contribution to the local communities. The implementation of the Proposed Action, therefore, would provide a short-term, beneficial impact to local retailers during the construction and demolition phase of the project.

Cultural Resources - There are no eligible or potentially eligible National Register of Historic Places (NRHP) archeological sites, but there are potentially eligible NRHP cold-war buildings on Grand Forks AFB. Grand Forks AFB had Section 106 consultation with SHPO to demolish buildings 530 and 606 as described in this EA and gained approval to complete that undertaking. State Historical Society of North Dakota correspondence with a "No Historic Properties

Affected" determination is included. One building, 313, remains listed as potentially eligible for the NRHP and will be maintained in a fashion consistent of NRHP eligibility.

In the unlikely event any archaeological artifacts are discovered during the construction of the fire station or demolition of 530 and 606, the operator or contractor would be instructed to halt operations and immediately notify Grand Forks AFB Cultural Resource Manager who would notify the State Historic Preservation Officer. Borrow material is to be derived from an archeological-approved source of the State Historical Society of North Dakota.

Land Use – Relocation of the hazardous cargo area and removing the QD arcs from the mission area would free up prime real estate and alleviate mission impacts. The proposed construction would not change the land use, since the new fire station is in the area designated for Airfield operations. Demolition of building 606 would create safer traffic flow for fire response trucks. Demolition of substandard building 530 would provide future real estate on the prime flight line adjacent location. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. A significant mission change from KC135 refueling tankers to the Unmanned Aircraft System (UAS) with military population decline is anticipated in the foreseeable future of Grand Forks AFB and is currently being assessed with an EIS. However, other associations with UAS mission organizations may prove to be healthy growth in the long-term future. No population growth fluctuations are anticipated in the foreseeable future of this construction and demolition project. The proposed action has no adverse impact to land use, but does have positive impact to land use with a more efficient location for the new fire station.

Transportation Systems – The proposed operation would have insignificant adverse impact to transportation systems on base due to vehicles traveling to and from the new fire station construction site and buildings 530 and 606 demolition sites. The site would provide direct access to the flight line and base transportation system through the construction of access roads as part of the Proposed Action. The relocation of the existing hazardous cargo area to the proposed hazardous cargo area involves no construction or demolition and there would be no impact to transportation resources.

Airspace/Airfield Operations - The Proposed Action would have a positive impact to aircraft safety and airspace compatibility with the new fire station location that more centrally serves the flight line from north to south to meet airfield response time requirements. The location of the proposed fire station would allow the secondary fire station (657) to be used for an alternative purpose involving airfield operations. The relocation of the existing hazardous cargo area to the proposed hazardous cargo area involves no construction or demolition and may need either a temporary obstruction or operational waiver for parked aircraft. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

Safety and Occupational Health – The demolition of 606 and 530 would resolve potential health issues related to mercury, PCBs, asbestos and lead-based paint. Participants in the demolition and construction are required to wear appropriate personnel protective equipment (PPE) for protection from exposure. Any excavation in this area needs to be reviewed by Bioenvironmental Engineer for worker protection. Implementation of the Proposed Action would result in long-term benefits to personnel health and safety by improving the living and working conditions in the new fire station facility. Provided best management practices are used, the Proposed Action would have positive impact on safety and occupational health.

Environmental Management – Provided best management practices (BMPs) are followed, the Proposed Action would not impact IRP sites, geology or pesticides. BMPs would be implemented to prevent increased runoff, erosion and sedimentation from soils exposed during demolition and construction activities. The soils in the project areas have been previously disturbed by development for facilities and pavement. Approximately eight acres would be disturbed, following an approved erosion and sediment control plan, in completing the construction and demolition activities. No long-term impacts would be expected following grading and revegetation in the project areas.

Environmental Justice - EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. There is no minority or low-income populations within or immediately adjacent to the area of the Proposed Action or Alternatives and, thus, there would be no disproportionately high or adverse impact on such populations.

Cumulative Impacts. The potential environmental impacts resulting from the incremental impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions were considered for the cumulative impacts analysis. The Master Space Plan described in the General Plan for Grand Forks AFB was developed to guide development for the next 15 to 20 years. Under the plan, substandard facilities would be demolished and replaced with new construction that meets AMC standards. The Proposed Action would be concurrent with capital improvement projects specified in the General Plan that would be assessed in separate NEPA documents as necessary. Potential impacts to resources would be similar to the Proposed Action in this EA and would revert to baseline conditions after completion of the individual projects. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. A major mission change from KC135 refueling tankers to the Unmanned Aircraft System (UAS) with military population decline is anticipated in the foreseeable future of Grand Forks AFB. However, other associations with Air National Guard, Department of Homeland Security and other organizations involved in the UAS mission may prove to be healthy growth in the long-term future of Grand Forks AFB. The potential adverse impacts to resources of interest in this EA are short-term and insignificant. The Proposed Action would be limited to the east-central area of the taxiway and would not have long-term adverse impacts to resources on Grand Forks AFB, Grand Forks County, or the state of North Dakota. There would be demolition of the existing fire station (530) and the missile transfer building

(606), potentially eligible historic buildings. The base underwent a large scale mitigation effort for demolition of cold war structures with the construction of the cold war heritage plaza created in 2004. History has been mitigated and preserved at the cold war heritage plaza.

There is non-jurisdictional wetland in the immediate footprint of the construction area of the new fire station site (Corp project number NWO-2005-60039-BIS). The wetland being affected by proposed activities was revealed in the 2004 wetland inventory and is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. United States Army Corps of Engineers North Dakota verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005, from the North Dakota Regulatory office. Jurisdictional determinations are valid for five years, and as such is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the United States Army Corps of Engineers does not require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404), and subsequently no mitigation for this specific project under this law is required.

Because this non-jurisdictional wetland would be impacted by the construction at the new fire station site, a FONPA must be prepared and submitted for review and approval by the Director, Installations and Mission Support prior to implementing the impacting activity.

1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

The 319th Air Refueling Wing (319 ARW) proposes four actions: (1) construct a new fire station, (2) demolish the existing fire station (530), (3) demolish the missile transfer building (606), and (4) relocate the hazardous cargo area at Grand Forks Air Force Base, North Dakota.

This Environmental Assessment (EA) examines the potential for impacts to the environment resulting from construction of a new fire station on Grand Forks Air Force Base (AFB), as well as demolition of the existing fire station, the missile transfer building, and redesignation of the site known as the hazardous cargo area (HCA). As required by the National Environmental Policy Act (NEPA) of 1969, federal agencies must consider environmental consequences in their decision-making process. The Air Force complies with NEPA through adherence to 40 Code of Federal Regulations (CFR) 1500-1508, Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of NEPA, and 32 CFR 989, Air Force Environmental Impact Analysis Process. The EA provides analysis of the potential environmental impacts from both the Proposed Actions and the Alternatives to determine whether the Proposed Actions would have a significant adverse effect on the quality of the environment. This environmental assessment is assigned RCS number 2009-116. The Automated Civil Engineering System-Project Management (ACES-PM) project number assigned is JFSD200501. A copy of the AF Form 813 describing the Proposed Action is found in Appendix A.

1.1 INTRODUCTION

Located in northeastern North Dakota (ND), Grand Forks AFB is an air refueling wing in Air Mobility Command (AMC) and home to 12 KC-135R Stratotanker aircraft. The host organization at Grand Forks AFB is the 319th Air Refueling Wing (ARW). Its mission is to guarantee global reach, by extending range in the air, supplying people and cargo where and when they are needed and provides air refueling and airlift capability support to United States Air Force (USAF) operations anywhere in the world, at any time. Organizational structure of the 319th ARW consists primarily of an operations group, maintenance group, mission support group and medical group.

The location of the Proposed Actions and the Alternative actions would be at Grand Forks AFB, ND. Grand Forks AFB covers approximately 5,161 acres of government-owned land and is located in northeastern ND, about 14 miles west of Grand Forks, along United States (US) Highway 2. See Figure 1.1 for a location map. Grand Forks (population 49,321) is the third largest city in ND. The city and surrounding area, is a regional center for agriculture, education and government. It is located approximately 160 miles south of Winnipeg, Manitoba and 315 miles northwest of Minneapolis, Minnesota. The total base population, as of Sept 2008, is approximately 5,222. Of that, 1,986 are military, 2,189 are military dependents, 366 appropriated fund (APF) civilians and 681 other civilians working on base (Grand Forks AFB, 2008).

The Base Realignment and Closure (BRAC) 2005 Report submitted by the President to Congress became final after November 8, 2005. This was a milestone in the restructuring of DOD's

domestic base structure within the process established by Congress. The Department began this implementation process within two years from the date the President submitted to the Congress (September 15, 2005) and must complete it within six years. The BRAC Commission's final recommendation included realignment of the 319th Air Refueling Wing's KC-135-R/T aircraft to Scott AFB, Seymour-Johnson AFB, MacDill AFB, Hickam AFB and McConnell AFB. It recommended modification of infrastructure at Grand Forks AFB to accommodate the emerging Unmanned Aircraft System (UAS) mission. Twelve KC-135 aircraft now remain at Grand Forks AFB to facilitate an efficient and cost effective bed down of the UAS. The tankers remain in place until the UAS is operational at GFAFB, but not later than 2011, unless otherwise required for national emergencies. A loss of 1,406 personnel is anticipated. Grand Forks remains an active Air Force installation with a new active duty/Air National Guard association unit created in anticipation of emerging missions at Grand Forks. The 119th Fighter Wing at Hector International Airport Air National Guard Station at Fargo ND is to be redesignated as a UAS wing and the facility in Fargo would be expanded to accommodate the UAS ground control and intelligence analysis functions and expeditionary combat support elements. The Air Force would construct appropriate facilities on GFAFB to launch, recover, maintain and support the UAS assigned to the 119th FW. The UAS beddown is being evaluated by an Environmental Impact Statement currently in progress.

1.2 NEED FOR THE ACTION

The Proposed Action has four parts:

1. construct a new fire station, with landscaping, drainage, parking and pavement
2. demolish the existing fire station (530)
3. demolish the missile transfer building (606)
4. relocate the hazardous cargo area

The existing 1957-vintage main crash and fire rescue facility is severely undersized, has an unsafe, inefficient maze layout, inadequate vehicle-to-stall clearance and does not meet current codes for life safety and standards of living. The building includes HVAC that is obsolete, difficult to maintain and inefficient. The existing fire station (530) lacks adequate maintenance space and requires hoses to be laid out in office space for drying during the winter months. The vehicle stalls provide only two inches of clearance on either side for parking fire trucks. The fire station was originally 9,350 square feet in size; due to several building additions, the station now occupies 21,266 SF. The utilities infrastructure is outdated, difficult to maintain and inefficient to operate. The current building is 2,245 square meters (SM) and there is a need for a building of 2,820 SM, an increase of 25 percent. The existing fire station (530) at 690 Steen Blvd does not meet airfield response time requirements because of the southerly location in relation to the north to south runway.

Renovating building 530 to AF standards for a fire station would exceed the 70% AF programming rule. The Air Force program policy in AFI32-1032 states that maintenance and repair do not change the nature of a facility, but simply ensure it can continue to be used effectively. Repair does not normally increase the volume or foot print of a building, although it may result in greater usable floor space due to reconfiguration of the interior. If proposed repairs exceed 70 percent of a facility's replacement cost, an economic analysis must accompany the

DD Form 1391 documenting that repair is more cost effective than constructing a new facility. MAJCOM Civil Engineers must approve requests to perform facility repairs which exceed 70% of the facility's replacement cost. In no case shall the cost of facility repairs exceed the replacement cost of the facility. This policy will not apply where a facility is being repaired in lieu of replacement because it is on the national or state historic register. Creating new or enlarging existing real property facilities (volume or footprint) is classified as construction. Renovating the existing fire station (530) would involve some costly repairs because of the inefficient HVAC and expansion of maintenance space. The building contains potential contamination, such as asbestos and lead-based paint, mercury thermostats, PCB light ballasts, and mercury containing light bulbs. Even with renovations, the airfield response times would be inadequate.

A secondary fire station (657) was built in 1988 to provide faster response time to the north end of the runway and north side of the base and meet USAF airfield response time requirements of three minutes for aircraft emergencies. This 2,911 SF building provides stalls for two fire response vehicles plus offices, bunkroom, kitchen and restrooms for three personnel on duty 24 hours/day, 7 days/week. The size does not provide adequate space to become the primary fire station. The facility is cramped and inefficient due to physically separated operations that defeat the objective of effective base fire protection. The size of the secondary fire station is 270 SM, a facility only 10% of the 2,820 SM proposed for the new fire station. However, it remains in good condition. When the new fire station is built, this facility would be offered to another user on base who needs access to the flight line ramp with a requirement for 2,911 SF, i.e., 270 SM, of combined industrial and office space.

Building 606 is an outdated facility with infrastructure that is no longer needed in accordance with the Grand Forks AFB Master Space Plan. Building 606 was a missile transfer building built in 1966 for the Minuteman missile mission. It has been pickled, i.e. mothballed, since 1999 when the Minuteman missiles were deactivated at Grand Forks AFB as part of BRAC. Building 606 is an excess building that represents sources of potential contamination, such as asbestos and lead-based paint, mercury thermostats, PCB light ballasts, and mercury containing light bulbs. Renovation of building 606 to AF standards would exceed the 70% AF programming rule. Removal of this building would provide space near the flight line for future projects. Demolition would also allow funds now expended on maintenance and repairs to be used more efficiently on functioning facilities.

The Grand Forks AFB Facilities Board approved the construction of a new fire station as project number JFSD200501. The proposed location initially evaluated was the northwest corner of 10th Avenue and Eielson Street, called within this document as the Prior Approved Fire Station Site. The location now proposed in this EA is the west end of 10th Avenue at the area known as the existing hazardous cargo area, called the New Fire Station Site within this document. The proposed hazardous cargo area would be relocated to an area on the north taxiway using an existing piece of concrete for those situations when explosives or other dangerous materials must be loaded on cargo aircraft and existing aprons cannot be used without violating quantity-distance safety criteria. There has been no recorded instance of explosive or dangerous material loadings or unloadings at Grand Forks AFB in the past ten years. The proposed UAS mission

does not intend to use explosives or munitions on the unmanned aircraft systems at Grand Forks AFB.

Planning for the fire station project began several years ago. The Proposed Action to construct a new fire station has been evaluated previously in two Environmental Assessments. The first Final EA (RCS # 2003-012) was completed in August 2003 for constructing a new fire station, a radar approach control facility (RAPCON) and an air traffic control tower, as project JFSD990072. A Finding of No Significant Impact was signed on October 2, 2003, by the Grand Forks AFB Environmental Protection Committee Chairman. The proposed location initially evaluated was the northwest corner of 10th Avenue and Eielson Street, called the Prior Approved Fire Station Site within this document.

In the fall of 2004, new information pertaining to wetlands in the proposed location of the prior approved fire station site became available. A Final EA (RCS # 2005-177) was completed in March 2006 for constructing a new fire station in an undeveloped area containing wetland areas at the corner north of 10th Avenue and west of Eielson St, as project JFSD200501. A Finding of No Significant Impact (FONSI) and a Finding of No Practicable Alternative (FONPA) was signed on March 15, 2006, by the Deputy Director, Installations and Mission Support, Air Mobility Command. The proposed location evaluated in this second EA was also the northwest corner of 10th Avenue and Eielson Street, called the Prior Approved Fire Station Site within this document and shown on Figure 2.1.

In the early months of 2009, new information pertaining to the prior approved fire station site at the corner of 10th Avenue and Eielson Street came to light. The site is adjacent to the existing road to the Combat Arms Training and Maintenance (CATM) located north of the proposed site. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the new fire station proposed at 10th Avenue and Eielson Street would need additional requirements:

- new automotive flight line gate barrier with a break-away fence
- new road to allow separate access to the CATM range without impact to the landfill caps
- relocation of over 1200 feet of flight line fences
- a higher elevation construction site with fill and foundation materials to compensate for a three feet difference in elevation
- new pavement to the flight line taxiway to support the heavier weight of large crash vehicles

In light of these significant expenses, a proposal was made by AFCEE Programming to relocate the existing hazardous cargo area (aka hot cargo pad) and re-site the new fire station at this location. This relocation of the hazardous cargo area is a change from one concrete area along the flight line to another concrete area on the taxiway. It does not involve construction. This relocation of the HCA was approved by an out-of-cycle Facilities Board review in March 2009. Relocating the hazardous cargo area would move the QD arcs and thus release previously restricted prime flight line property to enable the new fire station to be sited closer to the airfield and use existing flight line fence. A photo of the proposed location is shown in Figure 2.3 and Figure 2.4.

The hazardous cargo area designation is proposed to be relocated to the site indicated on the north taxiway as shown in Figure 2.1. With this action, the old hazardous cargo area would be de-sited pending approval by AMC and DDESB. Historically, there has been no recorded use of the existing hazardous cargo area in the last ten years and known future UAS missions do not have a requirement. If a future UAS mission requires construction of a separate hazardous cargo area, a project would be programmed for a new concrete hazardous cargo area and that proposal would be evaluated in a future environmental assessment. Airfield management coordinates aircraft parking locations for loading and unloading of hazardous cargo. Hazardous cargo includes any type of ammunition, explosives, gases, flammable liquids and solids, and poisonous, radioactive, corrosive and miscellaneous materials. Hazardous cargo areas or pads are paved areas for loading and unloading explosives and other hazardous cargo from aircraft. Hazardous cargo pads are required at facilities where existing aprons cannot be used for loading and unloading hazardous cargo. They are required at facilities where Q-D safety criteria would be violated (in relation to other critical resources) if the existing aprons were used for loading and unloading explosives or dangerous cargo.

The proposed hazardous cargo area as shown in Figure 2.1 has a 1250 foot explosive quantity distance radius and is based on a C-5 aircraft template. Access for K loaders and other equipment used in loading and unloading aircraft parked on the taxiway would be required. Airfield equipment for weather and communications within the 1250 foot radius have been reviewed and coordinated with Airfield Management. In the proposed hazardous cargo location, the 7 to 1 transitional slope would allow for a vertical height of approximately 22 feet in the center of the taxiway which would be under the tail height of either a C-17 or C-5. Taxiing aircraft are exempt from this requirement, but a parked aircraft may need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. If the proposed action to relocate the hazardous cargo area is denied by HQ AMC, the alternative action to eliminate the hazardous cargo area will be chosen.

Removing the QD arcs from the original hazardous cargo area would free up prime airfield real estate directly north and west of the existing three-bay hangar. This would also alleviate mission impacts to siting a new hangar in this area - a future UAS development plan that has been validated by past SATAFs.

1.3 OBJECTIVES FOR THE ACTION

A modern, efficient fire station is required to house all authorized airfield and base fire fighting vehicles, drive-through stalls, personnel, alarm center, training, administration, storage and fire hose tower. A new fire station would provide fire protection for USAF aircraft and equipment, improve firefighting response time and improve morale and retention of military and civilian firefighters. The location must be on the flight line and centrally located to meet airfield response times. Sleeping areas must not discharge directly into vehicle stalls. An adequate shower and lavatory facility is required for male and female firefighters. There must be a suitable living space for cooking, dining, relaxing and physical fitness.

Grand Forks AFB proposes to construct a new fire station at the west end of 10th Avenue at the New Fire Station Site and relocate the hazardous cargo area shown in Figure 2.1. A map of the location of the proposed construction is shown in Figure 1.4. A map of existing buildings is shown in Figure 2.5.

The objective of the Proposed Actions to demolish buildings 530 and 606 is to reduce the amount of funds being spent to maintain substandard buildings and remove potential asbestos and lead-based paint, mercury thermostat and light bulbs, and PCB light ballast risk. Demolishing the buildings would allow funds to be used more efficiently on functioning facilities. Demolition of buildings 530 and 606 would remove outdated facilities and infrastructure that are no longer needed in accordance with the Grand Forks AFB Master Space Plan. Demolition would eliminate future environmental hazards within the deteriorating buildings. Demolition of these buildings would provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS).

1.4 SCOPE OF EA

This EA identifies, describes and evaluates the potential environmental impacts associated with the four proposed actions: (1) construction of a new fire station on Grand Forks AFB, (2) the demolition of the old fire station (530), (3) demolition of the old missile transfer facility (606) in the vicinity of the proposed fire station, and (4) the relocation of the existing hazardous cargo area to the proposed hazardous cargo area. The relocation of the hazardous cargo area involves no construction, but a designation from one concrete area along the flight line to another concrete area on the taxiway. Except for possible cumulative impacts, it does not analyze unrelated construction and construction activities.

The following resources must be considered under the NEPA, Section 102(E).

- Air Quality
- Noise
- Wastes, Hazardous Materials and Stored Fuels
- Water Resources
- Biological Resources
- Socioeconomic Resources
- Cultural Resources
- Land Use
- Transportation Systems
- Airspace/Airfield Operations
- Safety and Occupation Health
- Environmental Management
- Environmental Justice

1.5 DECISION(S) THAT MUST BE MADE

This EA evaluates the environmental consequences from the proposed actions:

- construction of a new fire station on Grand Forks AFB
- demolition of the old fire station (530)
- demolition of the old missile transfer facility (606)
- relocation of the existing hazardous cargo area to the proposed hazardous cargo area

These actions are proposed to remove unnecessary facilities in accordance with the Grand Forks AFB master space plan, as well as provide a functional fire station and hazardous cargo area. NEPA requires that environmental impacts be considered prior to final decision on a proposed project. The Asset Management Flight Chief would determine if a Finding of No Significant Impact can be signed or if an Environmental Impact Statement (EIS) must be prepared. Preparation of an environmental analysis must be accomplished prior to a final decision regarding the proposed project and must be available to inform decision makers of potential environmental impacts of selecting the Proposed Action or any of the Alternatives.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

These regulations require federal agencies to analyze potential environmental impacts of Proposed Actions and Alternatives and to use these analyses in making decisions on a Proposed Action. All cumulative effects and irretrievable commitment of resources must also be assessed during this process. The Council on Environmental Quality (CEQ) regulations declares that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI).
- Aid in an agency's compliance with NEPA when an EIS is not necessary and facilitate preparation of an EIS when necessary.

Air Force Instruction (AFI) 32-7061 as promulgated in 32 Code of Federal Regulations (CFR) 989, specifies the procedural requirements for the implementation of NEPA and the preparation of an EA. Other environmental regulatory requirements relevant to the Proposed Actions and Alternatives are also in this EA. Regulatory requirements including, but not restricted to the following programs would be assessed:

- AF Environmental Impact Analysis Process (EIAP) (32 CFR 989)
- AFI 32-7020, Environmental Restoration Program
- AFI 32-7040, Air Quality Compliance
- AFI 32-7041, Water Quality Compliance
- AFI 32-7042, Solid and Hazardous Waste Compliance
- AFI 32-7063, Air Installation Compatible Use Zone (AICUZ) Program
- AFI 32-7064, Integrated Natural Resource Management
- Archaeological Resources Protection Act (ARPA) [16 U.S.C. Sec 470a-11, et seq., as amended]
- Clean Air Act (CAA) [42 U.S.C. Sec 7401, et seq., as amended]
- Clean Water Act (CWA) [33 U.S.C. Sec 400, et seq.]

- CWA [33 U.S.C. Sec 1251, et seq., as amended]
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) [42 U.S.C. Sec. 9601, et seq.]
- Defense Environmental Restoration Program [10 U.S.C. Sec. 2701, et seq.]
- Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 [42 U.S.C. Sec. 11001, et seq.]
- Endangered Species Act (ESA) [16 U.S.C. Sec 1531-1543, et seq.]
- Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality as Amended by EO 11991
- EO 11988, Floodplain Management
- EO 11990, Protection of Wetlands
- EO 12372, Intergovernmental Review of Federal Programs
- EO 12898, Environmental Justice
- EO 12989 Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
- EO 13112, Invasive Species
- Hazardous Materials Transportation Act of 1975 [49 U.S.C. Sec 1761, et seq.]
- NEPA of 1969 [42 U.S.C. Sec 4321, et seq.]
- National Historic Preservation Act (NHPA) of 1966 [16 U.S.C. Sec 470, et seq., as amended]
- The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 [Public Law 101-601, 25 U.S.C. Sec. 3001-3013, et seq.]
- Noise Control Act of 1972 [42 U.S.C. Sec. 4901, et seq., Public Law 92-574]
- ND Air Pollution Control Act (Title 23) and Regulations
- ND Air Quality Standards (Title 33)
- ND Hazardous Air Pollutants Emission Standards (Title 33)
- Occupational Safety and Health Act (OSHA) of 1970 [29 U.S.C. Sec. 651, et seq.]
- Resource Conservation and Recovery Act (RCRA) of 1976 [42 U.S.C. Sec. 6901, et seq.]
- Toxic Substances Control Act (TSCA) of 1976 [15 U.S.C. Sec. 2601, et seq.]

Grand Forks AFB has a National Pollutant Discharge Elimination System (NPDES) permit for both waste water and storm water to cover base-wide industrial activities. Implementation of the Proposed Actions for construction of a new fire station and demolition of 530 and 606 would disturb more than one acre and thus would require the need for Grand Forks AFB or the construction contractor to obtain a separate NPDES construction permit from the North Dakota Department of Health (NDDH). The base general small site permit would not cover this activity to construct a new fire station and demolish the existing fire station (530) and missile transfer building (606) and would need to be tracked by the construction agent IAW the appropriate rules. The permit would regulate discharge of storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. The relocation of the hazardous cargo area does not involve any construction or demolition work and involves no impact to waste water or storm water.

Scoping for this EA included discussion of relevant issues with members of the Asset Management and bioenvironmental flights. Scoping letters requesting comments on possible issues of concern are sent to agencies with pertinent resource responsibilities. Interagency correspondence is found in Appendix C. In accordance with 32 CFR 989, a copy of the final EA is submitted to the ND Division of Community Services.

Applicable regulatory requirements, environmental controls and required coordination before and during construction include Preconstruction Survey Report, Health and Safety Plan, a Work Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan and Erosion and Sediment Control Plan to the CEA Water Program Manager; a Pollution Prevention Plan, Asbestos Removal Plan, Spill Control Plan and Waste Disposal Plan to the CEA Pollution Prevention Manager; and copies of all plans to the Contracting Officer. The contractor performing the action would be required to submit these plans and specification to the 319 CES for approval prior to initiating work. The Proposed Action includes the demolition of Buildings 530 and 606 and therefore Section 106 consultation with SHPO was accomplished in coordination with this EA. A Notification of Demolition and Renovation must be provided to the ND State Department of Health ten days prior to initiation of demolition.

The Intergovernmental Coordination Act and EO 12372, Intergovernmental Review of Federal Programs, require federal agencies to cooperate with state and local agencies and to consider their views on implementing a federal proposal. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) is required under AFI 32-7060 for the purpose of agency coordination. The Description of Proposed Action and Alternatives (DOPAA) was provided to relevant federal, state, and local agencies for their input during the scoping process. Section 6.0 lists the agencies provided with a copy of the draft DOPAA and EA. USAF considered their input in the planning process; comment letters received are included in Appendix C. Additionally, the EA was made available for a 30-day public Comment period, June 20 to July 20, 2009, to solicit the input of these and other agencies as well as other interested parties. A copy of the public notice is found in Appendix B. A Public Notice of Availability for the EA and Draft FONSI/FONPA was published in the Grand Forks Herald on June 20 and 23, 2009. The EA and Draft FONSI/FONPA were available on the Grand Forks AFB public web site, http://www.grandforks.af.mil/library/index.asp, for the same time period. No public comments were received. The IICEP and public comment effort was performed to solicit agency and public input in the decision-making process.

The following pages include:

- the location map for Grand Forks AFB ND
- the environmental constraints map, which includes the existing explosive safety quantity distance arc; arrow points to new siting.
- the wetlands map for Grand Forks AFB; arrow points to new siting.
- the proposed fire station footprint in relation to the non-jurisdictional wetlands

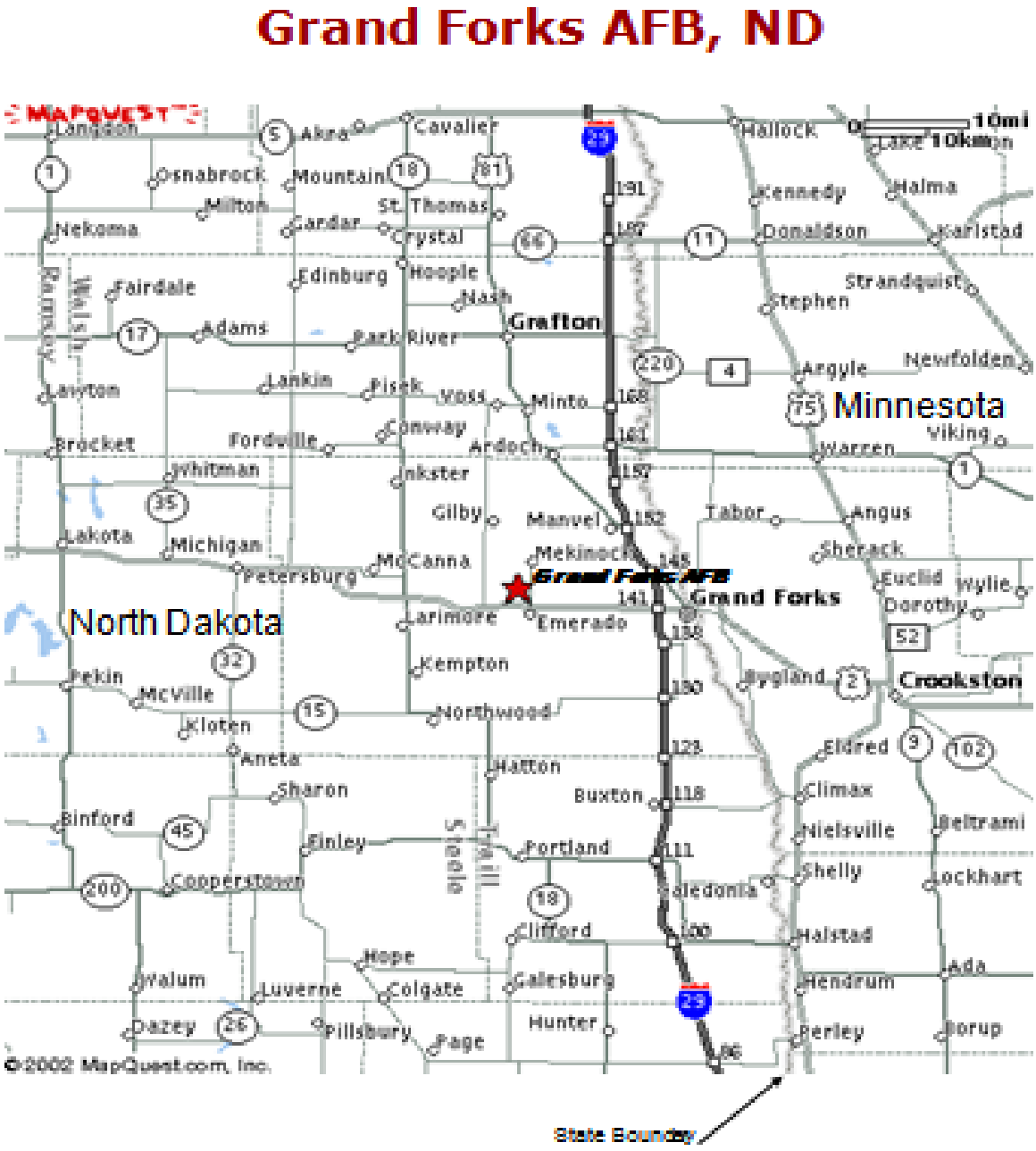

Figure 1.1 Location of Grand Forks Air Force Base in eastern North Dakota

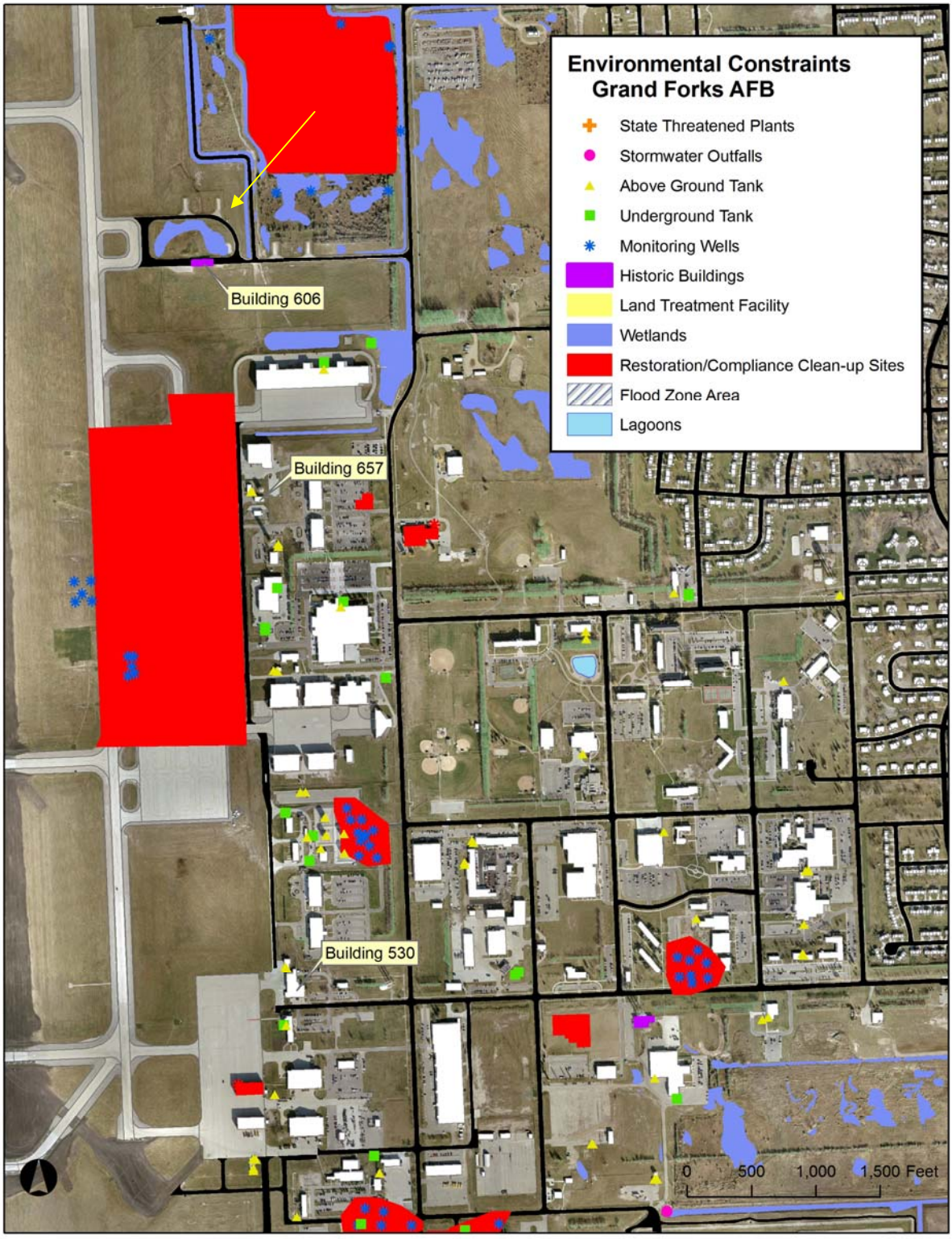

Figure 1.2 Map of Environmental Constraints at Grand Forks AFB. Yellow arrow points to proposed location of new Fire Station.

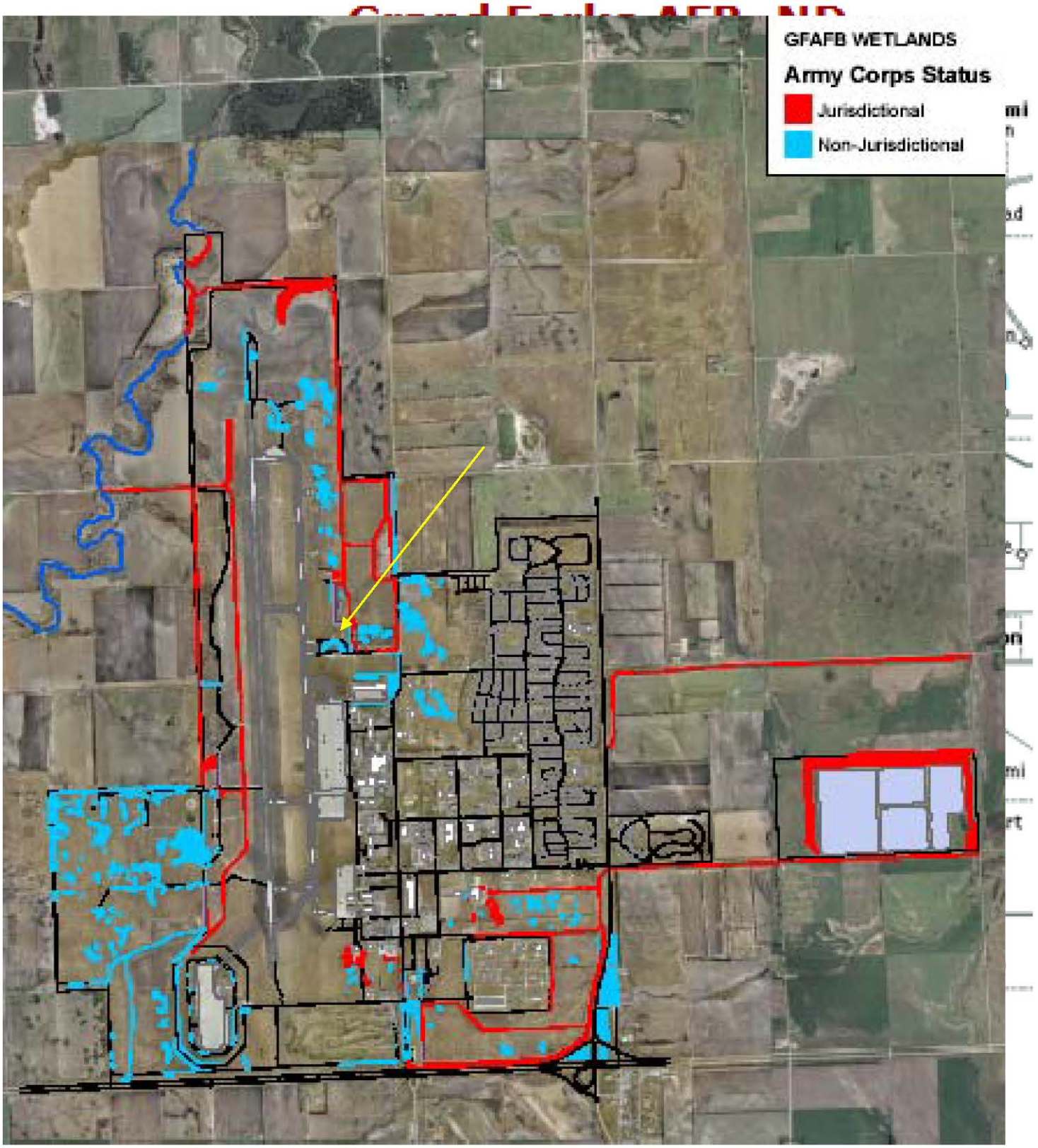

Figure 1.3 Wetland Locations on GFAFB. Yellow arrow-site of proposed construction.

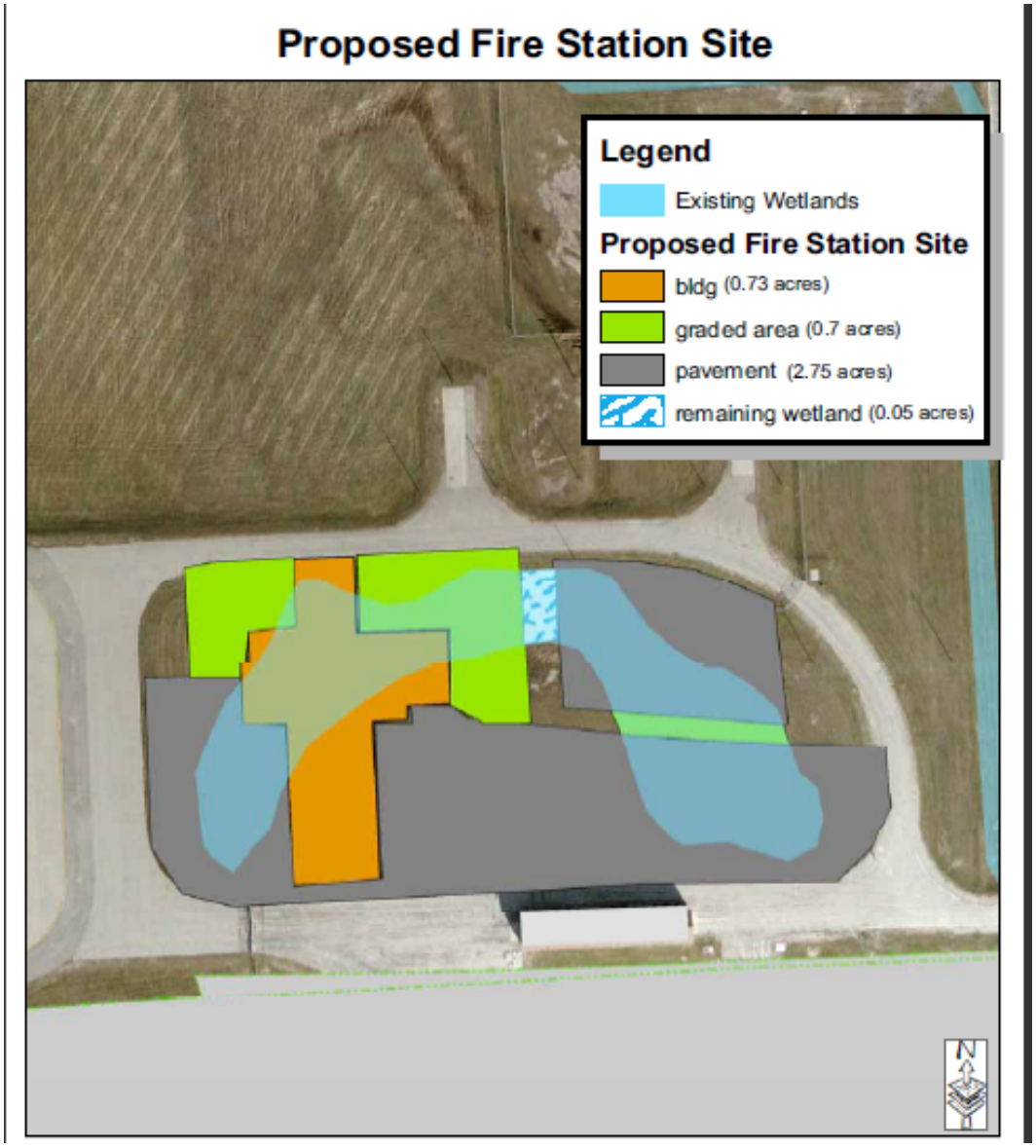

Figure 1.4 Wetland **Locations in relation to New Fire Station Site**

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Based on the descriptions of the relevant environmental resources presented in Section 3 and the predictions and analyses presented in Section 4, this section presents a comparative summary matrix of the alternatives (the heart of the analysis), providing the decision maker and the public with a clear basis for choice among the alternatives.

This section has five parts:

- Selection Criteria for Alternatives
- Alternatives Considered but Eliminated from Detailed Study
- Detailed Descriptions of the Three Alternatives Considered
- Comparison of Environmental Effects of the Proposed Action and Alternatives
- Identification of the Preferred Alternative

2.2 SELECTION CRITERIA FOR ALTERNATIVES

2.2.1 Selection criteria used to evaluate the Proposed and Alternative Actions to Construct a Fire Station include the following:

- A location that allows airfield response times to be met and optimize airfield observations
- A location large enough to support consolidation of base fire fighting operations in one building and to allow for maintenance and care of modern firefighting equipment

Selection criteria used to evaluate the 2003 EA Construct Fire Station included the following:

- A location in the airfield operations area without adversely impacting the flying operation or future land use in the airfield operations area
- Direct access to the flight line and base transportation system to provide emergency response service to protect aircraft, aircrews and base facilities
- Drive-through stalls in the new fire station to allow aircraft rescue and firefighting vehicles and structural vehicles to respond to flight line and structural emergencies
- Centrally located along the flight line for minimizing firefighting response times and optimizing airfield observations
- Outside the explosive safety quantity distance (ESQD) arcs
- A facility to accommodate the equipment needs, unique functional requirements, and safety of firefighting personnel to support the firefighter's mission
- A facility in compliance with USAF planning and design manuals, FAA design standards and DoD requirements for AT/FP

Selection criteria used to evaluate the 2006 EA Construct Fire Station included the following:

- Location in the airfield operations area without adverse impacts to flight operation or future land used in airfield operations area in accordance with Base General Plan

- Location in an area with direct access to the flight line and base transportation systems in order to provide emergency response services to aircraft, aircrews and base facilities
- Location in a central area along the flight line for minimizing the emergency response time and optimizing the ability to observe the airfield
- Design to meet equipment needs, unique functional requirements and safety of firefighting personnel to support the firefighter's mission
- Location outside the explosive quantity siting distance arcs

One significant difference among the 2003, 2006 and 2009 environmental assessments selection criteria is the location outside the explosive quantity distance (QD) arcs. It was suggested by AFCEE Community Planning in early 2009 that the permanent existing hazardous cargo area could be re-sited. It has not been used for off-loading or on-loading explosive or nuclear materials on aircraft since 1999 when the 321st Missile Group was deactivated. The future mission of Unmanned Aircraft Systems (UAS) does not propose to include explosive or nuclear materials at Grand Forks AFB. The AFH 32-1084, Facility Requirements, paragraph 2.28.2, Category code 116-662, Pad, Dangerous Cargo, sub-paragraph 2.28.2.1 states "The pad is required at installations where explosives or other dangerous materials must be loaded frequently on cargo aircraft and where existing aprons cannot be used without violating quantity-distance safety criteria." Aircraft carrying hazardous cargo do not use the apron for normal cargo loading. Grand Forks AFB does not load explosives frequently. It has handled none in the past ten years of records. In the event a need should arise, Grand Forks AFB could park the aircraft as remotely as practical from other explosives or populated areas, i.e., at the Proposed Hazardous Cargo Area on the north taxiway. A Local Operating Procedure would define the requirements for parking the aircraft. The parked aircraft location could be classified as a temporary, non-recurring, storage location that would still need to meet applicable QD arc criteria. If future missions should dictate the need to construct a permanent hazardous cargo area, a Proposed Action to construct a hazardous cargo area would need evaluation in an environmental assessment, as well as development of a programming document, an explosive site plan and necessary waivers and licenses.

The proposal to relocate the hazardous cargo area presented an opportunity for the proposed location of the New Fire Station Site that did not exist in 2003 or 2006. It straddled the flight line, as well as being centrally located on the flight line. It took advantage of the existing concrete heavy enough to support emergency response vehicles. It was close to the flight line and the fence line.

The QD arc location defined the selection of the Prior Approved Fire Station Site in the 2003 and 2006 EAs. It was the nearest location just outside the QD arc and yet centrally located to the flight line. The fire station might have been built based on the 2003 EA, were it not for the discovery of wetlands and the requirement for a FONPA to discuss why no other practicable alternative existed to avoid impacts to that wetland.

2.2.2 Selection criteria used to evaluate the Proposed and Alternative Actions to Demolish or Reutilize Building 530 include the following:

- Avoid repairs that would exceed 70% of the facility's replacement cost

2.2.3 Selection criteria used to evaluate the Proposed and Alternative Actions to Demolish or Reutilize Building 606 include the following:

- Avoid repairs that would exceed 70% of the facility's replacement cost

2.2.4 Selection criteria used to evaluate the Proposed and Alternative Actions to Relocate or Eliminate the Hazardous Cargo Area include the following:

- Location cannot violate quantity-distance safety criteria or explosives safety standards
- Location in an area with direct access to the flight line and base transportation systems in order to provide emergency response services to aircraft and aircrews

All the proposed actions must meet the criteria as follows:

- Avoid or minimize impacts to the natural and man-made environment
- Comply with state and federally mandated requirements and protocols
- Meet the current mission requirements of the installation
- Improve the versatility of the base for accepting new missions
- Eliminate or minimize potential hazards to safety that could occur in the area

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

2.3.1 Fire Station Construction

2.3.1.1 One alternative considered but eliminated was rebuilding the fire station in the current location of the existing fire station at 690 Steen Blvd. The location is near the south end of the flight line. Because of this southerly location, the fire response vehicles routinely fail to meet Air Force three minute response times for aircraft emergency fire calls. Not only is the existing fire station near the south end of the flight line (4800 feet from the center of the runway), but they are also 4500 feet from the southwest corner of military family housing. All housing is north of Steen Blvd. and east of J Street on the east side of the base. The current building is 2,245 square meters (SM) and the proposed building is 2,820 SM, a proposed increase of 25 percent. The location is surrounded by the airfield lighting vault, two squadron operations/aircraft maintenance units (Squad Ops/AMU) and the airfield operations center, and leaves little room for growth along the flightline. See Figure 1.2 and 2.5.

2.3.1.2 Another location to be considered but eliminated is the location of the secondary fire station (657) at 814 B Street. This location is adjacent to Charlie Ramp; however it offers no direct route to the runway with planes parked on the ramp. It is also constrained for space, as the new RAPCON is currently being built adjacent to the east, plus it is surrounded by the AFFF pump house, flight line supply and two squadron operations AMUs. This leaves little room for growth. The size of the secondary fire station is 270 SM, a facility only 10% of the 2,820 SM proposed for the new fire station. See Figure 1.2 and 2.5.

2.3.1.3 Alternative sitings along the east side of the runway were considered but these locations were hindered by existing facilities development and explosive quantity siting distance (EQSD) arcs. An alternative siting of the fire station on the south side of 10th Avenue, across from the prior approved fire station site was considered. This is the only available open space that is sufficient in size and unencumbered by safety concerns, on the east side of the airfield and centrally located. However, this 35 acre alternative site is an area that is reserved for future expansion of aircraft hangars for the Global Hawk and Predators of the UAS family. The most recent SATAF visitors recommended a hangar and ramp for Global Hawk aircraft in this area. See Figure 2.1 for location of Reserved Future Hangar Space.

2.3.1.4 Another area considered but eliminated is north of the existing hazardous cargo area. This area can be considered only if the HCA and QD arc are relocated or eliminated. This area straddles the flight line, but is further north of the center of the runway and reduces the goal to meet airfield response times. This area would require additional construction of roads and streets designed to carry the heavy weight of fire response vehicles than the proposed action which currently has existing concrete designed to carry the heavy weight of loaded aircraft. The most recent SATAF visitors recommended and proposed a new warehouse for snow control equipment storage and maintenance in this area, making it more centrally located to the runway, for snow removal.

2.3.1.5 Other alternatives considered but eliminated in earlier studies included locations west of the runway, south of the existing fire station, east of the existing fire station, and the northern part of the airfield, as described below.

2.3.1.5.1 Relocation of the new fire station west of the runway would not provide direct access to the transportation system in the main cantonment area or adequate response time for fire protection of base facilities. Airfield operating clear zone requirements would restrict the locations available on the west side of the runway to the southwestern corner of the base. If a location in that area were selected, emergency response times would be unacceptable in the areas other than airfield operations, including industrial, administrative, community, medical, outdoor recreation, training, barracks and family housing.

2.3.1.5.2 Siting the fire station in the southern and northern portions of the runway would preclude the requirement to be centrally located for minimizing firefighting response time and optimizing airfield observations. Relocation of the fire station east of the current location would preclude direct access to the flight line due to the requirement to cross a primary road, Eielson Street. Although there are open areas large enough to site the Fire Station, none of them would enable the firemen to provide three minute response for aircraft emergencies. At most times, emergency response times would be unacceptable in the areas other than airfield operations, including industrial, administrative, community, medical, outdoor recreation, training, barracks and family housing.

2.3.2 Hazardous Cargo Area Relocation

2.3.2.1. The proposed hazardous cargo area was selected on the north end of the taxiway due to the avoidance of any occupied buildings or area of activity. Another area considered but eliminated was the south end of the taxiway. The potential QD arc crossed into too many areas of activity on the Bravo ramp to be considered as a viable or reasonable selection.

2.3.2.2 Another area considered but eliminated was the Alpha ramp area. The Alpha ramp is no longer connected to the runway. Any consideration of Alpha ramp as a hazardous cargo area would need a programmed construction project describing the purpose and need. This proposed action would need accomplishment of a full environmental assessment. This alternative is not reasonable at this time when the small amount of hazardous cargo aircraft can be easily served by the proposed action to move the HCA to the north taxiway, or the alternative action to eliminate the HCA, and are much more cost effective, with zero construction costs involved.

2.4 DESCRIPTION OF PROPOSED ALTERNATIVES

This section describes the activities that would occur under three alternatives: the No Action Alternative, the Proposed Actions and Action Alternatives. The four actions within these three alternatives provide the decision maker with a reasonable range of alternatives from which to choose. A copy of Air Force Form 813, Request for Environmental Impact Analysis, is included in Appendix A.

2.4.1 Alternative 1 - No Action Alternatives - Status Quo

2.4.1.1 The No Action Alternative would be to not construct a new fire station. Inadequate fire protection for aircraft and facilities in accordance with USAF standards would be provided with the existing fire station. Infrastructure improvements to improve the effectiveness of the Base's mission, enhance quality of life, replace inefficient and inadequate facilities, and correct current deficiencies would not be initiated.

2.4.1.2 The No Action Alternative would leave the existing fire station (building 530) in place at the west end of Steen Blvd. No demolition would take place. The building would continue to require funding to maintain and operate, while continuing to age and deteriorate, and contain potential asbestos and lead-based paint, mercury thermostat and light bulbs, and PCB light ballast risk.

2.4.1.3 The No Action Alternative would leave the missile transfer building (606) in place at 711 10th Avenue as a pickled, i.e. mothballed, cold storage building. The building would continue to require funding to maintain and operate, while continuing to age and deteriorate, and contain potential asbestos and lead-based paint, mercury thermostat and light bulbs, and PCB light ballast risk.

2.4.1.4 The No Action Alternative would leave the hazardous cargo area (HCA) in the existing location. The QD Arc would remain and continue to limit any activities or construction within the 1250 foot explosive quantity distance radius.

2.4.2 Alternative 2 - Proposed Actions

2.4.2.1 Grand Forks AFB proposes to construct a new fire station, as well as landscaping improvements, site drainage, parking and pavements. See Figure 1.4 and Figure 2.1 for location of proposed fire station. The location is called the New Fire Station Site within this document.

The proposed construction of 2,820 square meters includes a consolidated crash and structural fire station to house fire protection vehicles, equipment, personnel, alarm center and all support areas. It would include reinforced masonry walls, brick exterior, sloped standing seam metal roof, underground utilities and communications infrastructure, pavements, emergency vehicle access roads and pavements, landscaping, parking lot, site improvements, and all other necessary work. The proposed location would allow use of the existing flight line fence. It would provide adequate space for fire hoses to dry in the winter and adequate clearance for parking large emergency response vehicles. It would provide an efficient layout to meet life safety codes for standard of living according to the USAF Fire Station Design Guide. Antiterrorism and force protection requirements would be incorporated IAW DOD Unified Facilities Criteria. The ground elevation is 893 feet. The Grand Forks AFB Facilities Board approved the construction of a new fire station on 18 Jun 07 as project number JFSD200501.

2.4.2.2 It is proposed to demolish the existing fire station (530), as well as remove asbestos, lead-based paint, light ballasts, light tubes, mercury thermostats and tanks plus site restoration. Building 530 is substandard, and renovation to AF standards would exceed the 70% AF programming rule. Demolition of building 530 would remove an outdated facility and infrastructure that are no longer needed in accordance with the Grand Forks AFB Master Space Plan. Demolition would eliminate future environmental hazards within the deteriorating building. Demolition of this building would provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS). See photo of building 530 in Figure 2.2.

With the construction of a new fire station, the secondary fire station (657) would not be needed to meet response times to the north end of the runway and the building would be offered to another function which requires aircraft ramp access. This 2,911 SF currently provides stalls for two fire response vehicles plus offices, bunkroom, kitchen and restrooms for three personnel on duty 24 hours/day, 7 days/week. The size does not provide adequate space to become the primary fire station. However, the building is in good condition and could provide industrial and office space to a user who needs access to the flight line Charlie ramp.

2.4.2.3 Demolish the missile transfer building (606), as well as remove asbestos, lead-based paint, light ballasts, light tubes, mercury thermostats and tanks plus site restoration. Building 606 is substandard, and renovation to AF standards would exceed the 70% AF programming rule. Demolition of building 606 would remove an outdated facility and infrastructure that are no longer needed in accordance with the Grand Forks AFB Master Space Plan. Demolition would eliminate future environmental hazards within the deteriorating building. Demolition of this building would provide open space on the road for fire and emergency response vehicles responding to airfield, industrial and housing fires and emergencies in without hindrance. See photo of building 606 in Figure 2.2.

2.4.2.4 Relocate the hazardous cargo area to a site on the north ramp, as shown in Figure 2.1. The proposed location is convenient to the flight line. The QD arc does not cross any buildings or areas of occupation. The relocation is a redesignation of one concrete area along the flight line to another concrete area on the north taxiway and does not involve any construction or renovation. The designation on the north taxiway will enable the airfield operations to have a readily available site for transient aircraft requiring parking when loaded with hazardous cargo. The new siting location at the proposed hazardous cargo area was coordinated as an out-of-cycle facilities board action and was approved in March 2009. Hazardous cargo aircraft are infrequent at Grand Forks AFB; in fact there have been none in the past ten years. The proposed Unmanned Aircraft System (UAS) mission at Grand Forks does not include explosive and hazardous cargo or munitions. In the future, if mission changes should dictate the need for construction of a permanent hazardous cargo area, an environmental assessment shall be completed for that proposed action and alternatives. A map of the location of this proposed construction is located in Figure 2.1 and Figure 2.5 below. Figure 2.1 includes the New Fire Station Site (proposed action 2), the Prior Approved Fire Station Site (alternative 3), Existing Hazardous Cargo Area to be De-sited (proposed action 2), Proposed Hazardous Cargo Area (proposed action 2), and Reserved Futures Hangar Space (35 acres). Photo of the proposed location is shown in Figure 2.3 and Figure 2.4.

2.4.3 Alternative 3 - Alternative Actions

2.4.3.1 Construct the new fire station on the corner of 10th Avenue and Eielson Street, as originally proposed and assessed in an EA/FONSI in 2003 and again by EA/FONSI/FONPA on March 15, 2006. A map showing the location of this Prior Approved Fire Station Site is also shown in Figure 2.1. The ground elevation is 890 feet. This alternative is a less cost effective location than the Proposed Action as described earlier in the Purpose and Need section. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the Prior Approved Fire Station Site at 10th Ave. and Eielson St. would need a new automotive flight line gate barrier with a break-away fence, a new road to allow separate access to the CATM range, relocation of over 1200 feet of flight line fences, a higher elevation construction site with fill and foundation materials to compensate for a three foot difference in elevation and new pavement to the flight line taxiway to support the heavier weight of large crash vehicles. This location is 1500 feet to the east of the New Fire Station Site in the Proposed Action. Security would require a variety of gate and fence options and subsequent concern about guaranteed operability of gates. It would include risks of leaving gates open as work-arounds in severe adverse weather conditions or equipment malfunctions. Grand Forks AFB has had a history of maintenance problems with the gates along the fence line due to freezing temperatures, ice accumulation along the rails, and snow accumulations blocking traffic and requiring removal at all hours. The gate design system associated with this alternative is not conducive to meeting AF standard mandatory response times. This location would not straddle the airfield flight line fence as desired by AF standards. This location was evaluated in 2003 and 2006 because it was the nearest available space near the center of the flight line, when there was an explosive zone surrounding the original hazardous cargo area. At that time, Planning and Programming personnel did not consider the possibility or feasibility of relocation of the hazardous cargo area and therefore moving the QD arc explosive zone. This location would require wetland

mitigation for 0.03 acres wetlands determined to be jurisdictional by the USACE. The impacts would be predominantly from access driveways crossing the stormwater ditch on the east and on the south of the site. Potential impacts to wetlands adjacent to the site would be minimized through use of erosion control best management practices. Typical erosion control measures such as silt fence and ditch checks would be used to prevent the release of construction site sediment to adjacent wetlands and drainage ditch. Mitigation would involve construction of new wetlands or wetland restoration. Grand Forks AFB would mitigate the losses at either a wetland mitigation bank or a suitable location on base. A formal mitigation plan would be developed during final design of the fire station. Application for a Section 404 permit shall be made to the USACE. A Finding of No Significant Impact (FONSI) and a Finding of No Practicable Alternative (FONPA) was signed on March 15, 2006, by the Deputy Director, Installations and Mission Support, Air Mobility Command, for this Prior Approved Fire Station Site.

2.4.3.2 Designate and/or renovate the existing fire station (530) for a purpose and use other than a fire station whose renovation would exceed the 70% AF programming rule for AF standards. Redesignation and/or renovation of the building into an industrial area would provide access to the flight line. Some reasonable uses would involve overflow storage of snow removal equipment and/or transient alert vehicles and equipment.

2.4.3.3 Renovate the existing missile handling building (606) for a purpose and use other than a missile handling building. It can be used for cold storage as is, or reconnected with electricity and HVAC for heated storage. Renovation of building 606 in the current location would impede the vehicle traffic flow, such as fire response vehicles. Because building 606 partially blocks the width of the road, there may be a need to widen the road or construct a new section of road to drive around building 606.

2.4.3.4 Eliminate the requirement for a designated hazardous cargo area on or adjacent to the flight line at Grand Forks AFB. Eliminating the requirement would reduce the restricted space on base. In the case of a transient aircraft requiring an HCA to park an aircraft with munitions, the Wing Commander could authorize an operational waiver for parking the plane in a temporary hazardous cargo area. Taxiing aircraft are exempt from this requirement, but a parked aircraft may need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

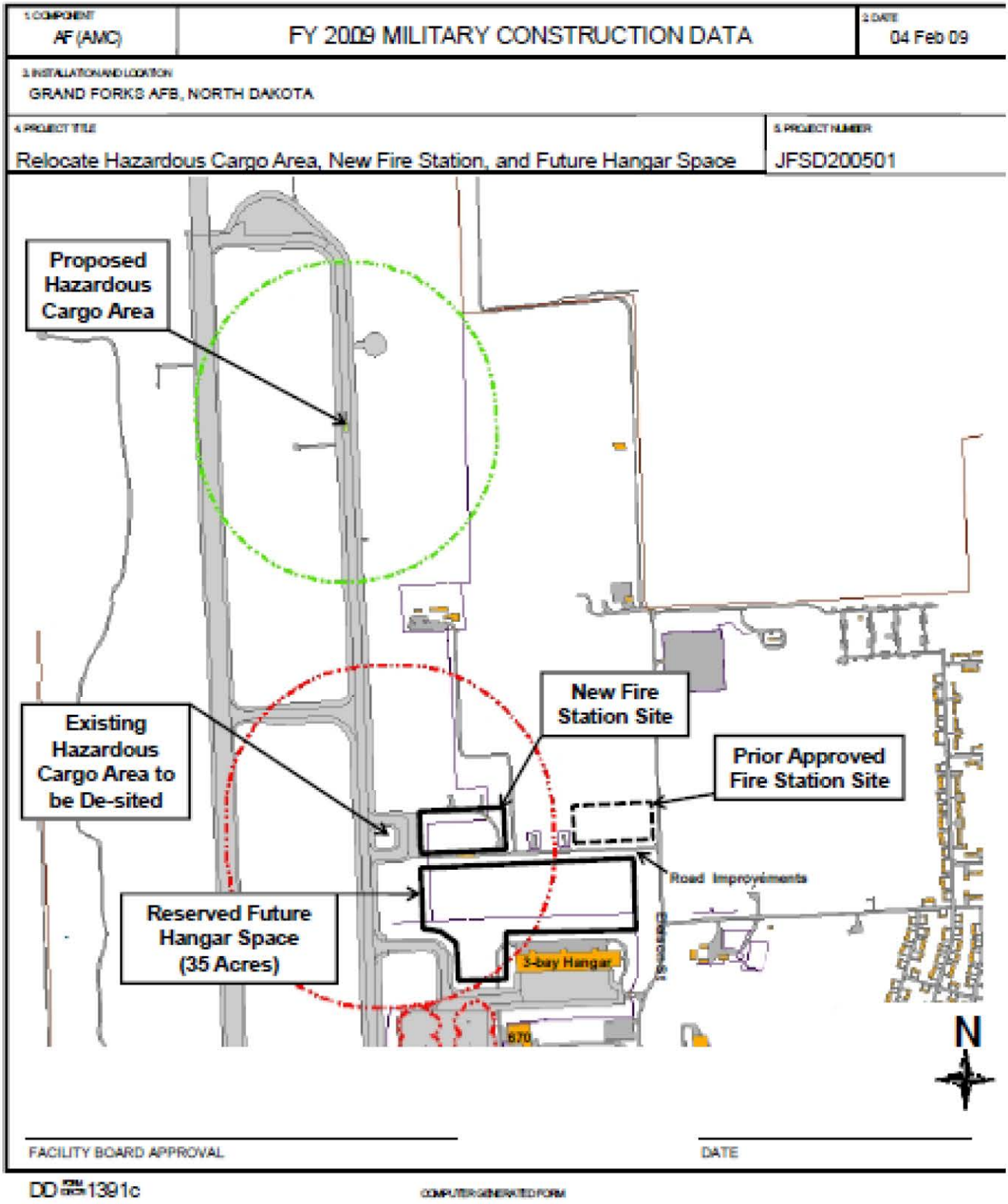

Figure 2.1 Map of Proposal to move hazardous cargo area and use site for new Fire Station

Building 606 – proposed for demolition

Building 530 – proposed for demolition

Figure 2.2 Photos of buildings 530 and 606 proposed for demolition

2.5 DESCRIPTION OF PAST, PRESENT and REASONABLY FORESEEABLE FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS

Impacts from the Proposed Action would be concurrent with other actions occurring at Grand Forks AFB. There are several other construction and construction projects occurring on Grand Forks AFB in the same time frame. An EIS for the beddown of the UAS mission is currently underway. These projects are addressed under separate NEPA documents.

The purpose of the proposed new fire station is to consolidate fire protection activities for U.S. Air Force (USAF) aircraft and facilities, improve firefighting response time and improve morale and retention of military and civilian firefighters at Grand Forks AFB. The existing fire station (building 530) was built in 1957 and does not meet life safety codes or standards of living according to the USAF Fire Station Design Guide. Renovating building 530 to AF standards would exceed the 70% AF programming rule. A modern, efficient fire station is needed to house all authorized airfield and base firefighting vehicles, equipment and on-duty firefighters living in the fire station. Also included are landscaping improvements, sodding, site drainage, parking and sidewalks.

The Proposed Action to construct a new fire station and demolish building 530 has been evaluated previously in two Environmental Assessments. The first, original, Final EA was completed in August 2003 for constructing a new fire station, a radar approach control facility (RAPCON) and an air traffic control tower, as project number JFSD990072 and RCS number 2003-012. The proposed site for the new fire station was the corner north of 10th Avenue and west of Eielson Street which was approved by the Facility Board on January 19, 2001. A Finding of No Significant Impact was signed on October 2, 2003, by the Grand Forks AFB Environmental Protection Committee Chairman. It is identified within this document as the Prior Approved Fire Station Site.

In the fall of 2004, new information pertaining to wetlands in the proposed location of the new fire station became available. The fire station was removed from the RAPCON/ATC tower project and given new project number JFSD200501 in October 2004, as well as new RCS number 2005-177. The location itself remained the Prior Approved Fire Station Site as identified on Figure 2.1 within this EA. A second Final EA was completed in March 2006 for constructing a new fire station in an undeveloped area containing wetland areas, again at the same corner north of 10th Avenue and west of Eielson Street. A Finding of No Significant Impact and a Finding of No Practicable Alternative was signed on March 15, 2006, by the Deputy Director, Installations and Mission Support, Air Mobility Command.

In the early months of 2009, new information pertaining to the proposed location at the corner of 10th Avenue and Eielson Street came to light. The site is adjacent to the existing road to the Combat Arms Training and Maintenance (CATM) located north of the proposed site. Because of anti-terrorism/force protection (AT/FP) and engineer construction requirements, the Prior Approved Fire Station Site at 10th and Eielson would need a new automotive flight line gate barrier with a break-away fence, a new road to allow separate access to the CATM range,

relocation of over 1200 feet of flight line fences, a higher elevation construction site with fill and foundation materials to compensate for a three foot difference in elevation and new pavement to the flight line taxiway to support the heavier weight of large crash vehicles. In light of these significant expenses, a proposal was made by AFCEE Programming to relocate the existing hazardous cargo area and re-site the new fire station at a new location 1500 feet to the west of the Prior Approved Fire Station Site, the original proposed location at the corner north of 10th Avenue and west of Eielson Street. This new location is called the New Fire Station Site within this document.

The Proposed Action to relocate the hazardous cargo area and construct the new fire station in the New Fire Station Site has several positive attributes. The new fire station would straddle the airfield flight line fence which is the preferred and common practice at Air Force bases, as well as the current practice at the existing fire station (530) at Grand Forks AFB. The New Fire Station Site would eliminate the need for a costly automated gate. It would also eliminate troublesome gate maintenance and operations because of the cold temperatures and snow covered grounds. It would be more centrally located to the flight line north and south ends, than the existing fire station (530) now nearer the south end of the runway. This would lead to better response time to the airfield and functionality of the trucks with more direct routes out of both sides of the vehicle bays. This location would have no gates to impede the flow of truck response to the airfield or the industrial area or the military housing area. Another positive aspect of this location versus the site at 10th and Eielson (the Prior Approved Fire Station Site) would be the reduced amount of fill and foundations materials needed for construction, as the site is three feet higher in elevation, than the corner site near 10th Ave and Eielson St. There would be reduced pavement cost by avoiding the need for a new access road to the taxiway, which would require high-strength to support the large crash response vehicles and fire trucks. The New Fire Station Site has better underlying grounds to support a new fire station than the Prior Approved Fire Station Site at 10th Ave/Eielson St., lending to greater sustainability and maintenance of the pavements. Security would be improved by avoiding a variety of gate options and subsequent concern about guaranteed operability of gates. It would eliminate risks of having to leave gates open as work-arounds in severe adverse weather conditions or equipment malfunctions. Security of entries to the building would be continuously camera-monitored from the 24 hours/day, 7 days/week alarm room. It would eliminate the need for a secondary fire station and the costs associated with that building and secondary personnel.

To accommodate the proposed New Fire Station Site, it is proposed that the existing hazardous cargo area be located north along the taxiway. By moving the hazardous cargo area to the north taxiway, over 35 acres of prime flight line land area would become available for UAS mission growth, new hangar construction and other new missions. The relocation is a redesignation from one existing concrete area along the flight line to another existing concrete area on the taxiway. No new construction is proposed. The proposed hazardous cargo area on the taxiway is adequate to support the infrequent requirement to house hazardous cargo transient planes. There have been no hazardous cargo transient planes in the past ten years at Grand Forks AFB. No explosives or munitions are projected with the proposed UAS mission.

A new hazardous cargo area is proposed to be relocated to the site indicated on the north taxiway in Figure 2.1. With this action, the existing hazardous cargo area would be de-sited pending

approval by AMC and DDESB. Historically, there has been no recorded use of the existing hazardous cargo area in the last ten years and known future missions do not have a requirement. Removing the QD arcs from the existing hazardous cargo area would free up prime airfield real estate directly north and west of the existing three-bay hangar. This QD arc removal would also alleviate mission impacts to siting a new hangar in this area - a future development plan that has been validated by past SATAFs. This area is called the Reserved Future Hangar Space (35 Acres) in Figure 2.1. If a future mission required a separate hazardous cargo area, a project would be programmed for construction of a new hazardous cargo area with proposed alternative locations. This proposed action with alternative locations would be evaluated in a future environmental assessment.

The proposed hazardous cargo area has a 1250 foot explosive quantity distance radius and is based on a C-5 aircraft template. Access for K loaders and other equipment used in loading/unloading aircraft parked on the taxiway is required. Airfield equipment for weather and communications within the 1250 foot radius have been reviewed and coordinated with Airfield Management. In the Proposed Hazardous Cargo Area, the 7 to 1 transitional slope would allow for a vertical height of approximately 22 feet in the center of the taxiway which would be under the tail height of either a C-17 or C-5. Taxiing aircraft are exempt from this requirement, but a parked aircraft may need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

Demolition of buildings 530 and 606 would remove outdated facilities and infrastructure that are no longer needed in accordance with the base facilities Master Space Plan. It would remove excess buildings and utilities that represent sources of potential contamination, such as asbestos, mercury, PCBs and lead-based paint. Renovating buildings 530 or 606 to AF standards would exceed the 70% AF programming rule. Demolition of these buildings would allow funds now expended on maintenance and repairs to be used more efficiently on functioning occupied facilities. Demolition of these buildings would provide prime space on the flight line for future projects associated with the new mission of Unmanned Aircraft Systems (UAS).

Adjacent to the north of the existing fire station (530) is the airfield lighting vault (531). A Proposed Action to construct a new airfield lighting vault to meet UFC criteria and demolish the existing airfield lighting vault (531) was evaluated in an Environmental Assessment. A Finding of No Significant Impact was signed on October 11, 2007, by the Asset Management Flight Chief. Demolition of 530 and 531 will open an area on the flight line for future development. The new airfield lighting vault will be constructed adjacent to the north of the existing location.

2.6 SUMMARY COMPARISON OF THE EFFECTS OF ALL ALTERNATIVES

Potential impacts from implementing the No Action Alternative, the Proposed Action and Alternative are discussed in detail in Chapter 4. Table 2.6-1, Summary of Environmental

Impacts below, offers a summary of the environmental consequences. Short-term (ST) impacts are those that occur during the timeframe of the construction project (approximately seven months) and long-term (LT) impacts occur subsequent to the completion of construction.

2.7 IDENTIFICATION OF PREFERRED ALTERNATIVE

This EA evaluates the proposed actions:

1. construction of a new fire station on Grand Forks AFB
2. demolition of the old fire station (530)
3. demolition of the old missile transfer facility (606)
4. relocation of the existing hazardous cargo area to the proposed hazardous cargo area

The EA also evaluates the No Action of the above four actions, plus four Alternative actions, construction of the fire station in the prior approved fire station site, renovation and reutilization of building 530, renovation and reutilization of building 606, and elimination of the HCA.

The proposed actions were selected as the Preferred Alternatives after consideration of the potential impacts and the logistics of the project. The differences in impacts include the following:

- Proposed construction of a new fire station at the HCA offers a site at mid-center of the flight line, straddle the existing airfield fence and use existing heavy concrete pavement**.** Alternative action will include more costly flight line gate barrier, break-away fence, CATM road, more fill and foundation, new pavement to flight line taxiway to support heavier crash vehicles. Proposed action to construct a new fire station will impact a non-jurisdictional wetland, while the Alternative action will impact a jurisdictional wetland. The difference in wetlands impact is discussed later in this document.
- Proposed demolition of the old fire station (530) will eliminate asbestos, lead, mercury and PCB risks, reduce maintenance and utility costs, offer prime flight line space for new UAS projects
- Demolition of the old missile transfer facility (606) will eliminate asbestos, lead, mercury and PCB risks, reduce maintenance and utility costs, widen road space for access to flight line
- Relocation of the existing hazardous cargo area to the proposed hazardous cargo area will offer prime flight line space for other users

The following photos show the proposed location of the new Fire Station. In the first photo, the original hazardous cargo area is located in the center of the photo. To the right is Building 606 missile transfer building which is currently used only for cold storage and proposed for demolition. The second photo is a view of the proposed site, as viewed from the north side of Building 606, looking to the west toward the taxiway.

Figure 2.3 Photo of proposed location for new Fire Station. Yellow arrow points to proposed site of new fire station. In the lower left of the photo is the Charlie "C" Ramp. In the lower right is Building 657, the secondary fire station. In the center right is Building 655, the water pump station. In the center far right is Building 670, the flight line supply. In the center of the photo is the existing u-shaped concrete pad hazardous cargo area. To the right is the proposed location of the new fire station. In the far upper right is Building 606, the missile transfer building, now used for cold storage, which is proposed for demolition.

Figure 2.4 Photo of close view of proposed location, arrow points to proposed location of new fire station site

This view faces the flight line. On the left, out of view, is Building 606.

The wetland being affected by proposed activities is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a non-jurisdictional cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. There is no culvert for drainage.

This airfield area is mowed as Semi-improved Area with cutting a uniform grass height between 7 and 14 inches

The following tables summarize the three actions by each of the four areas of consideration. The tables are No Action, Proposed Action, and Alternative Action.

The preferred alternative is the Proposed Action to construct a new fire station at the new fire station site (HCA), demolish buildings 530 and 606 and relocate the hazardous cargo area to the proposed hazardous cargo area north on the taxiway.

Table 2.6-1: Summary of Environmental Impacts – No Actions				
	No Action Construct Fire Station	No Action Demo 530	No Action Demo 606	No Action Relocate HCA
Legend: ST = short-term; LT = long-term				
Air Quality	None	None	None	None
Noise	None	None	None	None
Wastes, Hazardous Materials and Stored Fuels	None	Insignificant, until Asbestos, lead, mercury should leak	Insignificant, until Asbestos, lead, mercury should leak	None
Water Resources				
Ground Water	None	None	None	None
Surface Water	None	None	None	None
Wastewater	None	None	None	None
Water Quality	None	None	None	None
Wetlands	None	None	None	None
Biological Resources				
Vegetation	None	None	None	None
Noxious Weeds	None	None	None	None
Wildlife	None	None	None	None
Threatened and Endangered Species	None	None	None	None
Socioeconomic Resources	None	None	None	None
Cultural Resources	None	None	None	None
Land Use	None	None	None	None
Transportation Systems	None	None	None	None
Aircraft Safety	Fail to meet fire response times	None	None	None
Airspace Compatibility	None	None	None	None
Safety and Occupational Health	Fails to meet life safety codes or standards of living	Insignificant, until Asbestos, lead, mercury should leak	Insignificant, until Asbestos, lead, mercury should leak	None
Environmental Management				
Installation Restoration Program	None	None	None	None
Geological Resources	None	None	None	None
Pesticide Management	None	None	None	None
Environmental Justice	None	None	None	None

Table 2.6-2: Summary of Environmental Impacts – Proposed Actions				
	Proposed Action Construct Fire Station at HCA	Proposed Action Demo 530	Proposed Action Demo 606	Proposed Action Relocate HCA
Legend: ST = short-term; LT = long-term				
Air Quality	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Noise	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wastes, Hazardous Materials and Stored Fuels	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Water Resources				
Ground Water	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Surface Water	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wastewater	Insignificant Adverse ST Impact	None	None	None
Water Quality	None	None	None	None
Wetlands	Insignificant Impact filling 5.36 acre non-jurisdictional wetlands requires FONPA but no mitigation	None	None	None
Biological Resources				
Vegetation	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Noxious Weeds	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wildlife	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Threatened and Endangered Species	None	None	None	None
Socioeconomic Resources	Insignificant Positive ST Impact	Insignificant Beneficial ST Impact	Insignificant Beneficial ST Impact	None
Cultural Resources	None	Demo of 530 SHPO coordination approved	Demo of 606 SHPO Coordination approved	None
Land Use	None - land use remains airfield	None	None	None
Transportation Systems	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Aircraft Safety	Positive LT Impact	None	None	Needs operational instructions
Airspace Compatibility	None	None	None	None
Safety and Occupational Health	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Environmental Management				
Installation Restoration Program	None	None	None	None
Geological Resources	None	None	None	None
Pesticide Management	None	None	None	None
Environmental Justice	None	None	None	None

Table 2.6-3: Summary of Environmental Impacts – Alternative Actions				
	Alternative Action Construct Fire Station at 10th & Eielson	Alternative Action Renovate 530 for Another User such as Snow Removal Equipment Storage	Alternative Action Renovate 606 for Another User	Alternative Action Eliminate HCA
Legend: ST = short-term; LT = long-term				
Air Quality	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Noise	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wastes, Hazardous Materials and Stored Fuels	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Water Resources				
Ground Water	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Surface Water	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wastewater	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Water Quality	None	None	None	None
Wetlands	Insignificant Impact filling 0.03 acre jurisdictional wetlands requires FONPA and mitigation	None	Insignificant Adverse ST Impact	None
Biological Resources				
Vegetation	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Noxious Weeds	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Wildlife	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	None
Threatened and Endangered Species	Insignificant Adverse ST Impact	None	None	None
Socioeconomic Resources	Insignificant Beneficial ST Impact	Insignificant Beneficial ST Impact	Insignificant Beneficial ST Impact	None
Cultural Resources	None	None	None	None
Land Use	None	None	None	None
Transportation Systems	Insignificant Adverse ST Impact	Insignificant Adverse ST Impact	Insignificant Adverse Impact due to road width	None
Aircraft Safety	Positive LT Impact	None	None	Needs operational waiver
Airspace Compatibility	None	None	None	None
Safety and Occupational Health	Insignificant Adverse ST Impact	None	None	None
Environmental Management				
Installation Restoration Program	None	None	None	None
Geological Resources	None	None	None	None
Pesticide Management	None	None	None	None
Environmental Justice	None	None	None	None

Figure 2.5 Locations of buildings 530, 657, 606 and proposed site of new fire station

3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section describes the operational concerns and the environmental resources relevant to the decision that must be made concerning the Proposed and Alternative Actions. Environmental concerns and issues relevant to the decision to be made and attributes of the potentially affected environment are studied in greater detail in this section. This descriptive section, combined with the definitions of the alternatives in Section 2 and their predicted effects in Section 4, establish the scientific baseline against which the decision-maker and the public can compare and evaluate the activities and effects of all the alternatives.

3.2 AIR QUALITY

Grand Forks AFB has a humid continental climate that is characterized by frequent and drastic weather changes. The summers are short and humid with frequent thunderstorms. Winters are long and severe with almost continuous snow cover. The spring and fall seasons are generally short transition periods. The average annual temperature is 40°Farenheit (F) and the monthly mean temperature varies from 6°F in January to 70°F in July. Mean annual precipitation is 19.5 inches. Rainfall is generally well distributed throughout the year, with summer being the wettest season and winter the driest. An average of 34 thunderstorm days per year is recorded, with some of these storms being severe and accompanied by hail and tornadoes. Mean annual snowfall recorded is 40 inches with the mean monthly snowfall ranging from 1.6 inches in October to 8.0 inches in March. Relative humidity averages 58 percent annually, with highest humidity being recorded in the early morning. The average humidity at dawn is 76 percent. Mean cloud cover is 48 percent in the summer and 56 percent in the winter (USAF, 2003).

Table 3.2-1: Climate Data for Grand Forks AFB, ND

	Mean Temperature (ºF) Daily			Precipitation (Inches) Monthly		
Month	Maximum	Minimum	Monthly	Mean	Maximum	Minimum
January	15	-1	6	0.7	2.4	0.1
February	21	5	13	0.5	3.2	0.0
March	34	18	26	1.0	2.9	0.0
April	53	32	41	1.5	4.0	0.0
May	69	47	56	2.5	7.8	0.5
June	77	56	66	3.0	8.1	0.8
July	81	61	70	2.7	8.1	0.5
August	80	59	67	2.6	5.5	0.1
Sept	70	49	57	2.3	6.2	0.3
October	56	37	44	1.4	5.7	0.1
November	34	20	26	0.7	3.3	0.0
December	20	6	12	0.6	1.4	0.0

Source: AFCCC/DOO, October 1998

Wind speed averages 10 miles per hour (mph). A maximum wind speed of 74 mph has been recorded. Wind direction is generally from the northwest during the late fall, winter and spring and from the southeast during the summer.

Grand Forks County is included in the ND Air Quality Control Region. This region is in attainment status for all criteria pollutants. In 1997, the ND Department of Health (NDDH) conducted an Air Quality Monitoring Survey that indicated that the quality of ambient air in ND is generally good as it is located in an attainment area (NDDH, 1998). Grand Forks AFB has an air permit T5-F78004 (permit to operate) issued by NDDH and a CAA Title V air emissions permit.

The United States Environmental Protection Agency (USEPA) established the National Ambient Air Quality Standards (NAAQS), which define the maximum allowable concentrations of pollutants that may be reached, but not exceeded within a given time period. The NAAQS regulates the following criteria pollutants: Ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb) and particulate matter. The ND Ambient Air Quality Standards (NDAAQS) were set by the State of ND. These standards are more stringent and emissions for operations in ND must comply with the Federal or State standard that is the most restrictive. There is also a standard for hydrogen sulfide (H_2S) in ND.

Prevention of significant deterioration (PSD) regulations establishes SO_2, particulate matter 10 microns in diameter (PM_{10}) and NO_2 that can be emitted above a premeasured amount in each of three class areas. Grand Forks AFB is located in a PSD Class II area where moderate, well-controlled industrial growth could be permitted. Class I areas are pristine areas and include national parks and wilderness areas. Significant increases in emissions from stationary sources (100 tons per year (tpy) of CO, 40 tpy of nitrogen oxides (NO_X), volatile organic compounds (VOCs), or sulfur oxides (SO_X), or 15 tpy of PM_{10}) and the addition of major sources requires compliance with PSD regulations. There is also a 25 ton/year level for total particulate.

Air pollutants include O_3, CO, NO_2, SO_2, Pb and particulate matter. Ground disturbing activities create PM_{10} and particulate matter 2.5 microns in diameter ($PM_{2.5}$). Combustion creates CO, SO_2, $PM_{10\ and}$ $PM_{2.5}$ particulate matter and the precursors (VOC and NO_2) to O_3. Only small amounts of Hazardous Air Pollutants (HAP) are generated from internal combustion processes or earth-moving activities. The Grand Forks AFB 2007 Air Emissions Inventory Report indicated that the installation generated total HAPs of 2.01 tpy. Grand Forks AFB is not a significant source of HAPs. The installation total HAP is below 10 tpy and no single source is over 2 tpy." Equipment removed from 530 and 606 and new equipment added to the new fire station must be added or deleted from the base Air Pollutant Emission Inventory.

Equipment removal would have positive impact to air quality while addition of equipment to the new fire station would be an adverse impact. These actions are insignificant to this PSD Class II area of Grand Forks AFB. Relocating the HCP would involve no construction or demolition, but only the designation from one concrete area to another and therefore no significant impact to air quality.

As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

Table 3.2-2
National Ambient Air Quality Standards (NAAQS) and ND Ambient Air Quality Standards (NDAAQS)

Pollutant	Averaging Time	NAAQS $\mu g/m^3$ (ppm)[a]		NDAAQS $\mu g/m^3$ (ppm)[a]
		Primary[b]	Secondary[c]	
O_3	1 hr 8 hr[e]	235 (0.12) 157 (0.08)	Same Same	Same None
CO	1 hr 8 hr	40,000 (35) 10,000 (9)	None None	40,000 (35) 10,000 (9)
NO_2	AAM[d]	100 (0.053)	Same	Same
SO_2	1 hr 3 hr 24 hr AAM	None None 365 (0.14) 80 (0.03)	None 1,300 (0.5) None None	715 (0.273) None 260 (0.099) 60 (0.023)
PM_{10}	AAM 24 hr	50 150	Same Same	Same Same
$PM_{2.5}$[e]	AAM 24 hr	65 15	Same Same	None None
Pb	¼ year	1.5	Same	Same
H_2S	1 hr 24 hr 3 mth AAM Instantaneous	None None None None	None None None None	280 (0.20) 140 (0.10) 28 (0.02) 14 (10) 14 (10)

[a] $\mu g/m^3$ – micrograms per cubic meter; ppm – parts per million
[b] National Primary Standards establish the level of air quality necessary to protect the public health from any known or anticipated adverse effects of pollutant, allowing a margin of safety to protect sensitive members of the population.
[c] National Secondary Standards establish the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property and adverse impacts on the environment.
[d] AAM – Annual Arithmetic Mean.
[e] The Ozone 8-hour standard and the PM 2.5 standards are included for information only. A 1999 federal court ruling blocked implementation of these standards, which USEPA proposed in 1997. USEPA has asked the US Supreme Court to reconsider that decision (USEPA, 2000).
PM_{10} is particulate matter equal to or less than 10 microns in diameter.
$PM_{2.5}$ is particulate matter equal to or less than 2.5 microns in diameter.
Source: 40 CFR 50, ND Air Pollution Control Regulations – North Dakota Administrative Code (NDAC) 33-15

3.3 NOISE

Noise generated on Grand Forks AFB consists mostly of aircraft, vehicular traffic and construction activity. Most noise is generated from aircraft during takeoff and landing and not from ground traffic. Noise levels are dependent upon type of aircraft, type of operations and

distance from the observer to the aircraft. Duration of the noise is dependent upon proximity of the aircraft, speed and orientation with respect to the observer. As the base converts from a refueling mission to an unmanned aircraft system mission, noise levels decline. A new noise survey will be accomplished when the conversion is complete.

Table 3.3-1
Typical Decibel Levels Encountered in the Environment and Industry

Sound Level (dBa)[a]	Maximum Exposure Limits	Source of Noise	Subjective Impression
10			Threshold of hearing
20		Still recording studio; Rustling leaves	
30		Quiet bedroom	
35		Soft whisper at 5 ft[b]; Typical library	
40		Quiet urban setting (nighttime); Normal level in home	Threshold of quiet
45		Large transformer at 200 ft	
50		Private business office; Light traffic at 100 ft; Quiet urban setting (daytime)	
55		Window air conditioner; Men's clothing department in store	Desirable limit for outdoor residential area use (EPA)
60		Conversation speech; Data processing center	
65		Busy restaurant; Automobile at 100 ft	Acceptable level for residential land use
70		Vacuum cleaner in home; Freight train at 100 ft	Threshold of moderately loud
75		Freeway at 10 ft	
80		Ringing alarm clock at 2 ft; Kitchen garbage disposal; Loud orchestral music in large room	Most residents annoyed
85		Printing press; Boiler room; Heavy truck at 50 ft	Threshold of hearing damage for prolonged exposure
90	8 hr[c]	Heavy city traffic	
95	4 hr	Freight train at 50 ft; Home lawn mower	
100	2 hr	Pile driver at 50 ft; Heavy diesel equipment at 25 ft	Threshold of very loud
105	1 hr	Banging on steel plate; Air Hammer	
110	0.5 hr	Rock music concert; Turbine condenser	
115	0.25 hr	Jet plane overhead at 500 ft	
120	< 0.25 hr	Jet plane taking off at 200 ft	Threshold of pain
135	< 0.25 hr	Civil defense siren at 100 ft	Threshold of extremely loud

[a]dBA – decibals
[b]ft – feet
[c]hr - hours
Source: US Army, 1978

Table 3.3-2
Approximate Sound Levels (dBa) of Construction Equipment

Equipment Type	Sound Levels (dBa) at Various Distances (ft)					
	50	100	200	400	800	1,600
Front-end Loader	84	78	72	66	60	54
Dump Truck	83	77	71	65	59	53
Truck	83	77	71	65	59	53
Tractor	84	78	72	66	58	52

Source: Thurman, 1976; US Army, 1978

Because military installations attract development in proximity to their airfields, the potential exists for urban encroachment and incompatible development. The USAF utilizes a program known as AICUZ to help alleviate noise and accident potential problems due to unsuitable community development. AICUZ recommendations give surrounding communities alternatives to help prevent urban encroachment. Noise contours are developed from the Day-Night Average A-Weighted Sound Level (DNL) data which defines the noise created by flight operations and ground-based activities. The AICUZ also defines Accident Potential Zones (APZs), which are rectangular corridors extending from the ends of the runways. Recommended land use activities and densities in the APZs for residential, commercial and industrial uses are provided in the base's AICUZ study. Grand Forks AFB takes measures to minimize noise levels by evaluating aircraft operations. Blast deflectors are utilized in designated areas to deflect blast and minimize exposure to noise. New DOD Policy on EIAP and Analysis for Potential Hearing Loss is included in "Methodology for Assessing Hearing Loss Risk and Impacts in DoD Environmental Impact Analysis" which applies whenever the 80 decibel Day/Night Average Noise Level (DNL) contour extends into populated areas off base, or cantonment/residential areas on base. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction and demolition activities will wear hearing protection.

WASTES, HAZARDOUS MATERIALS and STORED FUELS

3.4.1 Hazardous Waste, Hazardous Material, Recyclable Material

Hazardous wastes, as listed under the RCRA, are defined as any solid, liquid, contained gaseous, or combination of wastes that pose a substantive or potential hazard to human health or the environment. On-base hazardous waste generation involves three types of on-base sites: an accumulation point (180-day), satellite accumulation points and spill cleanup equipment and materials storage. Discharge and emergency response equipment is maintained in accessible areas throughout Grand Forks AFB. The Fire Department maintains adequate fire response and discharge control and containment equipment. Equipment stores are maintained in buildings 409 and 530. Petroleum contaminated soils generated from excavations throughout the base can be treated at the land treatment facility located on base west of the south end of the runway. These solid wastes are tilled or turned a minimum of four times a year to remediate the soils to acceptable levels.

Recyclable materials from industrial facilities are collected in the recycling facility, in building 671. Papers, cardboard and wood are collected in separate storage bins. Glass, plastics and metal cans are commingled. Curbside containers are used in housing for recyclable materials. A contractor collects these materials and transports them off base for processing.

The Asset Management Flight manages the hazardous material through a contract with Science Applications International Corporation (SAIC). Typical hazardous materials include materials such as reactives, ignitables, toxics and corrosives. Improper storage can impact human health and the safety of the environment.

3.4.2 Underground and Above Ground Storage Tanks

Since Grand Forks AFB is a military installation with a flying mission, there are several aboveground and underground fuel storage tanks (ASTs and USTs).

Petroleum, oils and lubricants (POLs) are stored in twenty four (24) underground storage tanks (USTs) at GFAFB. Fifteen (15) USTs are regulated and store gasoline (4), diesel fuel (4), JP-8 (1) and waste oil (6) from oil water separators (OWS). Five (5) USTs are deferred from specific regulations and store JP-8 for the hydrant fuel system. Four (4) USTs are exempt from specific regulations and provide emergency spill containment for JP-8 or hydraulic oil. There are no nearby USTs or OWSs near the location proposed for the new fire station. There is a grit chamber in the floor of the existing fire station (Building 530) which would be removed during demolition. At the south east exterior corner of Building 606 is a UST for gray water. It would be removed with the demolition of 606.

JP-8, gasoline, diesel fuel and used oil are stored in seventy-three (73) aboveground storage tanks (ASTs) at GFAFB. JP-8 is stored in six (6) ASTs with a combined capacity of 3,990,000 gallons. These six hydrant fuel system tanks each are contained by a concrete dike system. Diesel fuel for motor vehicle use is stored in four (4) ASTs with a combined capacity of 50,950 gallons. Thirty-nine (39) ASTs store diesel fuel for emergency generator use. The remaining twenty-four (24) ASTs store diesel fuel and used oil in smaller capacity tanks throughout the base. All ASTs have secondary containment. There are no nearby ASTs near the location proposed for the new fire station. The nearest AST to the existing fire station is north of building 530 at the airfield lighting vault.

Potassium acetate used for runway deicing is stored in two 10,000-gallon ASTs. Both propylene glycol and Type IV aircraft deicing fluid is stored in 26,000-gallon and 8,600 gallon ASTs. Aircraft deicing fluid is recovered and stored in two 19,730 gallon ASTs. These are not near the proposed construction and demolition sites.

A map of environmental constraints is found at Figure 1.2.

3.4.3 Solid Waste Management

Hard fill, construction debris and inert waste generated by Grand Forks AFB are disposed of at a permitted off-base landfill. All on-base household garbage and solid waste is collected by a contractor and transported to the Grand Forks County Landfill, which opened in 1982. A new landfill is under construction at Grand Forks and should be open in October 2009. The majority of construction debris is disposed of at an inert landfill (permit number IT-198) four miles northeast of the base, while municipal waste and asbestos waste is disposed of at the Grand Forks Landfill (SW-069) twelve miles east of the base. GFAFB also operates a land treatment facility (IT-183) on base for the remediation of petroleum-contaminated soils (PCSs). PCSs are generated on-base through spills, are encountered while excavating for various subsurface repairs, or encountered while replacing or removing underground storage tanks and piping.

3.5 WATER RESOURCES

3.5.1 Ground Water

Chemical quality of ground water is dependent upon the amount and type of dissolved gases, minerals and organic material leached by water from surrounding rocks as it flows from recharge to discharge areas. The water table depth varies throughout the base, from a typical 1-3 ft to 10 ft or more below the surface.

Even though the Dakota Aquifer has produced more water than any other aquifer in Grand Forks County, the water is very saline and generally unsatisfactory for domestic and most industrial uses. Its primary use is for livestock watering. It is sodium chloride type water with total dissolved solids concentrations of about 4,400 ppm. The water generally contains excessive chloride, iron, sulfate, total dissolved solids and fluoride. The water from the Dakota Aquifer is highly toxic to most domestic plants and small grain crops and in places, the water is too highly mineralized for use as livestock water (Hansen and Kume, 1970).

Water from wells tapping the Emerado Aquifer near Grand Forks AFB is generally of poor quality due to upward leakage of poor quality water from underlying bedrock aquifers. It is sodium sulfate type water with excessive hardness, chloride, sulfate and total dissolved solids. Water from the Lake Agassiz beach aquifers is usually of good chemical quality in Grand Forks County. The water is a calcium bicarbonate type that is relatively soft. The total dissolved content ranges from 308 to 1,490 ppm. Most water from beach aquifers is satisfactory for industrial, livestock and agricultural uses (Hansen and Kume, 1970).

Grand Forks AFB draws 100 percent of its water for industrial, commercial and housing functions from the City of Grand Forks and has backup from Agassiz Water.

3.5.2 Surface Water

Natural surface water features located on or near Grand Forks AFB are the Turtle River and Kellys Slough National Wildlife Refuge (NWR). Drainage from surface water channels ultimately flows into the Red River.

The Turtle River, crossing the base boundary at the northwest corner, is very sinuous and generally flows in a northeasterly direction. It receives surface water runoff from the western portion of Grand Forks AFB and eventually empties into the Red River of the North that flows north to Lake Winnipeg, Canada. The Red River drainage basin is part of the Hudson Bay drainage system. At Manvel, ND, approximately 10 miles northeast of Grand Forks AFB, the mean discharge of the Turtle River is 50.3 feet cubed per second (ft^3/s). Peak flows result from spring runoff in April and minimum flows (or no flow in some years) occur in January and February.

NDDH has designated the Turtle River to be a Class II stream; it may be intermittent, but, when flowing, the quality of the water, after treatment, meets the chemical, physical and bacteriological requirements of the NDDH for municipal use. The designation also states that it is of sufficient quality to permit use for irrigation, for propagation of life for resident fish species and for boating, swimming and other water recreation.

Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR receives surface water runoff from the east half of the base and effluent from the base sewage lagoons located east of the base. Surface water flow of the slough is northeasterly into the Turtle River Drainage from surface water channels ultimately flowing into the Red River. Floodplains are limited to an area 250 ft on either side of Turtle River (about 46 acres on base). Any development in or modifications to floodplains must be coordinated with the United States Army Corps of Engineers and the Federal Emergency Management Agency (FEMA). The North Dakota State Water Commission requires that any structure in the floodplain have its lowest floor above the identified 100-year flood level.

Surface water runoff leaves Grand Forks AFB at four primary locations related to identifiable drainage areas on base. The four sites are identified as northeast, northwest, west and southeast related to the base proper. These outfalls were approved by the NDDH as stated in the Grand Forks AFB ND Pollutant Discharge Elimination System (NDPDES) Permit NDR05-0000 Stormwater Discharges from Industrial Activity. Of the four outfall locations, the west and northwest sites flow into the Turtle River, the northeast site flows to the north ditch and the southeast outfall flows into the south ditch. The latter two flow to Kellys Slough and then the Turtle River. All drainage from these surface water channels ultimately flows into the Red River. The Bioenvironmental Engineer Office samples the four outfall locations during months when de-icing activities occur on base.

3.5.3 Waste Water

Grand Forks AFB discharges its domestic and industrial wastewater to four stabilization lagoons located east of the main base. The four separate treatment cells consist of one primary treatment cell, two secondary treatment cells and one tertiary treatment cell. Wastewater effluent is discharged under ND Permit ND-0020621 into Kellys Slough. Wastewater discharge occurs for about one week, sometime between mid-April though October. Industrial wastewater at the base comprises less than ten percent of the total flow to the treatment lagoons.

3.5.4 Water Quality

According to the National Water Quality Inventory Report (USEPA, 1995), ND reports the majority of rivers and streams have good water quality. Natural conditions, such as low flows, can contribute to violations of water quality standards. During low flow periods, the rivers are generally too saline for domestic use. Grand Forks AFB receives water primarily from Grand Forks city and secondary from Lake Agassiz Water. The city recovers its water from the Red River and the Red Lake River, while the water association provides water from aquifers. The water association recovers water from well systems within glacial drift aquifers (USAF, 1999). The 319th Civil Engineer Squadron tests the water received on base daily for chlorine. The 319th Bioenvironmental Flight collects monthly bacteriological samples to be analyzed at the ND State Laboratory. The Bioenvironmental Flight needs to be advised of any water line interruptions, including turn-ons and turn-offs.

3.5.5 Wetlands

The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Grand Forks County has wetland Types I (wet meadow) to V (open freshwater). Approximately 59,500 acres of wetland Types I to V are used for wetland habitat. Wetland Types IV and V include areas of inland saline marshes and open saline water. Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR is the most important regional wetland area in the Grand Forks vicinity. A wetland delineation conducted in 2004 indicated that the base has 301 acres of wetlands contained within 192 separate wetland areas. See Figure 1.3 for locations. These include one Riverine wetland totaling 3 acres in Turtle River, one Palustrine Emergent Wetland (PEM)/Lacustrine wetland totaling 47 acres and 190 Palustrine wetlands totaling 251 acres. Of the Palustrine wetlands, 32 are Scrub-shrub wetlands at 76 acres, 3 are Forested wetlands at approximately <1 acre and 155 are Emergent wetlands at 174 acres. Fifteen wetlands have been identified as jurisdictional comprising 145 acres on base and 156 acres are non-jurisdictional. Vegetation is robust at GFAFB wetlands and many are characterized as typical prairie potholes found within the northern plains ecoregion.

Wetlands on Grand Forks AFB occur frequently in drainage ways, low-lying depressions and prairie potholes. Wetlands are highly concentrated in drainage ways leading from the wastewater treatment lagoons to Kellys Slough NWR. The majority of wetland areas occur in the northern and southwest central portions of base, near the runway, while the remaining areas are near the eastern boundary and southeastern corner of base. Development in or near these areas must include coordination with the ND State Water Commission and the USACE. To help preserve wetlands, the North Dakota, Grand Forks County regional office of the Natural Resource Conservation Service recommends a 100-ft vegetated (grass) buffer with a perimeter filter strip.

Palustrine emergent marsh (PEM) wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants and at GFAFB are dominated by cattails (*Typha sp*.) and smartweed (*Polygonum coccineum*) as noted in the 2004 Wetland Assessment report (CH2M HILL 2004). These species, in addition to spike-rush (*Eleocharis sp.*) and sedge (*Carex sp.*), were also the most prevalent type of wetland plants observed during this survey.

The PEM wetlands observed at the study area were partially comprised of a unique wetland system known as prairie pothole wetlands. Prairie potholes are depressional wetlands often located in the northern plains region of the U.S. and also in Canada. The potholes are the result of historical glacial activity, which left the landscape pockmarked. These potholes accumulate snowmelt and precipitation during spring-thaw conditions. Prairie pothole marshes can be temporary or may be permanent. There has been an increase in the number, average size, and permanence of prairie wetlands due to a decade-long wet spell that began in 1993 following a prolonged drying trend.

The non-jurisdictional wetland being affected by proposed construction of new fire station is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. This wetland was created with the construction of the low area within the surrounding roadway of the HCA and no culverts to allow discharge of stormwater. Figure 3.1 shows the wetland identified in the proposed site for the new fire station. A photo of this wetland is found in Figure 2.4.

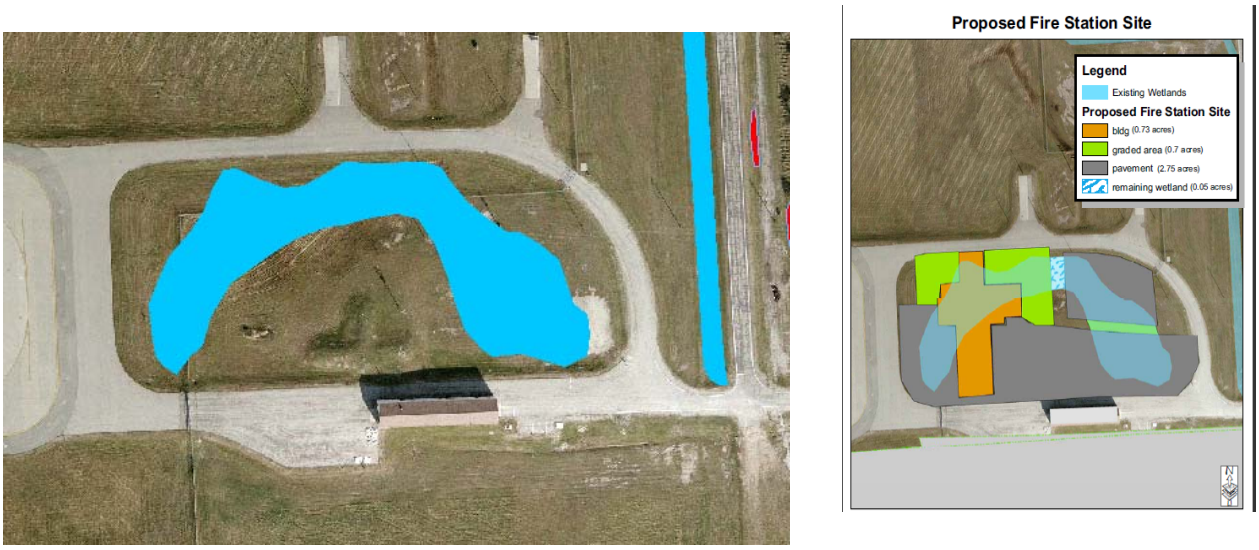

Figure 3.1 Existing 5.36 acres of non-jurisdictional Wetland in Proposed Location 2

The location of the proposed fire station, as proposed in the 2003 EA, would have affected 0.8 acre of jurisdictional wetland. To minimize the amount of wetland impact, the configuration of the fire station was altered and the entire footprint of the site was shifted toward the east and slightly south in the 2006 EA. This reconfiguration and shift reduced the amount of wetland impact to 0.03 acre. The impact would be predominantly from access driveways crossing the stormwater ditch on the east and south. These remaining impacts would be unavoidable.

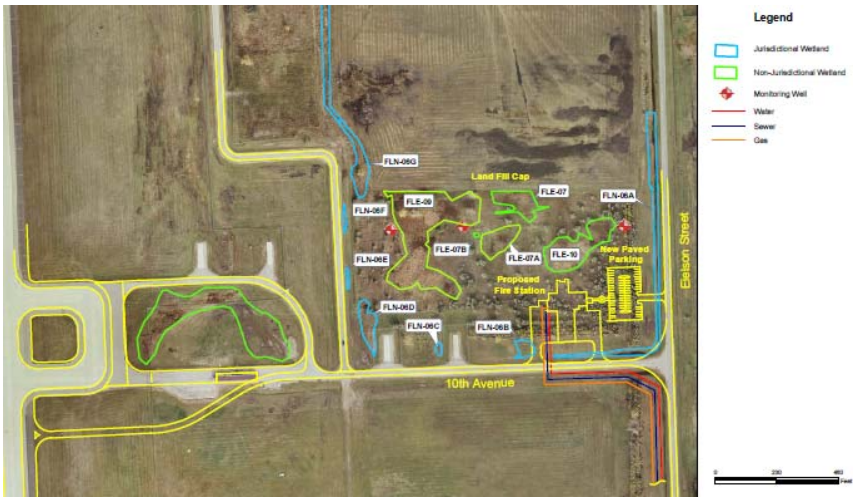

Figure 3.2 Existing 0.03 acres of jurisdictional Wetland in Alternative Location 3

Section 404 of the Clean Water Act (Title 33, United States Code, Section 1344) establishes a program to regulate all dredging and filling activities related to jurisdictional waters and wetlands of the United States. Actions that may impact wetlands, to include dredging, filling, and activities that may displace soil into a wetland, may require a 404 permit from the USACE. Applicants must submit USACE ENG Form 4345, *Application for Department of the Army Permit* to the appropriate USACE District Engineer prior to any land disturbance activity located in or near a wetland area. Along with the permit application, they must submit a vicinity map and

site development plan that includes a cross-sectional view of the affected area showing limits of jurisdictional waters, the normal water level, volume of fill material to be discharged below ordinary high water, and the area of waters affected.

Section 401 of the CWA directs that any proponent of an action that requires a federal license or permit (such as a Section 404 permit) must obtain a Water Quality Certificate from the state water pollution control agency. The Water Quality Certificate certifies that the action complies with state water quality criteria. State permits to undertake projects within a specified buffer zone surrounding wetlands may also be required. When applying for a permit under state wetland protection laws, certain information not required for an USACE permit, such as a delineation of a regulated buffer area, may also be required. In some cases, permit applications may be submitted concurrently for review by both the state and the USACE.

A wetland mitigation bank is a wetland area that is currently being restored, enhanced, or created, and set aside to compensate for future actions that may negatively impact other wetlands within the same watershed and provide like (in-kind) wetland functions. Development of wetlands mitigation banks is encouraged when practicable as a cost-effective method to reduce the uncertainty and delays that may be associated with mitigation requirements for future installation development. A wetland bank is established by means of a formal agreement with the Army Corps of Engineers or other appropriate regulatory agency enacted prior to nomination of a wetland to the program. The value of a bank is determined through cooperation with the regulating agency to quantify the wetland values restored, enhanced, or created in terms of credits.

EO 11990 requires each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. Prior to any construction activity in a wetland area (as defined by E. O. 11990), proponents must first prepare a Finding of No Practicable Alternative (FONPA), which documents that there are no practicable alternatives to such construction, and that the proposed action includes all practicable measures to minimize harm to wetlands. In preparing the FONPA, the AF must consider the full range of practicable alternatives that will meet the proposed mission requirements. If wetlands would be impacted, a FONPA must be prepared and submitted for review and approval by the Director, Installation and Mission Support prior to implementing the impacting activity.

3.5.6 Floodplains

The shape of the Red River Valley has resulted from past glacial activity. Floods in this area are frequent. Flooding usually lasts only for a short period because of a vast network of drainage ditches and channelized streams. The Red River has several basin characteristics that make it susceptible to flooding, including an undersized main channel in relation to its floodplain, a small main channel gradient and a northerly flow that synchronizes flooding with the northerly

progression of the spring thaw. Floods typically occur during late spring resulting from quick temperature rise, spring rains, snowmelt and soil-moisture content held over from the fall. Floods in the Red River Valley can be severe, such as the early 1997 flood that resulted in the evacuation of the entire town of Grand Forks. Review of the National Flood Insurance Rate Map (FIRM) indicates that a small portion of the Turtle River's 100-year floodplain is located in the extreme northwest corner of the base where the river crosses the Grand Forks AFB boundary. There is another small portion of the county's natural floodplain drainage that crosses the southeast corner of the Grand Forks AFB lagoons on its way to Kellys Slough. No floodplains are present in the proposed fire station site, or building 530 or 606 or HCA.

3.6 BIOLOGICAL RESOURCES

3.6.1 Vegetation

Hay land, wildlife management areas, waterfowl production areas, neighboring wildlife refuges, state parks and conservation reserve program land have created excellent grassland and wetland habitats for wildlife in Grand Forks County. Pastures, meadows and other non-cultivated areas create a prairie-land mosaic of grasses, legumes and wild herbaceous plants. Included in the grasses and legumes vegetation species are tall wheat grass, brome grass, Kentucky bluegrass, sweet clover and alfalfa. Herbaceous plants include little bluestem, goldenrod, green needle grass, western wheat grass and bluegrama. Shrubs such as Juneberry, dogwood, hawthorn, buffaloberry and snowberry also are found in the area. In wetland areas, predominant species include Typha sp., smartweed, wild millet, cord grass, bulrushes, sedges and reeds. These habitats for upland wildlife and wetland wildlife attract a variety of species to the area and support many aquatic species.

Various researchers, most associated with the University of ND, have studied current native floras in the vicinity of the base. The Natural Heritage Inventory through field investigations has identified ten natural communities occurring in Grand Forks County (1994). Of these, two communities are found within base boundaries, River/Creek and Lowland Woodland. The River/Creek natural community refers to the Turtle River. This area is characterized by submergent and emergent aquatic plants, green algae, diatoms, diverse invertebrate animals such as sponges, flatworms, nematode worms, segmented worms, snails, clams and immature and adult insects, fish, amphibians, turtles and aquatic birds and mammals. Dominant trees in the Lowland Community include elm, cottonwood and green ash. Dutch elm disease has killed many of the elms. European buckthorn (a highly invasive exotic species), chokecherry and wood rose (Rosa woodsii) are common in the under story in this area. Wood nettle (Laportea canadensis), stinging nettle (Urtica dioica), beggars' ticks (Bidens frondosa) and waterleaf (Hydrophyllum viginianum) are typical forbes.

A prairie restoration project in the "Prairie View Nature Preserve" has been developed to restore a part of the native tallgrass prairie that once was dominant in this region. Plants thriving in this preserve include big bluestem, little bluestem, Indian grass, switchgrass, blue gramma, buffalo grass and many native wildflower species. The Grand Forks AFB Natural Resources Manager and volunteers installed a butterfly garden within the Prairie View Nature Preserve in the fall of

2005, on National Public Lands Day. Volunteers helped plant the 1,300 square foot garden with about 50 different perennial varieties and shrubs.

3.6.2 Wildlife

Grand Forks County is agrarian in nature, however it does have many wildlife management areas, waterfowl production areas, conservation reserve program land and recreational areas providing excellent habitat for local wildlife within the county. Kellys Slough NWR is located a couple miles northeast of Grand Forks AFB. In addition to being a wetland, it is a stopover point for thousands of migratory birds, especially shorebirds. The Prairie Chicken Wildlife Management Area is located north of Mekinock and contains 1,160 acres of habitat for deer, sharp-tailed grouse and game birds. Wildlife can also be found at the Turtle River State Park, The Bremer Nature Trail and the Myra Arboretum.

The base supports a remarkable diversity of wildlife given its size and location within an agricultural matrix. The Turtle River riparian corridor, Prairie View Nature Preserve, grassland areas on the west side of the base and the lagoons to the east of the base all provide important habitat for native plant and wildlife species and should be conserved as such within mission constraints. Many mammalian species are found on base such as the white tail deer, eastern cottontail rabbit, coyotes, beaver, raccoons, striped skunks, badgers, voles, gophers, shrews, mice, muskrat, squirrels, bats and occasional moose and bear. Amphibian State Species of Concern include the Northern Leopard Frog. Mammal State Species of Concern include the bobcat, moose and black bear.

One hundred seventy bird species were identified in the 2004 biological survey, many of which include grassland bird species. Grassland bird populations are declining across North America due to huge losses of prime grassland habitat from conversion to agricultural, urban and industrial development. No other avian group has experienced such dramatic losses as grassland birds. GFAFB is fortunate to support a large variety of grassland birds, many of which are listed on the Partners-in-Flight species of concern list, such as the grasshopper sparrow. Large blocks of grassland should be conserved to protect these grassland bird species when the mission constraints allow it. Best management practices (BMPs) to restrict construction and demolition actions during nesting season are implemented to reduce the amount of disruption to birds and wildlife.

3.6.3 Threatened and Endangered Species

According to the GFAFB Migration and Breeding Bird Survey, 2007, the following birds have been found on the installation: 18 Birds of Conservation Concern (USFWS 2002), 8 birds on the North Dakota Threatened or Endangered Species, North Dakota Natural Heritage Inventory (Ranks S1-S3), 32 birds on the North Dakota Species of Concern, North Dakota Natural Heritage Inventory, 35 birds on the Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998 and 29 birds on the North Dakota Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004. Table 3.6-1 was mandated for inclusion in the INRMP and management is required for

these species. Therefore, base activities that affect them must be assessed following the Sikes Act. An Integrated Natural Resources Management Plan (INRMP) was signed by the Installation Commander on March 21, 2006. The INRMP defines natural resources management goals and objectives that are consistent with the military mission and ensure no net loss in the capability of installation lands to support the military mission. The main goal of ecosystem management on GFAFB is to maintain and improve the sustainability and biological diversity of unique native ecosystems while supporting the specific military mission of GFAFB.

Numerous migrating and breeding birds utilize the variety of habitats on the installation. There are several species of birds that use the property for migratory stopover sites and many other species that breed on the installation (GFAFB Migration and Breeding Bird Survey, 2007). All of the birds listed below are identified in the INRMP and were found and documented on the GFAFB bird checklist (GFAFB 2008). To date, 216 species of birds have been identified as present on base property. Several rare and state-listed species have been observed on base near Turtle River, the lagoons and the grassland to the west of the airfield. The ESA does require that Federal Agencies not jeopardize the existence of a threatened or endangered species nor destroy or adversely modify designated critical habitat for threatened or endangered species.

Two hundred and fifty five taxa were identified in the ND Natural Heritage Inventory and the BS Bioserve biological inventory update for Grand Forks Air Force Base. Two rare orchid species, the Large and Small Yellow Lady's Slipper, are known to exist on Grand Forks AFB. These state-threatened plants were identified during the 2004 inventory. Best management practices (BMPs) to restrict construction and demolition actions within the area are implemented to reduce the amount of disruption to natural resources. The Large and Small Yellow Lady's Slippers are found on the west side of the base airfield in unimproved area and are not near the proposed site of the fire station, hazardous cargo area, nor buildings 530 and 606.

INRMPs will provide for the protection and conservation of state listed protected species when practicable. Although not required by the Endangered Species Act, similar conservation measures for species protected by state law are provided when such protection is not in direct conflict with the military mission. When conflicts occur, the appropriate state authority is consulted to determine if any conservation measures can be feasibly implemented to mitigate impacts.

The location of the proposed fire station, the proposed hazardous cargo area, the alternative Prior Approved Fire Station Site and buildings 530 and 606 are in improved and semi-improved areas of the base, and not near the Turtle River, lagoons and grassland west of the airfield where threatened and species of concern are most likely to appear.

Table 3.6-1						
GFAFB Bird Conservation Species						
	Federal T&E	**BCC 2002**	**State T&E**	**State SC**	**PIF**	**State CWCS**
Alder Flycatcher				X		
American Avocet					X	X
American Bittern		X			X	X
American White Pelican						X
American Woodcock				X		
Baird's Sparrow		X		X	X	X
Bald Eagle			X			X
Black Tern				X	X	X
Black-billed Cuckoo		X			X	X
Black-billed Magpie					X	
Blue-headed Vireo				X		
Bobolink					X	X
Brewer's Sparrow			X			X
Brown Creeper					X	
Bufflehead				X		
Canada Warbler				X		
Canvasback					X	X
Chestnut-collared Longspur		X		X	X	X
Chestnut-sided Warbler			X			
Clay-colored Sparrow					X	
Common Loon				X		
Common Merganser				X		
Common Tern				X		
Cooper's Hawk				X		
Dickcissel					X	X
Eastern Bluebird				X		
Ferruginous Hawk		X		X	X	X
Forster's Tern				X		
Franklin's Gull				X	X	X
Grasshopper Sparrow		X			X	X
Green Heron			X			
Harris's Sparrow					X	
Hooded Merganser			X			
Horned Grebe						X
Killdeer					X	
Lark Bunting					X	X
Le Conte's Sparrow		X		X	X	X
Loggerhead Shrike		X		X	X	X
Mallard					X	

Marbled Godwit		X		X	X	X
Marsh Wren					X	
Mourning Warbler				X		
Nelson's Sharp-tailed Sparrow		X		X	X	X
Northern Harrier		X			X	X
Northern Pintail				X	X	X
Northern Waterthrush				X		
Olive-sided Flycatcher				X		
Orange-crowned Warbler				X		
Osprey				X		
Pileated Woodpecker			X			
Redhead					X	X
Red-breasted Nuthatch				X		
Ruddy Duck					X	
Scarlet Tanager				X		
Sedge Wren					X	X
Sharp-tailed Grouse						X
Short-eared Owl		X				X
Solitary Sandpiper		X				
Swainson's Hawk		X		X	X	X
Swamp Sparrow			X			
Turkey Vulture				X		
Upland Sandpiper		X		X	X	X
Virginia Rail					X	
Whip-poor-will				X		
White-rumped Sandpiper		X				
White-throated Sparrow			X			
Willet		X		X	X	X
Wilson's Phalarope		X			X	X
Yellow-headed Blackbird					X	
Totals	**0**	**18**	**8**	**32**	**35**	**29**
Federal T&E = US Fish and Wildlife Service, Threatened and Endangered Species System, 2005						
BCC 2002 = Birds of Conservation Concern 2002, US Fish and Wildlife, Division of Migratory Bird Management, 2002						
State T&E = North Dakota Threatened or Endangered Species, North Dakota Natural Heritage Inventory, (Ranks S1-S3), 2005						
State SC = North Dakota Species of Concern, North Dakota Natural Heritage Inventory, 2005						
PIF = Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998						
State CWCS = North Dakota Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004						

3.7 SOCIOECONOMIC RESOURCES

Grand Forks County is primarily an agricultural region and, as part of the Red River Valley, is one of the world's most fertile. Cash crops include sugar beets, beans, corn, barley and oats. The valley ranks first in the nation in the production of potatoes, spring wheat, sunflowers and durum wheat. Grand Forks County's population in 2000 was 66,109, a decrease of 6.5 percent from the 1990 population of 70,638 (ND State Data Center, No Date). Grand Forks County's annual median household income in 2007 was $42,475. Grand Forks AFB is one of the largest employers in Grand Forks County. The total base population, as of Sept 2008, is approximately 5,222. Of that, 1,986 are military, 2,189 are military dependents, 366 appropriated fund (APF) civilians and 681 other civilians working on base (Grand Forks AFB, 2008). The total annual economic impact for Grand Forks AFB is $433,914,947.

3.8 CULTURAL RESOURCES

3.8.1 According to the Grand Forks AFB Cultural Resources Management Plan, there are no archeological sites that are potentially eligible for the National Register of Historic Places (NRHP). A total of six archeological sites and six archeological find spots have been identified on the base. They are abandoned farmsteads and isolated artifacts. None meet the criteria of eligibility of the NRHP established in 36 CFR 60.4. There is no evidence for Native American burial grounds on the installation. There could be cultural sensitive areas found within areas identified on the cultural resource probability map (Figure 3.5). Due to the potential for the presence of buried prehistoric sites, paleosols (soil that developed on a past landscape) remain a management concern. Reconnaissance-level archival and archeological surveys of Grand Forks AFB conducted by the University of ND in 1989 indicated that there are no facilities (50 years or older) that possess historical significance. Murals and other artwork painted on walls throughout base buildings are considered cultural resources and must be preserved and consultation completed with the State Historic Preservation Officer (SHPO) per the National Historic Preservation Act. Several of the base buildings are approaching the age of 50 years and are pending evaluation in FY10 under the NHPA, Section 110. Prior to painting/removing artwork in base buildings, the actions must first be coordinated with the ND SHPO. Consultation under NHPA, Section 106 regarding the proposed demolition of six MSA buildings (703, 704, 705, 706, 707 and 714) occurred with the ND SHPO and a determination was made that no historic properties would be affected. Potentially eligible Cold-War Era facility 606 as well as building 530 has had section 106 consultations with the ND SHPO for proposed demolition. State Historical Society of North Dakota correspondence with a "No Historic Properties Affected" determination is included in Appendix C. Cold War Era Building 313 that is potentially eligible for the NHPA is managed as eligible for the NHPA under the guidance of the NDSHPO approved ICRMP signed by the Wing Commander. A map of the cultural resource probability areas is located in Figure 3.3. The location of the new fire station site, prior approved fire station site, HCA, 606 and 530 are in a low probability area.

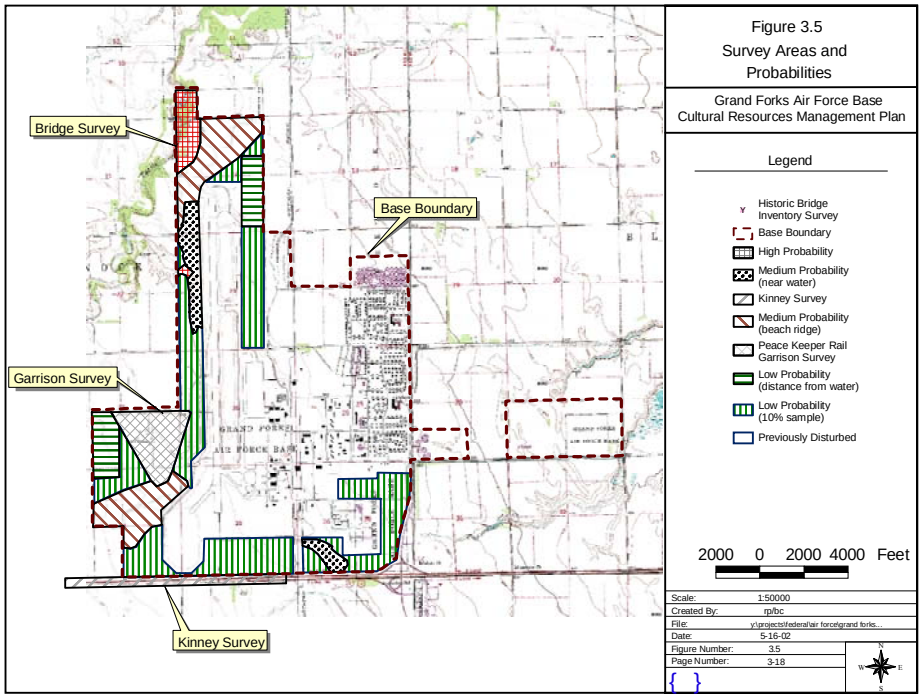

Figure 3.3 Cultural Resource Probability Areas

3.8.2 Grand Forks Air Force Base signed a Programmatic Agreement with Headquarters United States Air Forks, State Historical Society of North Dakota, Headquarters Air Force Space Command, Headquarters Air Mobility Command and the Advisory Council on Historic Preservation for the Deactivation of the 321st Missile Group in 1999. GFAFB mitigated under a memorandum of agreement for the demolition of building 306 and dismantlement of 150 Minuteman III Missile Launch Facilities and 15 Missile Alert Facilities and as such has preserved much of the cold war heritage of GFAFB through development of an outdoor interpretive plaza. The Cold War Plaza at Grand Forks Air Force Base incorporates a Viking, sunflakes and a history of the Cold War. With its Warrior of the North statue and interpretive storyboards, the Cold War Plaza was constructed in the heart of the community area for future generations to learn and appreciate the Cold War heritage of the base. The rich history of the base unfolds through dramatic story-boards and vivid photographs along the walkways. Starting with the original mission beddown in the 1950‘s, the storyboards depict the multiple missions, such as A Day in the Life of a Pilot and Missileer, Fighter Aircraft on the Ready and A Family of Warriors. The plaza was created as the result of a Memorandum of Agreement between the base and the North Dakota State Historical Preservation Office when the base‘s Semi-Automated Ground Environment (SAGE) facility (306), a large, windowless, concrete structure was demolished in 2003. The SAGE facility not only played a significant role as a state-of-the-art radar system in the late 1950‘s, but also as the Missile Wing Headquarters until 1997. A photo of the Cold War Plaza is shown in Figure 3.4.

Key elements of the plaza include a seven foot bronze statue of the Warrior of the North and 20 storyboards of the Grand Forks AFB Cold War heritage. The Warrior of the North statue represents the thousands of Airmen who have served bravely and diligently at the base

throughout the years. Locally referred to as Sven, he can also be seen on coins, wall art and street banners throughout the base. The statue was sculpted by a noted artist, Thomas Bollinger, who has also sculpted such works as the Sacagawea statue located in the United States Capitol Building. The storyboards, created of porcelain enamel, are strategically placed in chronological order throughout the plaza. The storyboard text was researched by a local university student and the storyboard layout; design and editing were accomplished in-house by the 319th Civil Engineer Squadron. The sunflake symbol, embedded in the walkways, signifies the diverse seasons of the North Dakota landscape. Benches, ornamental lighting and brick paver walk-ways are integral design features connecting the plaza to the surrounding community area. Colorful, low-maintenance landscaping located throughout the plaza creates a park-like atmosphere which softens the formality of the symmetrical walkways. The plaza is handicap accessible and connected to the base sidewalk and multi-use trail system. Gently sloped berms add interest, frame the plaza and screen nearby parking areas.

The plaza honors the Cold War heritage for present and future generations. A portable walking-set of the storyboards was also created to be shared and enjoyed at nearby schools, museums and other community events held off-base. The Cold War Plaza turned a cultural resource mitigation project into a landscape architectural focal point in the heart of the community area for all to enjoy.

Figure 3.4 Cold War Plaza at Grand Forks AFB

3.8.3 Building 606 proposed for demolition was constructed in 1965 as a missile transfer building. The one-story, prefabricated steel structure has a reinforced concrete foundation and a steel roof (Figure 3-10). The building is roughly 152 ft. east-west by 32 ft. north/south (4,864 sq. ft.) with the main entrance door on the east elevation. See the photo in Figure 2.2.

Building 606 was constructed in an isolated, "hot cargo" area, to hold a Minuteman II missile before transfer of the missile to the 321st Missile Wing missile silos west of the base. After the Minuteman II was replaced with Minuteman III missiles in the early 1970s, the building continued to function as originally designed. Building 606 was initially recommended not eligible for the NRHP due to a lack of historic significance; the building's function was described as utilitarian and was designed to support the transfer and maintenance of Minuteman II and III missiles (Weitze 1996). However, the SHSND did not concur with this finding and Grand Forks AFB treated the building as eligible for the NRHP. Recent consultation with the State Historical Society of North Dakota produced correspondence with a "No Historic Properties Affected" determination for building 606 as well as 530, and this document is included in Appendix C.

Building 606 is in good overall condition. No significant deterioration was noted to exterior features. With the deactivation of the 321st Missile Wing in 1998, Building 606 no longer serves missile transfer functions. The structure is pickled, i.e. mothballed, and is currently used for cold storage in the space on the south side of the building. The north side of the building is occupied by a corridor. There have been no alterations to Building 606 since the initial assessment of the building's significance in 1996. The building retains integrity, although no longer heated or lighted or maintained.

3.9 LAND USE

Land use in Grand Forks County consists primarily of cultivated crops with remaining land used for pasture and hay, urban development, recreation and wildlife habitat. Principal crops are spring wheat, barley, sunflowers, potatoes and sugar beets. Turtle River State Park, developed as a recreation area in Grand Forks County, is located about five miles west of the base. Several watershed protection dams are being developed for recreation activities including picnicking, swimming and ball fields. Kellys Slough NWR (located about two miles east of the base) and the adjacent National Waterfowl Production Area are managed for wetland wildlife and migratory waterfowl, but they also include a significant acreage of open land wildlife habitat. There are several WPA, NWR, WMA's, UND land, CRP land all available for Wildlife Habitat. There are increasing fisher populations, deer, coyote, many active hunters and an active bird club in the county.

The main base encompasses 5,773 acres, of which the USAF owns 5,161 acres and another 612 acres are lands containing easements, permits and licenses. Improved grounds, consisting of all covered area (under buildings and sidewalks), land surrounding base buildings, the 9-hole golf course, recreational ball fields and the family housing area, encompass 1,120 acres. Semi-improved grounds, including the airfield, fence lines and ditch banks, skeet range and riding stables account for 1,390 acres. The remaining 3,263 acres of the installation consist of unimproved grounds. These areas are comprised of woodlands, open space and wetlands, including four lagoons (180.4 acres) used for the treatment of base wastewater. Agricultural out leased land (505 acres) is also classified as unimproved. Land use at the base is twenty percent urban in nature, with residential development to the east, and cropland, hayfields and pastures in the north, west and east of the base footprint.

3.10 TRANSPORATION SYSTEMS

Seven thousand vehicles per day travel ND County Road B3 from Grand Forks AFB's east gate to the US Highway 2 Interchange (Clayton, 2001). Two thousand vehicles per day use the off-ramp from US Highway 2 onto ND County Road B3 (Dunn, 2001). US Highway 2, east of the base interchange, handles 10,800 vehicles per day. (Kingsley and Kuntz, 2001). A four lane arterial road has a capacity of 6,000 vehicles per hour and a two lane road has capacity of 3,000 vehicles per hour, based on the average capacity of 1,500 vehicles per hour per lane. Roadways adjacent to Grand Forks AFB are quite capable of accommodating existing traffic flows.

Grand Forks AFB has good traffic flow even during peak hours (6-8 am and 4-6 pm). There are two gates: the main gate located off of County Road B3, about one mile north of U.S. Highway 2 and the Secondary Gate located off of U.S. Highway 2, about 3/4 mile west of County Road B3. The main gate (gate 1) is connected to Steen Boulevard (Blvd), which is the main east-west road and serves the passenger traffic. The south gate (gate 2) is connected to Eielson Street (St), which is the main north-south road and serves the truck traffic.

3.11 AIRSPACE/AIRFIELD OPERATIONS

3.11.1 AIRCRAFT SAFETY

Bird Aircraft Strike Hazard (BASH) is a significant safety concern for military aircraft. The focus of the BASH program is to prevent wildlife-related aircraft mishaps and reduce the potential for wildlife hazards to aircraft operations. Collision with birds may result in aircraft damage and aircrew injury, which may result in high repair costs or loss of the aircraft. A BASH hazard exists at Grand Forks AFB and its vicinity, due to resident and migratory birds and whitetail deer. Daily and seasonal bird movements create various hazardous conditions. Vegetation is mowed to detract birds or animals on the flight line. Although BASH problems are insignificant on Grand Forks AFB, Kellys Slough NWR two miles east of the base is a major stopover for migratory birds. Canada Geese and other large waterfowl have been seen in the area (USAF, 2001b).

Wetland areas provide the basic needs for many wildlife species and thus create potential hazards to aircraft operations. Innovative techniques to manage wildlife in wetlands are explored and implemented, such as bird depredation, bow hunting and deer drives. Legally defensible actions to reduce the amount of wetlands on the airfield to the maximum extent possible should be explored and pursued when their presence conflicts with the flight mission. While "no net loss" of wetlands is an important AF goal, priority must be given to flight safety.

3.11.2 AIRSPACE COMPATIBILITY

The primary objective of airspace management is to ensure the best possible use of available airspace to meet user needs and to segregate requirements that are incompatible with existing airspace or land uses. The Federal Aviation Administration has overall responsibility for managing the nation's airspace and constantly reviews civil and military airspace needs to ensure all interests are compatibly served to the greatest extent possible. Airspace is regulated and

managed through use of flight rules, designated aeronautical maps and air traffic control procedures and separation criteria.

3.12 SAFETY AND OCCUPATIONAL HEALTH

Safety and occupational health issues include one-time and long-term exposure. Examples include asbestos/radiation/chemical exposure, explosives safety quantity-distance and bird/wildlife aircraft hazard. Safety issues include injuries or deaths resulting from a one-time accident. Aircraft Safety includes information on birds/wildlife aircraft hazards and the BASH program. Health issues include long-term exposure to chemicals such as asbestos and lead-based paint. Safety and occupational health concerns could impact personnel working on the project and in the surrounding area.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) of the CAA designates asbestos as HAP. OSHA provides worker protection for employees who work around or asbestos containing material (ACM). Regulated ACM (RACM) includes thermal system insulation (TSI), any surfacing material and any friable asbestos material. Non-regulated Category I non-friable ACM includes floor tile and joint compound.

Lead exposure can result from paint chips or dust or inhalation of lead vapors from torch-cutting operations. This exposure can affect the human nervous system. Due to the size of children, exposure to lead-based paint is especially dangerous to small children. OSHA considers all painted surfaces in which lead is detectable to have a potential for occupational health exposure.

3.13 ENVIRONMENTAL MANAGEMENT

3.13.1 ENVIRONMENTAL RESTORATION PROGRAM

The Installation Restoration Program (IRP) is the AF's environmental restoration program based on the CERCLA. CERCLA provides for Federal agencies with the authority to inventory, investigate and clean up uncontrolled or abandoned hazardous waste sites. There are seven IRP sites at Grand Forks AFB. These sites are identified as potentially impacted by past hazardous material or hazardous waste activities. They are the Fire Training Area/Old Sanitary Landfill Area, FT-02; New Sanitary Landfill Area, LF-03; Strategic Air Ground Equipment (SAGE) Building 306, ST-04; Explosive Ordnance Detonation Area, OT-05; Refueling Ramps and Pads, Base Tanks Area, ST-06; POL Off-Loading Area, ST-07; and Refueling Ramps and Pads, ST-08 (USAF, 1997b). Two sites, OT-05 and ST-06, are considered closed. ST-08 has had a remedial investigation/feasibility study (RI/FS) completed and the rest are in long-term monitoring. Grand Forks AFB is not on the National Priorities List (NPL).

3.13.2 GEOLOGICAL RESOURCES

3.13.2.1 Physiography and Topography

The topography of Grand Forks County ranges from broad, flat plains to gently rolling hills that were produced mainly by glacial activity. Local relief rarely exceeds 100 ft in one mile and, in parts of the lake basin, less than five feet in one mile.

Grand Forks AFB is located within the Central Lowlands physiographic province. The topography of Grand Forks County and the entire Red River Valley, is largely a result of the former existence of Glacial Lake Agassiz, which existed in this area during the melting of the last glacier, about 12,000 years ago (Stoner et al., 1993). The eastern four-fifths of Grand Forks County, including the base, lies in the Agassiz Lake Plain District, which extends westward to the Pembina escarpment in the western portion of the county. The escarpment separates the Agassiz Lake Plain District from the Drift Plain District to the west. Glacial Lake Agassiz occupied the valley in a series of recessive lake stages, most of which were sufficient duration to produce shoreline features inland from the edge of the lake. Prominent physiographic features of the Agassiz Lake Plain District are remnant lake plains, beaches, inter-beach areas and delta plains. Strandline deposits, associated with fluctuating lake levels, are also present and are indicated by narrow ridges of sand and gravel that typically trend northwest-southwest in Grand Forks County.

Grand Forks AFB lies on a large lake plain in the eastern portion of Grand Forks County. The lake plain is characterized by somewhat poorly drained flats and swells, separated by poorly drained shallow swells and sloughs (Doolittle et al., 1981). The plain is generally level, with local relief being less that one foot. Land at the base is relatively flat; with elevations ranging from 880 to 920 ft mean sea level (MSL) and averaging about 890 ft MSL. The land slopes to the north at less than 12 feet per mile. The Prior approved fire station site sits at 890 feet, while the proposed new fire station site is 893 feet.

3.13.2.2 Soil Type Condition

Soils consist of the Gilby loam series that are characterized by deep, somewhat poorly drained, moderately to slowly permeable soils in areas between beach ridges. The loam can be found from 0 to 12 inches. From 12 to 26 inches, the soil is a mixture of loam, silt loam and very fine sandy loam. From 26 to 60 inches, the soil is loam and clay loam.

3.13.3 PESTICIDE MANAGEMENT

Pesticides are handled at various facilities including Environmental Controls, Golf Course Maintenance and Grounds Maintenance. Other organizations assist in the management of pesticides and monitoring or personnel working with pesticides. Primary uses are for weed and mosquito control. Herbicides, such as picloram, nonselective glyphosate and 2, 4-D are used to maintain areas on base. Pesticides Trumpet and Altosid are used for aerial spraying for mosquito control. Military Public Health and Bioenvironmental Engineer provide information on the safe handling, storage and use of pesticides. Military Public Health maintains records on all pesticide applicators. The Fire Department on-base provides emergency response in the event of a spill, fire, or similar type incident.

3.14 ENVIRONMENTAL JUSTICE

Environmental justice addresses the minority and low-income characteristics of the area, in this case Grand Forks County. The county is more than 93 percent Caucasian, 2.3 percent Native American, 1.4 percent African-American, 1 percent Asian/Pacific Islander, less than 1 percent Other and 1.6 percent "Two or more races". In comparison, the US is 75.2 percent Caucasian, 12.3 African-American, 0.9 percent Native American or Native Alaskan, 3.6 percent Asian, 0.1 Native Hawaiian or Pacific Islander, 5.5 percent Other and 2.4 percent "Two or more races". Approximately 12.5 percent of the county's population is below the poverty level in comparison to 13.3 percent of the state (US Bureau of the Census, 2002). There are few residences and no concentrations of low-income or minority populations around Grand Forks AFB.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter discusses the potential for significant impacts on the human and natural environment. The effects of the Proposed Action and the Alternatives on the affected environment are discussed in this section. The proposed project involves construction of a new fire station on Grand Forks AFB, demolition of the existing fire station (530) and the missile transfer building (606), and the relocation of the existing hazardous cargo area to the proposed hazardous cargo area.

4.2 AIR QUALITY

4.2.1 Alternative 1 - No Actions

4.2.1.1–Construct Fire Station - No new impacts to air quality would occur from the No Action Alternative.

4.2.1.2 –Demolish 530 - No new impacts to air quality would occur from the No Action Alternative.

4.2.1.3 –Demolish 606 - No new impacts to air quality would occur from the No Action Alternative.

4.2.1.4 –Relocate HCA - No new impacts to air quality would occur from the No Action Alternative.

4.2.2 Alternative 2 - Proposed Actions

4.2.2.1-Construct Fire Station at HCA - Air Quality is considered good and the area is in attainment for all criteria pollutants. Short-term effects of the proposed construction and demolition involve heavy construction equipment and vehicular traffic emissions which are not significant as they are mobile sources. Fugitive dust would be generated and is mentioned on our Title V permit. To reduce temporary impacts to air quality, dust abatement measures, such as watering disturbed areas and roads would be used. Fugitive emissions from construction activities are expected to be below the regulatory threshold and would be managed in accordance with NDAC 33-15-17-03. Best management practices (BMPs) to reduce fugitive emissions would be implemented to reduce the amount of these emissions. North Dakota Department of Health correspondence requiring that all necessary measures must be taken to minimize fugitive dust emissions created during construction activities is found in Appendix C. By using LEED standards for construction of the new fire station, long-term positive impacts to air quality are anticipated as a result of the Proposed Action.

Purchase of any new generators/boilers requires permit to construct and is subject to air compliance under the Title V permit (Chapter 33-15-14, N.D.A.C). Permit process must be coordinated through 319 CES/CEAN and the ND Health Department. This is a modification to

the existing permit. Modifications without approval are violations of the operating agreement. Before purchase is made, coordination must be finished.

All new generators are subject to 40 CFR Part 60, Subpart IIII regarding new limits on equipment emissions and must obtain certification. Any generator purchases must meet these new standards. Additions of major sources require compliance with Prevention of Significant Deterioration (PSD) regulations.

As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.

4.2.2.2 –Demolish 530 – Insignificant impacts to air quality would be similar to those of 4.2.2.1-Construct Fire Station. Retirement of existing generators or boilers from Buildings 530 need to be coordinated with the Air Quality program manager to ensure the existing Title V permit is updated and/or the insignificant inventory is updated as a requirement of the permit.

4.2.2.3 –Demolish 606 – Insignificant impacts to air quality would be similar to those of 4.2.2.1-Construct Fire Station. Retirement of existing generators or boilers from Buildings 606 need to be coordinated with the Air Quality program manager to ensure the existing Title V permit is updated and/or the insignificant inventory is updated as a requirement of the permit.

4.2.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to air quality.

4.2.3 Alternative 3 – Alternative Actions

4.2.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to air quality from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.2.2.1.

4.2.3.2 –Renovate 530 – Renovation and reuse of the building by another user, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Impacts to air quality would be similar to those currently taking place. Change of the user of Building 530 needs to be coordinated with the Air Quality program manager to ensure the existing Title V permit is updated and/or the insignificant inventory is updated as a requirement of the permit.

4.2.3.3 –Renovate 606 - Renovation and reuse of the building by another user, such as mobility sand bag overflow storage, is similar to the existing user. Impacts to air quality would be similar to those occurring at 606. Change of the user of Building 606 needs to be coordinated with the Air Quality program manager to ensure the existing Title V permit is updated and/or the insignificant inventory is updated as a requirement of the permit.

4.2.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to air quality. The airfield management office would need to develop new operational procedures in case of parking transient aircraft containing hazardous cargo.

4.3 NOISE

4.3.1 Alternative 1 - No Actions

4.3.1.1–Construct Fire Station - No new impacts to noise would occur from the No Action Alternative.

4.3.1.2 –Demolish 530 - No new impacts to noise would occur from the No Action Alternative.

4.3.1.3 –Demolish 606 - No new impacts to noise would occur from the No Action Alternative.

4.3.1.4 –Relocate HCA - No new impacts to noise would occur from the No Action Alternative.

4.3.2 Alternative 2 -Proposed Actions

4.3.2.1-Construct Fire Station at HCA -Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project areas. Impacts associated with the noise of construction and demolition activities and operation of heavy equipment would be insignificant, temporary and cease at the completion of these activities. North Dakota Department of Health correspondence stating that noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction and demolition activities are not conducted during early morning or late evening hours are found in Appendix C. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction and demolition activities would wear hearing protection to protect for hearing loss because the 80 decibel Day/Night Average Noise Level (DNL) contour extends into the cantonment areas on base during equipment operation.

4.3.2.2 –Demolish 530 – Impacts to noise would be similar to those of 4.3.2.1-Construct Fire Station.

4.3.2.3 –Demolish 606 - Impacts to noise would be similar to those of 4.3.2.1-Construct Fire Station.

4.3.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to noise.

4.3.3 Alternative 3 – Alternative Actions

4.3.3.1-Construct Fire Station at corner of 10th Ave and Eielson St – Insignificant impacts to noise from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.3.2.1-Construct Fire Station.

4.3.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing use. Insignificant impacts associated with the noise of construction and demolition activities and operation of heavy equipment would be insignificant, temporary and cease at the completion of these activities.

4.3.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as mobility sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with the noise of construction and demolition activities and operation of heavy equipment would be insignificant, temporary and cease at the completion of these activities.

4.3.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to noise. The airfield management office would need to develop new operational procedures in case of parking transient aircraft containing hazardous cargo.

4.4 WASTES, HAZARDOUS MATERIALS and STORED FUELS

4.4.1 Alternative 1 - No Actions

4.4.1.1–Construct Fire Station - No new impacts to hazardous waste, materials and stored fuels would occur from the No Action Alternative.

4.4.1.2 –Demolish 530 - No new impacts to hazardous waste, materials and stored fuels would occur from the No Action Alternative.

4.4.1.3 –Demolish 606 - No new impacts to hazardous waste, materials and stored fuels would occur from the No Action Alternative.

4.4.1.4 –Relocate HCA - No new impacts to hazardous waste, materials and stored fuels would occur from the No Action Alternative.

4.4.2 Alternative 2 - Proposed Actions

4.4.2.1–Construct Fire Station at HCA - The increase in hazardous and solid wastes from construction of a new fire station would be temporary and insignificant. Short-term adverse impacts are expected as the increase in solid wastes from construction and demolition actions would include an estimated four million pounds of debris. Solid waste municipal waste and asbestos waste would be disposed in an approved location, such as the Grand Forks Municipal Landfill (SW-069), which is located within 12 miles of the proposed site, or the new Grand

Forks Landfill, estimated to open in October 2009. Construction debris could be disposed at an inert landfill, such as one located four miles from the base, with permit number IT-198. All solid waste materials would be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. Inert waste should be segregated from non-inert waste, where possible, to reduce the cost of waste management. The demolition contractor (or prime) must retain an inspector to survey each building and place the firm's ND license in the correct space of Box IX of the demo notification form. The quantity of RACM for removal must be determined by the certified inspector and stated on the demo form. Only RACM is required to be removed prior to a demolition. Non-friable ACM (e.g. floor tile and wall board systems) can remain in the building and be removed with the building debris as demolition waste. The quantity of non-friable material remaining in the building must be assessed by the inspector and stated on the demolition form. North Dakota Department of Health correspondence requiring that all necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes is found in Appendix C.

Polychlorinated Biphenyls (PCBs) and PCB Items would be removed prior to demolition and disposed at an EPA approved chemical waste landfill approved for disposal of PCBs. Storage and disposal procedures in 40 CFR 761 would be performed.

Lead-based paints or coatings are not required to be removed prior to demolition. All debris can be considered demolition waste and disposed of properly. Workers must be protected from exposure during demolition and must be properly trained in the removal and disposal of lead-based paint surfaces.

Batteries, pesticides, mercury devices and lamps such as fluorescent light bulbs can be stored and disposed as Universal Waste. Ignitable, corrosive, reactive and toxic wastes must be stored and disposed as Hazardous Waste. Accumulations of both Universal and Hazardous Waste are stored at the Hazmat contractor site on the south end of Building 408.

Petroleum-contaminated soils (PCSs) generated from construction of a new fire station and demolition of Buildings 530 and 606 would be treated at the land treatment facility (IT-183) located on the southwest side of the airfield.

4.4.2.2 –Demolish 530 – Impacts to hazardous waste, materials and stored fuels would be similar to those of 4.4.2.1-Construct Fire Station. A grit chamber is located inside Building 530. Removal must be performed with the building demolition actions in accordance with federal, state and local regulations. The demolition of 530 would resolve potential environmental issues related to mercury, PCBs, asbestos, lead-based paint, and mold.

4.4.2.3 –Demolish 606 - Impacts to hazardous waste, materials and stored fuels would be similar to those of 4.4.2.1-Construct Fire Station. An underground storage tank for gray water from floor drains is located at the exterior southeast corner adjacent to Building 606. The tank for gray water at 606 has not held hazardous materials and the tank and piping shall be removed when the building is demolished. The demolition of 606 would resolve potential environmental issues related to mercury, PCBs, asbestos, lead-based paint, mold and mice droppings.

4.4.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to hazardous waste, materials and stored fuels.

4.4.3 Alternative 3 – Alternative Actions

4.4.3.1-Construct Fire Station at corner of 10th Ave and Eielson St – Insignificant impacts to hazardous waste, materials and stored fuels from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.4.2.1-Construct Fire Station.

4.4.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with the use of hazardous waste, materials and stored fuels of construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.4.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with the use of hazardous waste, materials and stored fuels of construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.4.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to hazardous waste, materials and stored fuels. The airfield management office would need to develop new operational procedures in case of parking transient aircraft containing hazardous cargo.

4.5 WATER RESOURCES

4.5.1 Alternative 1 - No Action Alternatives

4.5.1.1–Construct Fire Station - No new impacts to groundwater, surface water, wastewater, water quality, or wetlands would occur from the No Action Alternative.

4.5.1.2 –Demolish 530 - No new impacts to groundwater, surface water, wastewater, water quality, or wetlands would occur from the No Action Alternative.

4.5.1.3 –Demolish 606 - No new impacts to groundwater, surface water, wastewater, water quality, or wetlands would occur from the No Action Alternative.

4.5.1.4 –Relocate HCA - No new impacts to groundwater, surface water, wastewater, water quality, or wetlands would occur from the No Action Alternative.

4.5.2 Alternative 2 - Proposed Alternatives

4.5.2.1–Construct Fire Station at HCA – impacts to water resources as follows:

4.5.2.1.1 Groundwater: Excavation during demolition and construction could potentially intercept the high water table. If the excavated area fills with groundwater, water could be directly exposed to contaminants released from construction equipment. This water would need to be pumped from the excavation, filtered and discharged as surface water. Erosion control plans would be required to minimize the amount of soil and sediment entering the water during construction and permits would be required for the discharge of the water. The acquisition of the discharge permit would be part of the design and construction process. Provided best management practices are followed, there would be insignificant impacts on ground water. No long-term significant impacts are anticipated.

4.5.2.1.2 Surface Water: Surface water quality could be degraded during actual demolition and construction in the immediate area. The short-term effects come from possible erosion contributing to turbidity of runoff and possible contamination from spills or leaks from construction equipment. The contractor must utilize effective methods to control surface water runoff and minimize erosion. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation, controlling erosion. Provided best management practices are utilized during construction and site reclamation, negative surface water impacts should be insignificant. Long-term significant impacts are not anticipated.

4.5.2.1.3 Storm Water: In the short-term, demolition and construction activities could increase surface erosion and increase the dissolved solid and sediment content in storm water. Storm water runoff would be controlled through implementation of an erosion and sediment control plan. North Dakota Department of Health correspondence requiring that projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover is found in Appendix C. Specific sediment, erosion control, and spill prevention measures would be developed during detailed design and would be included in the plans and specifications. Potential measures could include silt fences and traps, detention basins, buffer strips or other features used in various combinations. Long-term significant impacts are not anticipated.

4.5.2.1.4 Wastewater: Provided best management practices are used, the Proposed Action would have no impact on wastewater.

4.5.2.1.5 Water Quality: Provided containment needs are met and best management practices are used, the Proposed Action would have insignificant impact to water quality. Prior to introducing a new line to the water main at the new fire station site, it should be disinfected IAW AWWA standards to include bacteriological testing by the contractors.

4.5.2.1.6 Wetlands: There are non-jurisdictional wetlands in the immediate footprint of the construction area of the new fire station site. The 2004 wetland inventory revealed the presence

of wetlands at the site of the proposed action. The wetland being affected by proposed activities is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. This wetland was created with the construction of the low area within the surrounding roadway of the HCA and no culverts to allow discharge of stormwater. A photo of this wetland is shown in Figure 2.4.

Natural Resource Manager Kristen Rundquist spoke with Ms Patsy Crooke of the Department of the United States Army Corps of Engineers North Dakota Regulatory office and Mr Bill Rafferty contract administrator regarding construction of a new fire station on Grand Forks AFB (Corp project number NWO-2005-60039-BIS). The new fire station project will fill 5.36 acres of a wetland identified as FLE-17 on the installation. It was verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005 from the North Dakota Regulatory office. Jurisdictional determinations are valid for 5 years, and as such is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the United States Army Corps of Engineers does not require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404), and subsequently no mitigation for this specific project under this law is required. A copy of this memo for record is found in Appendix C.

The North Dakota Game and Fish Department commented that no significant adverse effects on wildlife or wildlife habitat, including endangered species, would result from our project provided any unavoidable wetland impacts are mitigated in kind on an acre-for-acre basis. The base replied to the Game and Fish that the specific 5 .36 acre wetland affected by the proposed actions is a non-jurisdictional wetland, and as such the United States Army Corps of Engineers of North Dakota regulatory office does not require mitigation for this unavoidable wetland loss. Fiscal policy does not allow the base to mitigate wetland loss associated with this construction, and therefore will not be accomplished. Copy of this correspondence is found in Appendix C.

Prairie pothole wetlands existed on the installation and were filled prior to creation of the Grand Forks AFB infrastructure. Because of the extent of the wetland within the HCA and the proximity to pavement, the project cannot avoid directly impacting wetlands. The area surrounding the new fire station site would be re-contoured to a more gradual slope with drainage to convey surface water runoff. Because this wetland would be impacted, a FONPA must be prepared and submitted for review and approval by the Director, Installations and Mission Support prior to implementing the impacting activity.

4.5.2.1.7 Floodplains: There are no floodplains in the immediate footprint of the construction or demolition areas. Provided best management practices are used, the Proposed Action would have no impact on floodplains.

4.5.2.2 –Demolish 530 – Impacts to water resources would be similar to those of 4.5.2.1-Construct Fire Station.

4.5.2.3 –Demolish 606 - Impacts to water resources would be similar to those of 4.5.2.1-Construct Fire Station.

4.5.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to water resources.

4.5.3 Alternative 3 – Alternative Actions

4.5.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to water resources from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.5.2.1-Construct Fire Station; however the wetland impacted is jurisdictional rather than non-jurisdictional. The wetland mitigation plan would involve 0.03 acre of jurisdictional wetlands if this alternative site were chosen. Grand Forks AFB would mitigate the losses of jurisdictional wetlands at either a wetland mitigation bank or a suitable location on base. A formal mitigation plan would be developed during design of the construction and demolition. The FONSI and FONPA for this alternative were previously signed on Mar 15, 2006, by the Deputy Director, Installations and Mission Support of Air Mobility Command.

4.5.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with the use of water resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.5.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with the use of water resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.5.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to water resources.

4.6 BIOLOGICAL RESOURCES

4.6.1 Alternative 1 - No Actions

4.6.1.1–Construct Fire Station - No new impacts to wildlife, vegetation, or other biological resources would occur from the No Action Alternative.

4.6.1.2 –Demolish 530 - No new impacts to wildlife, vegetation, or other biological resources would occur from the No Action Alternative.

4.6.1.3 –Demolish 606 - No new impacts to wildlife, vegetation, or other biological resources would occur from the No Action Alternative.

4.6.1.4 –Relocate HCA - No new impacts to wildlife, vegetation, or other biological resources would occur from the No Action Alternative.

4.6.2 Alternative 2 - Proposed Actions

4.6.2.1–Construct Fire Station at HCA – impacts to wildlife, vegetation, or other biological resources as follows:

4.6.2.1.1 Vegetation: BMPs and control measures, including silt fences, covering of stockpiles, keeping construction equipment in construction areas would be implemented to ensure that impacts to biological resources and the amount of vegetation disturbed would be kept to the minimum required to complete the action. Disturbed areas should be re-established as soon as possible. There would be a short-term insignificant loss of vegetation from construction activities. All trees and shrubs that need removal shall be either relocated on site if appropriate and/or replaced one for one. New plantings of trees shall be consistent w/guidance in AFI 32-7064 and the base INRMP.

4.6.2.1.2 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. The federal noxious weed act (7 USC 2801 et seq.) and executive order 13112 requires federal agencies to monitor and control noxious weeds on federal properties. Limit possible weed seed transport from infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or remove seed sources and propagules from site prior to conducting activities, or limit operations to non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment before transporting to a new site. The base does contain invasive/noxious weeds. Equipment should be kept within the construction area to reduce transport of noxious weeds. Provided best management practices are used, the Proposed Action would have no significant impact on noxious weeds.

4.6.2.1.3 Wildlife: Construction would have insignificant impacts to wildlife, because the construction activity is short-term and construction equipment would remain in the construction area. The area is semi improved, providing habitat for mammals such as Richardson ground squirrels, rabbits, birds and invertebrates. Due to the abundance and mobility of these species and the profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local area. Cumulative affects should not be considerable as the fire station area is commonly disturbed by vehicular traffic. Provided best management practices are used, the Proposed Action would have no significant impact on wildlife.

4.6.2.1.4 Threatened or Endangered Species: The most recent compilation of all bird data collected on GFAFB identifies 18 Birds of Conservation Concern (USFWS 2002), 8 birds on the North Dakota Threatened or Endangered Species, North Dakota Natural Heritage Inventory (Ranks S1-S3), 32 birds on the North Dakota Species of Concern, North Dakota Natural Heritage Inventory, 35 birds on the Partners in Flight Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40), 1998 and 29 birds on the North Dakota Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of Conservation Priority, 2004. Proposed activities should have insignificant impact on these sensitive species. There is suitable habitat adjacent to the work area for many of the birds of conservation concern as listed above and other animals for the construction of a new fire station. The area is semi-improved and construction management practices should be conducted to reduce any adverse impacts. The

activity footprint should remain within the proposed site. All alternatives would be accomplished in compliance with the INRMP. U.S. Fish and Wildlife Service of North Dakota correspondence stating that no endangered or threatened species are known to occupy the project area is found in Appendix C. The location of the proposed activity is in semi-improved areas of the base, and not near the Turtle River, lagoons and grassland west of the airfield where threatened and species of concern are most likely to appear.

4.6.2.2 –Demolish 530 – Impacts to wildlife, vegetation, or other biological resources would be similar to those of 4.6.2.1-Construct Fire Station. Some trees were identified in the existing fire station (530) site and require removal. All trees and shrubs that need removal shall be either relocated on site if appropriate and/or replaced one for one.

4.6.2.3 –Demolish 606 - Impacts to wildlife, vegetation, or other biological resources would be similar to those of 4.6.2.1-Construct Fire Station.

4.6.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to wildlife, vegetation, or other biological resources.

4.6.3 Alternative 3 – Alternative Actions

4.6.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to wildlife, vegetation, or other biological resources from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.6.2.1-Construct Fire Station.

4.6.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with the wildlife, vegetation, or other biological resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.6.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with the wildlife, vegetation, or other biological resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.6.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to wildlife, vegetation, or other biological resources.

4.7 SOCIOECONOMIC RESOURCES

4.7.1 Alternative 1 - No Actions

4.7.1.1–Construct Fire Station - No new impacts to socioeconomic resources would occur from the No Action Alternative.

4.7.1.2 –Demolish 530 - No new impacts to socioeconomic resources would occur from the No Action Alternative.

4.7.1.3 –Demolish 606 - No new impacts to socioeconomic resources would occur from the No Action Alternative.

4.7.1.4 –Relocate HCA - No new impacts to socioeconomic resources would occur from the No Action Alternative.

4.7.2 Alternative 2 - Proposed Actions

4.7.2.1–Construct Fire Station at HCA – Socioeconomic resources would be impacted if implementation of the Proposed Action resulted in a change to the population, employment, or income potential of Grand Forks AFB and the Region of Interest (ROI). Implementing the Proposed Action would not result in impacts to the socioeconomic conditions of the ROI. The Proposed Action would not involve relocation of personnel; therefore, no change to the population or permanent workforce would be expected. The economic benefits would be local and short-term, such as construction jobs, purchase of construction materials and services and secondary retail sales.

The Proposed Action would not create permanent employment positions or reduce the current employment opportunities at Grand Forks AFB and the ROI; therefore, there would be no long-term changes to employment and income potential. The unemployment rate in the ROI is low (4.6 percent) and would not be impacted by the small increase in short-term employment opportunities provided by the Proposed Action. The demolition of existing buildings and construction of new facilities on Grand Forks AFB would cost approximately $13 million. There would be a small, positive impact to the total personal income in the ROI.

4.7.2.2 –Demolish 530 – Impacts to socioeconomic resources would be similar to those of 4.7.2.1-Construct Fire Station.

4.7.2.3 –Demolish 606 - Impacts to socioeconomic resources would be similar to those of 4.7.2.1-Construct Fire Station.

4.7.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to socioeconomic resources.

4.7.3 Alternative 3 – Alternative Actions

4.7.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to socioeconomic resources from construction of the fire station at the Prior Approved Fire Station Site would be

similar to those generated and described under the Proposed Action at 4.7.2.1-Construct Fire Station.

4.7.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with the socioeconomic resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.7.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with the socioeconomic resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.7.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to socioeconomic resources.

4.8 CULTURAL RESOURCES

4.8.1 Alternative 1 - No Actions

4.8.1.1–Construct Fire Station - No new impacts to cultural resources would occur from the No Action Alternative.

4.8.1.2 –Demolish 530 - No new impacts to cultural resources would occur from the No Action Alternative.

4.8.1.3 –Demolish 606 - No new impacts to cultural resources would occur from the No Action Alternative.

4.8.1.4 –Relocate HCA - No new impacts to cultural resources would occur from the No Action Alternative.

4.8.2 Alternative 2 - Proposed Actions

4.8.2.1–Construct Fire Station at HCA – The Proposed Action to construct a new fire station has little potential to impact underground archaeological resources. The location of the new fire station site is in a low probability area for archaeological resources. In the unlikely event any such artifacts are discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify Grand Forks AFB Cultural Resource Manager who would notify the State Historic Preservation Officer (SHPO).

Off-site clean fill shall be used to backfill the construction sites. Borrow is to be derived from an archeological-approved source of the State Historical Society of North Dakota. Aggregate

material (gravel, sand, silt, clay and boulder rip rap) from existing pits that are being used by a federal agency (e.g., NDDOT/FHWA) on projects are an approved source. Other alternative borrow sources that may be used are to be identified during consultation and review by SHPO.

4.8.2.2 –Demolish 530 – Impacts to cultural resources would be similar to those of 4.8.2.1-Construct Fire Station. The demolition of the existing fire station (530) constructed in 1957 required Section 106 consultations by the Base with the State Historical Society of North Dakota. State Historical Society of North Dakota correspondence with a "No Historic Properties Affected" determination for demolition of building 530 is included in Appendix C.

4.8.2.3 –Demolish 606 - Impacts to cultural resources would be similar to those of 4.8.2.1-Construct Fire Station. The demolition of the missile transfer building (606) constructed in 1966 required Section 106 consultations by the Base with the State Historical Society of North Dakota. Building 606 is a Cold War facility and potentially eligible for the National Register of Historic Places. SHPO correspondence with a "No Historic Properties Affected" determination for demolition of building 606 is included in Appendix C.

4.8.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to cultural resources.

4.8.3 Alternative 3 – Alternative Actions

4.8.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to cultural resources from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.8.2.1-Construct Fire Station.

4.8.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. This building is over the age of 50 years and is pending evaluation in an FY10 project under the NHPA, Section 110. Insignificant impacts associated with the cultural resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.8.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Renovation of this cold war era building would need consultation with SHPO. Insignificant impacts associated with cultural resources during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.8.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to cultural resources.

4.9 LAND USE

4.9.1 Alternative 1 - No Actions

4.9.1.1–Construct Fire Station - No new impacts to land use would occur from the No Action Alternative.

4.9.1.2 –Demolish 530 - No new impacts to land use would occur from the No Action Alternative.

4.9.1.3 –Demolish 606 - No new impacts to land use would occur from the No Action Alternative.

4.9.1.4 –Relocate HCA - No new impacts to land use would occur from the No Action Alternative.

4.9.2 Alternative 2 - Proposed Actions

4.9.2.1–Construct Fire Station at HCA –The proposed construction would not change the land use, since the new fire station is in the area designated for Airfield operations. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. Limited growth is anticipated at Grand Forks AFB with the mission change to the Unmanned Aircraft System (UAS). No population growth fluctuations are anticipated in the foreseeable future. The proposed action has no adverse impact to land use, but does have positive impact to land use with a more efficient location for the new fire station.

4.9.2.2 –Demolish 530 – Impacts to land use would be similar to those of 4.9.2.1-Construct Fire Station. Demolition of building 530 would provide additional real estate on the prime location adjacent to Bravo ramp.

4.9.2.3 –Demolish 606 - Impacts to land use would be similar to those of 4.9.2.1-Construct Fire Station. Demolition of building 606 would create safer traffic flow for fire response trucks.

4.9.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no change to land use designated for Airfield operations. Relocation of the proposed hazardous cargo area and removing the QD arcs from the mission area would free up prime real estate and alleviate mission impacts at the old HCA. The new HCA would remain airfield operations area with a QD arc limiting the use of the real estate along the north taxiway.

4.9.3 Alternative 3 – Alternative Actions

4.9.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to land use from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.9.2.1-Construct Fire Station. The land use designation at this corner is Industrial.

4.9.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. No impacts associated with land use during construction and demolition activities and operation of equipment would be anticipated with these renovation activities.

4.9.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. No impacts associated with land use during construction and demolition activities and operation of equipment would be anticipated with these renovation activities.

4.9.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to land use as the area remains Airfield operations.

4.10 TRANSPORTATION SYSTEMS

4.10.1 Alternative 1 - No Actions

4.10.1.1–Construct Fire Station - No new impacts to transportation systems would occur from the No Action Alternative.

4.10.1.2 –Demolish 530 - No new impacts to transportation systems would occur from the No Action Alternative.

4.10.1.3 –Demolish 606 - No new impacts to transportation systems would occur from the No Action Alternative.

4.10.1.4 –Relocate HCA - No new impacts to transportation systems would occur from the No Action Alternative.

4.10.2 Alternative 2 - Proposed Actions

4.10.2.1–Construct Fire Station at HCA - Implementing the Proposed Action would not result in long-term impacts to the transportation networks at Grand Forks AFB. Short-term impacts from implementing the Proposed Action could include increased traffic movement through Gate 2 (secondary gate) for the duration of construction and demolition activities. The movement of equipment and vehicles for construction and demolition activities would result in short-term impacts to traffic and circulation during peak hours at Grand Forks AFB. Many trips would occur outside of peak hours as well. The construction and demolition truck traffic would enter and exit Grand Forks AFB from Gate 2, which is used primarily for contractor truck access. Short-term congestion resulting from construction and demolition vehicle traffic would be insignificant.

The project areas are adjacent to Eielson Street, which provides direct access to Gate 2. The proposed location is located on 10th Ave and only a block west of Eielson St. This direct route

for construction and demolition vehicles and distribution of traffic would minimize any potential impact on transportation at Grand Forks AFB. In addition, the route to the landfill is direct along U.S. Highway 2 and is outside the City of Grand Forks. Short-term impacts to transportation in the local area would be expected and insignificant.

4.10.2.2 –Demolish 530 – Impacts to transportation systems would be similar to those of 4.10.2.1-Construct Fire Station. Building 530 is located on Steen Blvd and only a block west of Eielson St.

4.10.2.3 –Demolish 606 - Impacts to transportation systems would be similar to those of 4.10.2.1-Construct Fire Station. Building 606 is located on 10th Ave and only a block west of Eielson St.

4.10.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no change to transportation systems.

4.10.3 Alternative 3 – Alternative Actions

4.10.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to transportation systems from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.10.2.1-Construct Fire Station. The Prior Approved Fire Station Site is also near the north end of Eielson Street, along the north side of 10th Avenue.

4.10.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with transportation systems during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.10.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with transportation systems during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.10.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to transportation systems.

4.11 AIRSPACE/AIRFIELD OPERATIONS

4.11.1 Alternative 1 - No Actions

4.11.1.1–Construct Fire Station - No new impacts to airspace and airfield operations would occur from the No Action Alternative. Fire response vehicles would continue to fail the three minute response for aircraft emergencies.

4.11.1.2 –Demolish 530 - No new impacts to airspace and airfield operations would occur from the No Action Alternative.

4.11.1.3 –Demolish 606 - No new impacts to airspace and airfield operations would occur from the No Action Alternative.

4.11.1.4 –Relocate HCA - No new impacts to airspace and airfield operations would occur from the No Action Alternative.

4.11.2 Alternative 2 - Proposed Actions

4.11.2.1–Construct Fire Station at HCA - The Proposed Action would have a positive impact on aircraft safety and airspace compatibility. The new location better serves both the north and south ends of the flight line and provides airfield response times to be met. The location straddles the airfield fence line. The location of the existing fire station (530) is much closer to the south end than the north end; this has required the use of a secondary fire station (657). The location of the proposed fire station would allow the secondary fire station (657) to be used for an alternative purpose involving airfield operations.

4.11.2.2 –Demolish 530 – Impacts to airspace and airfield operations would be similar to those of 4.11.2.1-Construct Fire Station. Demolition of 530 would provide prime space for development along the Bravo ramp.

4.11.2.3 –Demolish 606 - Impacts to airspace and airfield operations would be similar to those of 4.11.2.1-Construct Fire Station. Demolition of 606 would free space along 10th Avenue and provide wider access to the flight line.

4.11.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment. Local airfield operation instructions will need development. When the proposed hazardous cargo area is in use, aircraft would have to back taxi as a result of hazardous cargo on the taxiway. This could be a challenge to the flying mission, if that situation ever were to occur. The proposed hazardous cargo area has a 1250 foot explosive quantity distance radius and is based on a C-5 aircraft template. Access for K loaders and other equipment used in loading/unloading aircraft parked on the taxiway is required. Airfield equipment for weather and communications within the 1250 foot radius have been reviewed and coordinated with Airfield Management. In the Proposed Hazardous Cargo Area, the 7 to 1 transitional slope would allow for a vertical height of approximately 22 feet in the center of the taxiway which would be under the tail height of either a C-17 or C-5. Taxiing aircraft are exempt from this requirement, but a parked aircraft may need either a temporary obstruction or operational waiver. The determination for the need of a temporary obstruction or operational waiver is being coordinated by Grand Forks AFB Civil Engineering with HQ AMC and AFCEE concurrently with this environmental assessment. The request to relocate the

hazardous cargo area shall state that the alternative will be to eliminate the hazardous cargo area, and if HQ AMC or AFCEE denies the request for waiver to operate the HCA on the north taxiway, the Alternative Action to eliminate the HCA will be chosen.

4.11.3 Alternative 3 – Alternative Actions

4.11.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to airspace and airfield operations from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.11.2.1-Construct Fire Station. However, the gate design system associated with this alternative is not conducive to meeting AF standard mandatory response times to aircraft fires. This location does not straddle the airfield flight line fence which is the preferred and common practice at Air Force bases.

4.11.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with airspace and airfield operations during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.11.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with airspace and airfield operations during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.11.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment. New operational guidelines must be written by airfield operations for parking transient aircraft containing hazardous cargo.

4.12 SAFETY AND OCCUPATIONAL HEALTH

4.12.1 Alternative 1 - No Actions

4.12.1.1–Construct Fire Station - No new impacts to safety and occupational health would occur from the No Action Alternative. Fire response vehicles would continue to fail the three minute response for aircraft emergencies.

4.12.1.2 –Demolish 530 - No new impacts to safety and occupational health would occur from the No Action Alternative.

4.12.1.3 –Demolish 606 - No new impacts to safety and occupational health would occur from the No Action Alternative.

4.12.1.4 –Relocate HCA - No new impacts to safety and occupational health would occur from the No Action Alternative.

4.12.2 Alternative 2 - Proposed Actions

4.12.2.1–Construct Fire Station at HCA - Participants in the demolition and construction are required to wear appropriate personnel protective equipment (PPE) for protection from exposure. Any excavation in this area needs to be reviewed by Bioenvironmental Engineer for worker protection. Implementation of the Proposed Action would result in long-term benefits to personnel health and safety by improving the living and working conditions in the new fire station facility. Provided best management practices are used, the Proposed Action would have positive impact on safety and occupational health.

4.12.2.2 –Demolish 530 – Impacts to safety and occupational health would be similar to those of 4.12.2.1-Construct Fire Station. The demolition of 530 would resolve potential health issues related to mercury, PCBs, asbestos, lead-based paint, mold and mice droppings.

4.12.2.3 –Demolish 606 - Impacts to safety and occupational health would be similar to those of 4.12.2.1-Construct Fire Station. The demolition of 606 would resolve potential health issues related to mercury, PCBs, asbestos, lead-based paint, mold and mice droppings.

4.12.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no change to safety and occupational health.

4.12.3 Alternative 3 – Alternative Actions

4.12.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to airspace and airfield operations from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.12.2.1-Construct Fire Station. However, the gate design system associated with this alternative is not conducive to meeting AF standard mandatory response times to aircraft fires.

4.12.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Removal of asbestos and lead base paint, mercury or PCBs must be performed by certified officials following state and federal solid and hazardous waste rules. Insignificant impacts associated with safety and occupational health during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.12.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Removal of asbestos and lead base paint, mercury or PCBs must be performed by certified officials following state and federal solid and hazardous waste rules. Insignificant impacts associated with safety and occupational health during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.12.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment. New operational guidelines must be written by airfield operations for parking transient aircraft containing hazardous cargo.

4.13 ENVIRONMENTAL MANAGEMENT

4.13.1 Alternative 1 - No Actions

4.13.1.1–Construct Fire Station - No new impacts to environmental management would occur from the No Action Alternative.

4.13.1.2 –Demolish 530 - No new impacts to environmental management would occur from the No Action Alternative.

4.13.1.3 –Demolish 606 - No new impacts to environmental management would occur from the No Action Alternative.

4.13.1.4 –Relocate HCA - No new impacts to environmental management would occur from the No Action Alternative.

4.13.2 Alternative 2 - Proposed Actions

4.13.2.1–Construct Fire Station at HCA – impacts to environmental management as follows:

IRP: Provided best management practices (BMP) are followed, the Proposed Action would not impact IRP Sites.

Geology: The Proposed Action would not impact geological resources. Soils present in the proposed area include the Gilby loam series. The elevation at this site is 893 feet.

Pesticides: No pesticides would be used during the construction of a new fire station.

4.13.2.2 –Demolish 530 – Impacts to environmental management would be similar to those of 4.13.2.1-Construct Fire Station.

4.13.2.3 –Demolish 606 - Impacts to environmental management would be similar to those of 4.13.2.1-Construct Fire Station.

4.13.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to environmental management.

4.13.3 Alternative 3 – Alternative Actions

4.13.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to environmental management from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.13.2.1-Construct Fire Station. However, the elevation at the prior approved fire station site is 890 feet. The location is adjacent to the landfill caps and the monitoring wells, so caution must be taken to not disturb these IRP sites.

4.13.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. Insignificant impacts associated with environmental management during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.13.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. Insignificant impacts associated with environmental management during construction and demolition activities and operation of equipment would be insignificant, temporary and cease at the completion of these renovation activities.

4.13.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment. New operational guidelines must be written by airfield operations for parking transient aircraft containing hazardous cargo.

4.14 ENVIRONMENTAL JUSTICE

4.14.1 Alternative 1 - No Actions

4.14.1.1–Construct Fire Station - No new impacts to environmental justice would occur from the No Action Alternative.

4.14.1.2 –Demolish 530 - No new impacts to environmental justice would occur from the No Action Alternative.

4.14.1.3 –Demolish 606 - No new impacts to environmental justice would occur from the No Action Alternative.

4.14.1.4 –Relocate HCA - No new impacts to environmental justice would occur from the No Action Alternative.

4.14.2 Alternative 2 - Proposed Actions

4.14.2.1–Construct Fire Station at HCA - EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. Implementing the Proposed Action would not result in environmental justice impacts since there are no low-income or minority populations or children within or immediately adjacent to the project area.

4.14.2.2 –Demolish 530 – Impacts to environmental justice would be similar to those of 4.14.2.1-Construct Fire Station.

4.14.2.3 –Demolish 606 - Impacts to environmental justice would be similar to those of 4.14.2.1-Construct Fire Station.

4.14.2.4 –Relocate HCA - The relocation of the hazardous cargo area involves no construction or demolition or movement of equipment and therefore poses no impact to environmental justice.

4.14.3 Alternative 3 – Alternative Actions

4.14.3.1-Construct Fire Station at corner of 10th Ave and Eielson St - Impacts to environmental justice from construction of the fire station at the Prior Approved Fire Station Site would be similar to those generated and described under the Proposed Action at 4.14.2.1-Construct Fire Station.

4.14.3.2 –Renovate 530 – Renovation and reuse of the building by another use, such as snow control equipment overflow storage, or transient alert vehicle and equipment storage, would be similar to the existing user. No impacts associated with environmental justice during construction and demolition activities and operation of equipment are anticipated during these renovation activities.

4.14.3.3 –Renovate 606 - Renovation and reuse of the building by another use, such as sand bag overflow storage, would be similar to the existing use. No impacts associated with environmental justice during construction and demolition activities and operation of equipment are anticipated during these renovation activities.

4.14.3.4–Eliminate HCA - The elimination of the hazardous cargo area involves no construction or demolition or movement of equipment and poses no impact to environmental justice.

4.15 INDIRECT AND CUMULATIVE IMPACTS

The short-term increases in air emissions and noise during construction and the impacts predicted for other resource areas, would not be significant when considered cumulatively with other ongoing and planned activities at Grand Forks AFB and nearby off-base areas. The cumulative impact of the Proposed Actions or Alternatives with other ongoing activities in the area would produce an increase in solid waste generation; however, the increase would be limited to the timeframe of each project.

The potential impacts to issues and resource areas of interest in this EA are short-term and insignificant. No resources were found to have a long-term effect resulting from implementation of the Proposed Action, except benefits to airfield operation and safety and loss of wetland. According to the United States Army Corps of Engineers, there is no need to mitigate for 5.36 acres of non-jurisdictional wetlands that would be affected by the proposed action to construct a new fire station at the site of the existing hazardous cargo area. The incremental contribution of impacts of the Proposed Actions, when considered in combination with other past, present and reasonably foreseeable future actions, would be negligible. The Proposed Actions would be concurrent with capital improvement projects specified in the General Plan that would be assessed in separate NEPA documents as necessary. Overall, the analysis for this EA indicates that the Proposed Actions for this fire station project would not result in, or contribute to, significant negative cumulative impacts to the resources in the region.

Planned improvements to infrastructure and facilities are included in the 5-year, 10-year and 20-year plans in accordance with the base comprehensive plan for Grand Forks AFB. Potential impacts to resources from implementation of projects in these plans, including demolition and construction activities, would be similar to the Proposed Actions in this EA and would revert to baseline conditions after completion of the individual projects. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the base. Limited growth is anticipated at Grand Forks AFB in the short-term. A significant mission change from KC135 refueling tankers to the Unmanned Aircraft System (UAS) with military population decline is anticipated in the foreseeable future of Grand Forks AFB. However, other associations with Air National Guard, Department of Homeland Security and other organizations involved in the UAS mission may prove to be healthy growth in the long-term future of Grand Forks AFB. The Air Force would construct and renovate appropriate facilities on GFAFB to launch, recover, maintain and support the UAS. The UAS beddown is being evaluated by an Environmental Impact Statement currently in progress.

The proposed demolitions would help meet the Air Force goal to reduce the Air Force physical plant by “twenty twenty”--- 20 percent by the year 2020. The Air Force would focus limited time and funding on the infrastructure needed to perform the mission, diverting resources away from excess, obsolete and under-utilized infrastructure.

4.16 UNAVIODABLE ADVERSE IMPACTS

Unavoidable adverse impacts are likely to occur if the No Action Alternative is implemented. If Building 530 and 606 are not demolished, unavoidable adverse impacts on resources such as hazardous waste, hazardous materials, and the economic burden of maintaining unused facilities would continue at current levels. In addition, unavoidable adverse impacts would increase for safety and occupational health as these Cold War era facilities continue to age and degrade, presenting safety issues for Grand Forks AFB personnel who perform duty in them.

The Proposed Action and Alternatives would involve the use of construction related vehicles and their short-term impacts on noise, air quality and traffic are unavoidable. These impacts would be short-term and insignificant in comparison to the long-term benefits of implementing the Proposed Actions or Alternatives.

In compliance with Executive Order 11990, *Protection of Wetlands*, May 24, 1977, the Air Force will seek to preserve the natural values of wetlands while carrying out its mission on both AF lands and non-AF lands. To the maximum extent practicable, the AF will avoid actions which would either destroy or adversely modify wetlands. Executive Order 11990 requires federal agencies to avoid to the extent practicable, adverse impacts associated with the destruction or modification of wetlands. The Order directs federal agencies to avoid new construction in wetlands unless there is no reasonable alternative and states that where wetlands cannot be avoided, the Proposed Action must include all practicable measures to minimize harm to wetlands. Since wetlands would be impacted by this project, a FONPA must be prepared and submitted for review and approval by the Director, Installation and Mission Support prior to implementing the impacting activity.

4.16.1 Wetland Avoidance

Wetlands account for 301 acres, or 5.8 percent, of the total land area that comprises Grand Forks AFB. Wetlands are predominantly located in undeveloped areas of the Base. They are profuse on the north and northeast side of the runway, southwest corner of the base, and southeast corner of the base. It is not possible to avoid wetland impacts completely and sufficiently address the purpose and need of the Proposed Action.

4.16.2 Minimize Wetland Impacts

The location of the proposed fire station, as proposed in this EA, would have affect on an estimated 5.36 acres of non-jurisdictional wetlands identified in the fire station wetland delineation summary report. The impacts would be predominantly from construction of the new fire station building, the associated pavements and a landscaped area surrounding the facility.

4.16.3 Wetland Compensation

There are non-jurisdictional wetlands in the immediate footprint of the construction area of the new fire station site. The 2004 wetland inventory revealed the presence of wetlands at the site of the proposed action. The wetland being affected by proposed activities is identified as FLE-17 PEM in the base GIS. It is 5.36 acres in size and described as a cattail emergent marsh type wetland located in a shallow basin surrounded by roadway. This wetland was created with the construction of the low area within the surrounding roadway of the HCA and no culverts to allow discharge of stormwater.

Natural Resource Manager Kristen Rundquist spoke with Ms Patsy Crooke of the Department of the United States Army Corps of Engineers North Dakota Regulatory office and Mr Bill Rafferty

contract administrator regarding construction of a new fire station at the proposed site on Grand Forks AFB (Corp project number NWO-2005-60039-BIS). The new fire station project will fill 5.36 acres of a wetland identified as FLE-17 on the installation. It was verified that wetland FLE-17 was ruled as an approved non-jurisdictional wetland in a letter dated May 23, 2005 from the North Dakota Regulatory office. Jurisdictional determinations are valid for 5 years, and as such is the ruling document regarding this wetland today. Because the wetland is non-jurisdictional, the United States Army Corps of Engineers does not require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404), and subsequently no mitigation for this specific project under this law is required.

Impacts to water resources from construction of the fire station at the Prior Approved Fire Station Site, also known as Alternative 3, and the demolition of the existing fire station (530) and the missile transfer building (606) would be similar to wetland loss generated under the Proposed Action; however the wetland impacted is jurisdictional rather than non-jurisdictional. The wetland mitigation plan would involve 0.03 acre of jurisdictional wetlands if this alternative site were chosen. Grand Forks AFB would mitigate the losses of jurisdictional wetlands at either a wetland mitigation bank or a suitable location on base. A formal mitigation plan would be developed during design of the construction and demolition. The FONSI and FONPA for this alternative were previously signed on Mar 15, 2006, by the Deputy Director, Installations and Mission Support of Air Mobility Command. There would be no action or impact to relocate the hazardous cargo area and no compensation necessary for wetland loss.

4.17 RELATIONSHIP BETWEEN USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Balancing the local short-term uses of the human environment with the maintenance and enhancement of long-term productivity is an important consideration in planning a project. For the purposes of this project, short-term uses of the environment include direct construction-related disturbances occurring over the projected 7-month timeframe (or slightly longer) for the project. Long-term uses of the human environment include those impacts occurring after construction activities area completed. If the project was not constructed, existing uses would likely continue.

The Proposed Actions and Alternatives would involve the use of previously developed areas. No croplands, pastureland, or wooded areas would be modified or affected as a result of implementing the Proposed Action and, consequently, productivity of the area would not be degraded. Wetland in the project area will be impacted. Short-term effects would be those associated with the demolition and construction activities to improve the facilities at Grand Forks AFB. Implementation of the Proposed Action would not sacrifice long-term productivity of the environment for short-term uses. The long-term enhancement of productivity would be those effects associated with operation and maintenance of the facilities after implementation of the Proposed Action. The project areas are located in previously disturbed areas and do not include valuable resources such as prime cropland; however it does impact a non-jurisdictional wetland. The new location of the fire station in a prime location along the flight line, centrally located to optimize response to any location on the runway, is a valuable enhancement to Grand

Forks AFB. It would enhance the base capability to meet USAF and Department of Defense airfield response time requirements of three minutes for aircraft emergencies.

4.18 IRREVERSIVLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the Proposed Actions, fuels, manpower, economic resources and other recovery materials related to the construction of a new fire station would be irreversibly lost. An irreversible effect would result from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time. An irretrievable effect would result from loss of non-jurisdictional wetlands that cannot be restored in the same location as a result of the Proposed Action.

Use of fill material and other construction materials and loss of vegetation for implementation of the Proposed Actions would represent an irreversible commitment of resources since the new facilities would be expected to remain useful for many years. Use of fuel for operation of construction and demolition equipment represents another irreversible commitment of resources in the Proposed Actions. The amount of fuel used for activities during the construction and demolition period would represent a negligible amount compared to the amount of fuel used daily for operation of Grand Forks AFB. Financial resources would also be committed to the demolition project. Other resource commitments would be neither irreversible nor irretrievable. A FONPA must be prepared and submitted for review and approval by the Director, Installation and Mission Support prior to implementing the impacting activity because of the loss of wetlands.

5.0 LIST OF PREPARERS

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Mr. Richard Marcellais, Chairman
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Three Affiliated Tribes
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7.0REFERENCES

Doolittle, J. A., C. A. Heidt, S. J. Larson, T. P. Ryterske, M. G. Ulmer and P. E. Wellman, Undated. Soil Survey of Grand Forks County, ND, U.S. Department of Agriculture, Soil Conservation Service.

Grand Forks AFB, 2008. Economic Impact Analysis Fiscal Year 2008. Home Page.

Hansen, Dan E. and Jack Kume, 1970. Genealogy and Ground Water Resources of Grand Forks County, Part I, Geology; ND Geological Survey Bulletin No. 53.

Job Service of ND, 2001. ND State Wage Survey. Home Page.

NDDH, 2001. Division of Air Quality, Asbestos Control Program. www.health.state.nd.us

NDDH, 1998. Annual Report, ND Air Quality Monitoring Data Summary.

ND Natural Heritage Inventory and ND Parks and Recreation Department. Grand Forks AFB, ND, Biological Survey. 1994.

ND State Data Center, No Date. Census ND 2000. Home Page.

Stoner, J. D., D. L. Lorenz, G. J. Wiche and R. M. Goldstein, 1993. Red River of the North Basin, Minnesota, ND and South Dakota; Water Resources Bulletin 29:4; pages 575-615.

Thurman, Albert and Richard Miller, 1976. Secrets of Noise Control. 2nd ed. Atlanta: Fairmont Press.

US AFI 32-7061, as promulgated in 32 C.F.R. 989, EIAP

USAF, 2009. Base General Plan on-line web site.

USAF, 2008. Bird Airstrike Hazard Plan.

USAF, 2008. Grand Forks AFB Installation Hazardous Waste Management Plan.

USAF, 1999. Final EIS for Minuteman III Missile System Dismantlement at Grand Forks AFB, ND.

USAF, 2005. Grand Forks AFB Integrated Natural Resources Management Plan.

USAF, 2008. Management Action Plan for Grand Forks AFB.

USAF, 2007. Grand Forks AFB Final Emissions Survey Report, March, 2008.

USAF, 1995. AICUZ Study at Grand Forks AFB, ND.

US Army, 1978. Construction Engineer Research Laboratory (CERL). Construction site Noise Control, Cost-Benefit Estimation Technical Background.

US Bureau of the Census, 2002. 2000 Census of Population and Housing (population and demographic data.

APPENDIX A
AF 813
Request for Environmental Impact Analysis

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS: 2009-116

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

1. TO *(Environmental Planning Function)*	2. FROM *(Proponent organization and functional address symbol)*	2a. TELEPHONE NO.
319 CES/CEVA	319 CES/CERR, Real Property	701-747-4803

3. TITLE OF PROPOSED ACTION

Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501).

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

Existing fire station is 1957-version, outdated, inefficient. Siting at old Hazardous Cargo pad will add quicker response time, improved security, higher elevation, greater security with 24/7 camera monitoring, less cost than 2003 proposed site.

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

Construct new fire station at site of old Hazardous Cargo Area. Demolish building 530 and 606, excavation, removal of concrete slabs and foundations, disposal of all debris off site, backfill, grading, seeding and final site restoration. See reverse.

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE
MARY C. GILTNER, YF-03 Deputy Base Civil Engineer	Mary C. Giltner	5-20-09

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.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☐	☒	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☐	☒	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☐	☒	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☐	☒	☐
13. CULTURAL RESOURCES *(Native American burial sites, archaeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☐ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR
☒ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE
WAYNE A. KOOP, R.E.M., FY-02 Environmental Management Flight Chief		MAY 20 2009

4.0 Purpose and Need for Action, 2009-116, Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501)

4.1 Purpose of the Action (mission objectives-who proposes to do what, where, when): Relocate the Hazardous Cargo Area and construct new fire station in this site. Demolish buildings 530 and 606 . The work includes construction of modern efficient fire station and demolition of existing fire station and nearby missile transfer building, excavation, removal of concrete slab and foundation, disposal of all debris off site, backfill, grading, seeding and final site restoration.

4.2 Need for the Action (why this action is desired or required-why here, why now): In early 2009, new information pertaining to the proposed 2006 location at the corner of 10th Ave and Eielson St came to light. Because of AT/FP requirements, the 2006 siting will need a new automatic flight line gate barrier with a breakaway fence, new road to allow separate access to CATM range, re-siting of over 1000 feet flight line fence, higher elevation construction site with fill and foundation materials to compensate for 3 ft difference in elevation, new pavement to flight line taxiway to support heavier weight of large crash vehicles.

4.3 Objectives for the Action (what goal do you wish to accomplish): Construct the fire station along the flight line for efficient response to airfield. Eliminate costly gate, fence and road construction in the 2006 site at the corner of 10th Ave and Eielson St. Eliminate the need for a secondary fire station to serve the north end of the airfield.

4.4 Related EISs/EAs and other documents (similar projects in the past): EAs to Construct new fire station, RCS# 2003-012, signed 2 Oct 03; and RCS # 2005-177, signed 15 Mar 06. CATEX actions for renovation and repairs of 530 and 606 in past years.

4.5 Decision that must be made: Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501)

4.6 Applicable Regulatory Requirements and Required Coordination-- required permits, licenses, entitlements: Applicable regulatory requirements and required coordination before and during construction include a Work Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan, and Erosion and Sediment Control Plan to the CEV Water Program Manager; a Spill Control Plan and Waste Disposal Plan to the CEV Pollution Prevention Manager; and copies of all plans to the Contracting Officer.

5.0 Description of Proposed Action and Alternatives

5.1 Description of the proposed action (in brief, introduction): Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501)

5.2 Selection criteria for Alternatives

5.2.1 Minimum mission requirements: effectiveness, timeliness, cost effective, legality, safety, efficiency, force protection.

5.2.2 Minimum environmental standards : noise, air, water, safety, HW, vegetation, cultural, geology, soils, socioeconomic.

5.3 Alternatives Considered but Eliminated from Detailed Study: None.

5.4 Description of proposed alternatives

5.4.1 No-action alternative: The no action alternative would be to leave the fire station as an undersized, unsafe, inefficient maze layout with inadequate vehicle-to-stall clearance. Facility 606 is old and will remain vacant. The base will continue to expend maintenance and utility funds to maintain the facilities to ensure a minimal impact to safety. Fire department will continue to fail airfield response times.

5.4.2 Proposed Action: Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501) Cap utilities as needed. Recycle the electronics and metals. Haul debris off base. Site restoration of each area shall include required backfill, final grading and sodding. Mitigate wetlands for loss of 5.3 acreage at this site.

5.4.3 Another Reasonable Action Alternative: Construct the fire station in the location originally assessed in 2006. Reutilize or renovate or demolish facility 606 .

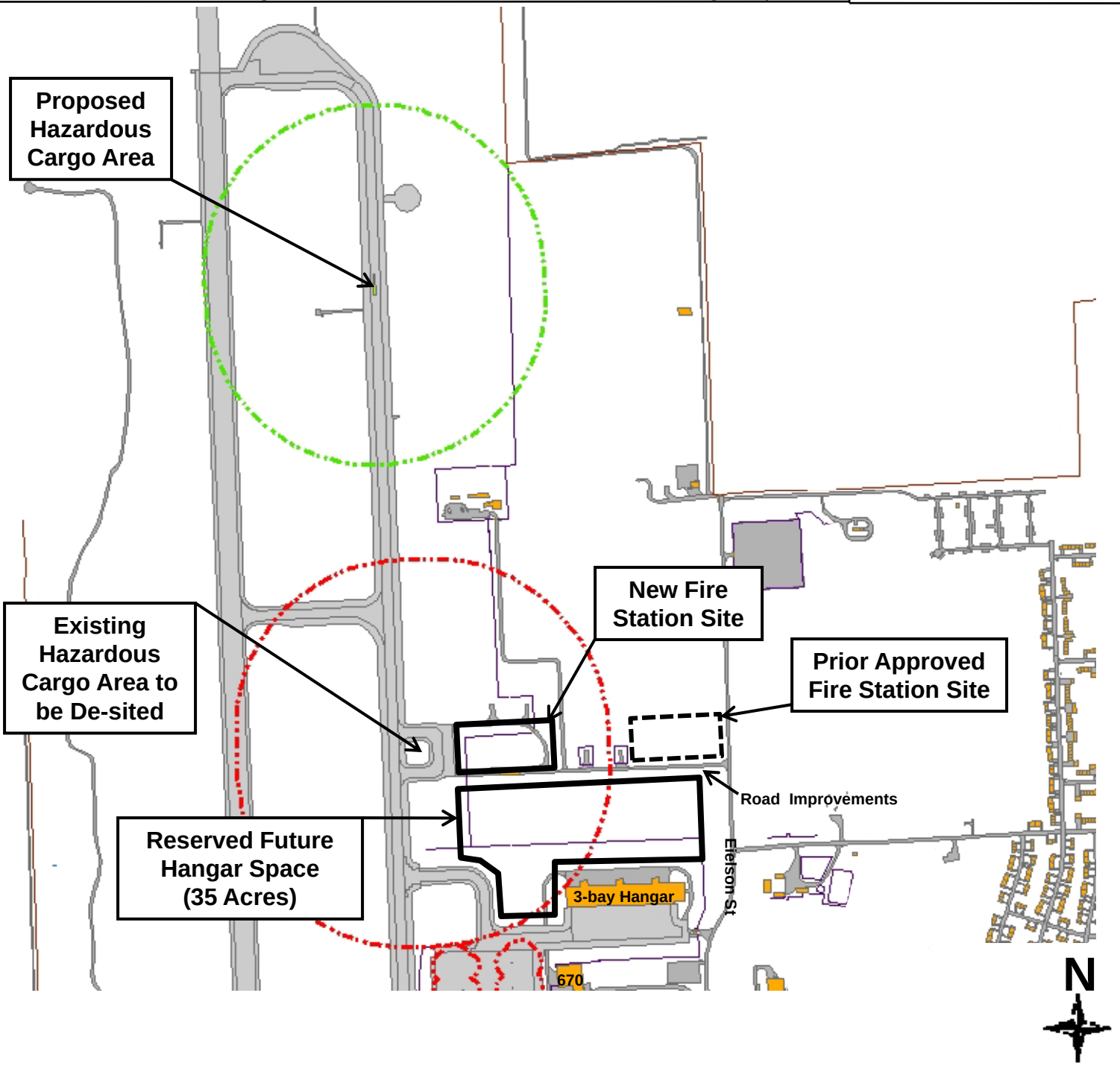
5.5 Description of Past and Reasonably Foreseeable Future Actions Relevant to Cumulative Impacts: There are several other construction and demolition projects occurring on Grand Forks AFB in the same time frame. These projects are addressed under separate NEPA documents.

5.6 Recommendation of preferred alternative: Construct new fire station and demolish existing fire station (530) and missile transfer building (606) (JFSD200501)

1. COMPONENT	FY 2009 MILITARY CONSTRUCTION DATA	2. DATE
AF (AMC)		04 Feb 09

3. INSTALLATION AND LOCATION
GRAND FORKS AFB, NORTH DAKOTA

4. PROJECT TITLE	5. PROJECT NUMBER
Relocate Hazardous Cargo Area, New Fire Station, and Future Hangar Space	JFSD200501



FACILITY BOARD APPROVAL

DATE

DD FORM 1391c

COMPUTER GENERATED FORM

APPENDIX B
Public Notice of Availability

PUBLIC NOTICE
Availability of Environmental Assessment and Finding of No Significant Impact / Finding of No Practicable Alternative for Construction of Fire Station Demolition of Buildings 530 and 606 Grand Forks Air Force Base, North Dakota

The Air Force has conducted an assessment of the potential environmental and socioeconomic effects associated with construction of a new fire station and demolition of the existing fire station (530) and the missile transfer building (606) at Grand Forks Air Force Base.

The purpose of the proposed new fire station is to consolidate fire protection activities for U.S. Air Force (USAF) aircraft and facilities, improve firefighting response time, and improve morale and retention of military and civilian firefighters at Grand Forks AFB. A modern, efficient fire station is needed to house all authorized airfield and base firefighting vehicles, equipment, and on-duty firefighters living in the fire station. The project will include mechanical demolition of buildings 530 and 606 and pavement which are no longer needed; grading of the area for erosion and drainage control; and revegetation of the area to suitable grass.

Based on the environmental assessment, it was determined that the proposed construction and demolition actions would result in no significant impact to the quality of the natural or human environment. Therefore, an environmental impact statement is not required and a finding of no significant impact (FONSI) has been prepared. In accordance with Air Force regulations, a finding of no practical alternative (FONPA) has also been prepared for minor wetland impacts which are unavoidable. A combined FONSI and FONPA document was prepared to minimize paperwork.

The draft EA and FONSI/FONPA are available for public review at the Grand Forks Public Library, 2110 Library Circle, Grand Forks, ND 58201, and at the Grand Forks AFB Library, 511 Holzapple Street, Grand Forks AFB, ND 58205. It can be viewed on the web site http://www.grandforks.af.mil/library/.

If you have any questions or comments, please contact the Public Affairs Office, 319 ARW/PA, 375 Steen Blvd., Grand Forks AFB, North Dakota 58205-6434; telephone (701) 747-7072; or e-mail PA@grandforks.af.mil. Comments shall be accepted until July 20, 2009.

(June 20 & 23, 2009)

Publication Fee $ 79.38

63 lines

ELAINE FAWCETT
NOTARY PUBLIC
STATE OF NORTH DAKOTA
My Commission Expires: Feb. 7, 2013

Received 1 July 09

7096

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA }
COUNTY OF GRAND FORKS } SS.

Vicky Straub of said State and County being first duly sworn, on oath says:

That {she / he} is { a representative of the GRAND FORKS HERALD, INC.,

publisher of the Grand Forks Herald, Morning Edition, a daily newspaper of general circulation, printed and published in the City of Grand Forks, in said County and State, and has been during the time hereinafter mentioned, and that the advertisement of Public Notice Availability & Environmental a printed copy of which is hereto annexed, was printed and published in every copy of the following issues of said newspaper, for a period of 2 time (s) to wit:

6/20	Yr. 09		Yr.
6/23	Yr. 09		Yr.
	Yr.		Yr.
	Yr.		Yr.

and that the full amount of the fee for the publication of the annexed notice inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever and the amount of said fee is $ 79.38 ;

That said newspaper was, at the time of the aforesaid publication, the duly elected and qualified Official Newspaper within said County, and qualified in accordance with the law of the State of North Dakota to do legal printing in said County and State.

Subscribed and sworn to before me this 29 day of June A.D. 09

Elaine Fawcett
Notary Public, Grand Forks, ND

APPENDIX C
Interagency Correspondence

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

June 22, 2009

Diane Strom
EIAP
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434

ND SHPO 97-0527CA: Construct a Fire Station and Demolish existing buildings 530 and 606, Grand Forks Air Force Base, North Dakota

Dear Ms. Strom,

We reviewed ND SHPO 97-0527CA: Construct a Fire Station and Demolish existing buildings 530 and 606, Grand Forks Air Force Base, North Dakota and concur with a "No Historic Properties Affected" determination, provided the project is of the nature specified and takes place in the legal description outlined and mapped in your e-mail.

If you have any questions please contact Susan Quinnell, at (701) 328-3576 or squinnell@nd.gov

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)

North Dakota Heritage Center • 612 East Boulevard Avenue, Bismarck, ND 58505-0830 • Phone 701-328-2666 • Fax: 701-328-3710
Email: histsoc@state.nd.us • Web site: http://www.nd.gov/hist• TTY: 1-800-366-6888

Received 24 June 09

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

June 22, 2009

Ms. Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEVA
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

Re: Draft EA: Construction of New Fire Station
and Demolition of Buildings 530 and 606
Grand Forks Air Force Base, Grand Forks County

Dear Ms. Strom:

This department has reviewed the information concerning the above-referenced project submitted under date of June 16, 2009, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.

2. Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the Department's website or by calling the Division of Water Quality (701-328-5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

3. All necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes. Any facility that is to be renovated or demolished must be inspected for asbestos. Notification of the Department's Division of Air Quality (701-328-5188) is required before any demolition. Removal of any friable asbestos-containing material must be accomplished in accordance with section 33-15-13-02 of the North Dakota air pollution control rules.

Received 24 June 09

4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

5. Many buildings constructed prior to 1978 have interior and exterior surfaces coated with lead-based paint. The Office of Housing and Urban Development (HUD), as well as other Federal Housing Authorities, have implemented requirements for reducing exposure to lead from lead-based paint. If the building is under the control of a Federal Agency, these materials must be handled according to their requirements which may include the use of properly trained individuals for removal and disposal. If the building is not under the control of a Federal Agency, the lead-based paint should be properly handled to reduce or prevent exposing workers and building occupants to lead.

6. All solid waste materials must be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are strongly encouraged. As appropriate, segregation of inert waste from non-inert waste can generally reduce the cost of waste management. Further information on waste management and recycling is available from the Department's Division of Waste Management at (701) 328-5166.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc

"Strom, Diane Civ USAF AMC 319 CES/CEVA" <Diane.Strom@grandforks.af.mil>
06/16/2009 02:51 PM

To <carole.mcmahon@gfcounty.com>, <info@mhanation.com>, <brady@chippewacouncil.com>, <dglatt@nd.gov>, <tdwelle@nd.gov>, <ckramer@nd.gov>,
cc
bcc
Subject Proposed Construction of Fire Station and Demolition of 530 and 606 at Grand Forks AFB ND

Enclosed for your review and comments is the Environmental Assessment to Construct a Fire Station and Demolish existing buildings 530 and 606 at Grand Forks Air Force Base, North Dakota. The Fire Station had initially been sited at the corner of Eielson St. and 10th Ave. and an EA/FONSI/FONPA signed and dated in 2006. However, the siting has been changed to a location closer to the flightline, and another EA with FONSI/FONPA is herewith enclosed.

To ensure that all social, economic and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed project pursuant to Section 102(2) (D) (iv) of the National Environmental Policy Act of 1969, as amended. We are particularly interested in any property which your department may own or have an interest in or would be adjacent to the proposed improvement at Grand Forks AFB. We would also appreciate being made aware of any proposed developments your department may be contemplating in the area under consideration for the proposed construction and demolition. Any information that might help us in our studies would be appreciated.

Information or comments relating to environmental or other matters that you might furnish will be used in determining if this project is significant.

It is requested that any comments or information be forwarded to our office on or before **July 16, 2009**.

If further information is desired regarding the proposed action, please contact me at the following numbers.

<<...>>

Sincerely,
Diane M. Strom
Environmental Impact Analysis Program (EIAP)
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434
Phone (701) 747-6394.
Fax (701) 747-6155.

Email diane.strom@grandforks.af.mil

U.S. FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
ND FIELD OFFICE

Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.

7-1-09 Jeffrey K. Towner
Date Jeffrey K. Towner
Field Supervisor

Recd- JUL 7 2009

North Dakota
DEPARTMENT OF COMMERCE

Community Services Economic Development & Finance Tourism Workforce Development

June 17, 2009

Diane M. Strom
Dept. of the Air Force
319 CES/CEVA
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

"Letter of Clearance" In Conformance with the North Dakota Federal Program Review System - State Application Identifier No.: ND090617-0344

Dear Ms. Strom:

SUBJECT: Environmental Assessment to Construct a Fire Station and Demolish Bldgs. 530 and 606 at Grand Forks AFB

The above referenced draft assessment has been reviewed through the North Dakota Federal Program Review Process. As a result of the review, clearance is given to the project only with respect to this consultation process.

If the proposed project changes in duration, scope, description, budget, location or area of impact, from the project description submitted for review, then it is necessary to submit a copy of the completed application to this office for further review.

We also request the opportunity for complete review of applications for renewal or continuation grants within one year after the date of this letter.

Please use the above SAI number for reference to the above project with this office. Your continued cooperation in the review process is much appreciated.

Sincerely,

James R. Boyd
Manager of Governmental Services
Division of Community Services

bb

Memo of Telephone Record 7/30/09

I spoke with Ms Patsy Crooke of the Department of the Army Corps of Engineers North Dakota Regulatory office and Mr Bill Rafferty contract administrator regarding construction of a new fire station on Grand Forks AFB (Corp project number NWO-2005-60039-BIS). The new fire station project will fill 5.3 acres of a wetland identified as FLE-17 on the installation. It was verified that wetland FLE-17 was ruled as an approved nonjurisdictional wetland in a letter dated May 23, 2005 from the North Dakota Regulatory office. Jurisdictional determinations are valid for 5 years, and as such is the ruling document regarding this wetland today. Because the wetland is nonjurisdictional, the Army Corps does not require a Section 404 application for a permit under the Clean Water Act (33USC 401, Section 10; 1413, Section 404), and subsequently no mitigation for this specific project under this law is required.

//Signed//
Kristen Rundquist

Landman, Kaitlin M Civ USAF AMC 319 CES/CEV

From: Rundquist, Kristen A Civ USAF AMC 319 CES/CEAN
Sent: Thursday, July 30, 2009 2:32 PM
To: Landman, Kaitlin M Civ USAF AMC 319 CES/CEV
Subject: Fire Station Wetlands - ND Regulatory Office Comments
Attachments: Memo for the Record-Wetland FLE17 - Firestation.pdf
Signed By: kristen.rundquist@grandforks.af.mil

Kaitlin,
Please place in our computer location to file this email string and the attachment in 56A.

Thank you,
Kristen

-----Original Message-----
From: Crooke, Patsy J NWO [mailto:Patsy.J.Crooke@usace.army.mil]
Sent: Thursday, July 30, 2009 2:17 PM
To: Rundquist, Kristen A Civ USAF AMC 319 CES/CEAN
Subject: RE: Fire Station Wetland -- New Site -- Grand Forks AFB

Kristen:
I concur with the content of the memo. If you want to add our Department of the Army (DA) project number that we assigned the project when we made the determination, it is NWO-2005-60039-BIS.
Thank you and good luck with the project!

Patsy

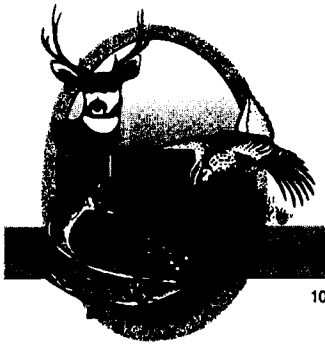
Patsy Crooke
Project Manager
USACE/NDRO
1513 S 12th Street
Bismarck, ND 58504
(701) 255-0015
(701) 255-4917 (Fax)
patsy.j.crooke@usace.army.mil

-----Original Message-----
From: Rundquist, Kristen A Civ USAF AMC 319 CES/CEAN
[mailto:Kristen.Rundquist@grandforks.af.mil]
Sent: Thursday, July 30, 2009 2:09 PM
To: Crooke, Patsy J NWO
Subject: Fire Station Wetland -- New Site -- Grand Forks AFB

Hello Patsy,

Per our conversation this afternoon, I drafted a memo for record. Could you please review it, and reply with your consent for our records?

If you have any questions, please let me know.



"VARIETY IN HUNTING AND FISHING"

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

July 13, 2009

Diane M. Strom
Environmental Impact Analysis Program (EIAP)
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB, ND 58205-6434

Dear Ms. Strom:

RE: Proposed Construction of Fire Station and Demolition of Buildings 530 & 606
Grand Forks Air Force Base, North Dakota

The North Dakota Game and Fish Department has reviewed this project for wildlife concerns. We do not believe it will have any significant adverse effects on wildlife or wildlife habitat, including endangered species, provided any unavoidable wetland impacts are mitigated in kind on an acre-for-acre basis.

Sincerely,

Steve Dyke

(for) Michael G. McKenna
Chief
Conservation & Communication Division

js

DEPARTMENT OF THE AIR FORCE
319TH CIVIL ENGINEER SQUADRON
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

319 CES/CD
525 Tuskegee Airmen Blvd
Grand Forks AFB, ND 58205-6434

AUG 3 2009

Michael G. McKenna, Chief of Conservation and Communication
North Dakota Game and Fish Department
100 North Bismarck Expressway
Bismarck, ND 58501-5095

Dear Mr McKenna,

Thank you for your July 13, 2009 letter regarding the environmental assessment of our proposed project, "Fire Station Construction and Demolition of Buildings 530 and 606." You commented that no significant adverse effects on wildlife or wildlife habitat, including endangered species, would result from our project provided any unavoidable wetland impacts are mitigated in kind on an acre-for-acre basis.

The specific 5.36 acre wetland affected by our proposed actions is a nonjurisdictional wetland, and as such the North Dakota Army Corps of Engineers regulatory office does not require mitigation for this unavoidable wetland loss. Unfortunately, fiscal policy does not allow us to mitigate wetland loss associated with this construction, and therefore will not be accomplished.

Should you have any questions or comments, please provide them to us. Our POC is Ms Kristen Rundquist, at 701-747-4774 or kristen.rundquist@grandforks.af.mil.

MARY C GILTNER
Deputy Base Civil Engineer

STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE		TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1	JA	Coord	Col Losco, 16 Sep 2009	6			
2	PA	Coord	Mr. Tony Joyner, 17 Sep 2009	7			
3	A7E	Coord	Maj, USAF 18Sep09	8			
4	A7	Sign		9			
5				10			

SURNAME OF ACTION OFFICER AND GRADE	SYMBOL	PHONE	TYPIST'S INITIALS	SUSPENSE DATE
Mr. Mostafa Masseoud, YD-02	HQ AMC/A7PI	229-0911		

SUBJECT	DATE
Construction of a New Fire Station at Grand Forks AFB ND	20090918

SUMMARY

1. PURPOSE: The purpose of this SSS is to request HQ AMC/A7 sign the finding of no significant impact (FONSI) and finding of no practicable alternative (FONPA) at Tab 1 for the Construction of a New Fire Station at Grand Forks AFB ND.

2. SUMMARY/BACKGROUND: The Air Force Environmental Impact Analysis Process (EIAP), Title 32 Code of Federal Regulations (CFR) Part 989.14(a), directs AF to prepare an environmental assessment (EA) at Tab 2 that must lead to either a FONSI, a decision to prepare an environmental impact statement (EIS), or a decision to take no action on the proposed action (PA).

3. PA is to construct a new consolidated crash/structural fire station, to provide an efficient modern fire station. PA is needed to improve fire fighting capability, operations efficiency levels and safety.

4. VIEWS OF OTHERS: HQ AMC/JA and AFLOA/JACE reviewed the FONSI/FONPA and find the package legally sufficient.

5. RECOMMENDATION: HQ AMC/A7 signs the FONSI/FONPA at Tab 1.

MARTIN P. BUNCHER, YF-03, P.E.
Deputy Chief, Programs Division
Installations & Mission Support

2 Tabs
1. FONSI/FONPA
2. EA