FINDING OF NO SIGNIFICANT IMPACT
FOR
BUILDING ADDITION

AGENCY: Department of the Air Force

PROPOSED ACTION (Building Addition): Under this alternative, Grand Forks AFB would construct an addition on the east side of building 233 that would match the entrance addition on the west side. The addition would house a new mechanical room that would be an addition to the small mechanical room that already exists on that side of the building. The existing air handler and condenser would be replaced and installed in the mechanical room. The addition would be approximately 15 feet by 15 feet.

ALTERNATIVES CONSIDERED: Under the alternative action, the mechanical room addition would be placed on the north side of the building. This alternative would create two mechanical rooms on building 233. The no action alternative would not construct an addition to the mechanical room on building 233. Personnel would continue to perform maintenance, utilizing a ladder, in the building's attic. Dust fibers would continue to enter the duct work of the building causing problems for the commander.

ENVIRONMENTAL CONSEQUENCES:
Air Quality - Air Quality is considered good and the area is in attainment for all criteria pollutants. 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) would be implemented to reduce the amount of these emissions.

Noise - Short-term operation of heavy equipment in the construction area would generate additional noise. The increase in noise from construction activities would be negligible.

Wastes, Hazardous Materials, and Stored Fuels - The increase in hazardous and solid wastes from construction related activities would be minimal and temporary. Construction debris would be disposed of in approved location, such as the Grand Forks Municipal Landfill.

Water Resources – Provided BMPs are followed, there would be minimal impacts on ground water, surface water, and water quality. The proposed action would have no impact on waste water or wetlands.

Biological Resources – BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species.

Socioeconomic Resources - This action would have a minor positive effect on the local economy. Secondary retail purchases would make an additional contribution to the local communities. The
This Final EA has been prepared in accordance with the National Environmental Policy Act, and assesses the potential environmental impacts of constructing an addition to building 233 for a mechanical room. 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 construction activities along with other concurrent actions at Grand Forks AFB and the surrounding area.
implementation of the proposed action, therefore, would provide a short-term, beneficial impact to local contractors and retailers during the construction phase of the project.

Cultural Resources - The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer.

Land Use – The proposed action would not impact land use.

Transportation Systems – The proposed action would have minimal adverse impact to transportation systems on base due to vehicles traveling to and from the construction site.

Airspace/Airfield Operations - The proposed action would not impact aircraft safety or airspace compatibility.

Safety and Occupational Health – The proposed impact would have beneficial impact as maintenance personnel would no longer be required to utilize a ladder to perform maintenance.

Environmental Management – The proposed action would not impact IRP Sites. BMPs would be implemented to prevent erosion. No pesticides would be used as part of this project.

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 are no minority or low-income populations in the area of the proposed action or alternatives, and, thus, there would be no disproportionately high or adverse impact on such populations.

No adverse environmental impact to any of the areas identified by the AF Form 813 is expected by the proposed action, Construct Building Addition.

CONCLUSION: Based on the Environmental Assessment performed for Construct Building Addition, no significant environmental impact is anticipated from the proposed action. Based upon this finding, an Environmental Impact Statement is not required for this action. This document and the supporting AF Form 813 fulfill the requirements of the National Environmental Policy Act (NEPA), the Council of Environmental Quality (CEQ) regulations implementing NEPA, and Air Force Instruction 32-7061, which implements the CEQ regulations.

WAYNE A. KOOP, R.E.M., GM-13
Environmental Management Flight Chief

Date: 1 Apr 04
Final

Environmental Assessment

BUILDING ADDITION
Building 233

At
Grand Forks AFB, North Dakota

22 Mar 04
Agency: United States Air Force (USAF)

Action: The action proposes to construct a building addition to building 233 at Grand Forks Air Force Base (AFB), North Dakota.

Contacts: 319 CES/CEVA
525 Tuskegee Airmen Boulevard (Blvd)
Grand Forks AFB, ND 58205

Designation: Final Environmental Assessment (EA)

Abstract: This Final EA has been prepared in accordance with the National Environmental Policy Act, and assesses the potential environmental impacts of constructing an addition to building 233 for a mechanical room at Grand Forks AFB, located in Grand Forks County, North Dakota. 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 construction activities along with other concurrent actions at Grand Forks AFB and the surrounding area.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>PURPOSE OF AND NEED FOR THE PROPOSED ACTION</td>
<td>15</td>
</tr>
<tr>
<td>1.1</td>
<td>Introduction</td>
<td>15</td>
</tr>
<tr>
<td>1.2</td>
<td>Need For The Action</td>
<td>15</td>
</tr>
<tr>
<td>1.3</td>
<td>Objectives For The Action</td>
<td>15</td>
</tr>
<tr>
<td>1.4</td>
<td>Scope of EA</td>
<td>16</td>
</tr>
<tr>
<td>1.5</td>
<td>Decision(s) That Must Be Made</td>
<td>16</td>
</tr>
<tr>
<td>1.6</td>
<td>Applicable Regulatory Requirements And Required Coordination.</td>
<td>16</td>
</tr>
<tr>
<td>2.0</td>
<td>DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES</td>
<td>19</td>
</tr>
<tr>
<td>2.1</td>
<td>Introduction</td>
<td>19</td>
</tr>
<tr>
<td>2.2</td>
<td>Selection Criteria For Alternatives</td>
<td>19</td>
</tr>
<tr>
<td>2.3</td>
<td>Alternatives Considered But Eliminated From Detailed Study</td>
<td>19</td>
</tr>
<tr>
<td>2.4</td>
<td>Description Of Proposed Alternatives</td>
<td>19</td>
</tr>
<tr>
<td>2.4.1</td>
<td>Alternative 1 (Proposed Action)</td>
<td>19</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Alternative 2</td>
<td>20</td>
</tr>
<tr>
<td>2.4.3</td>
<td>Alternative 3 (No Action Alternative)</td>
<td>20</td>
</tr>
<tr>
<td>2.5</td>
<td>Description of Past, Present, and Reasonably Foreseeable Future Actions Relevant To Cumulative Impacts</td>
<td>20</td>
</tr>
<tr>
<td>2.6</td>
<td>Summary Comparison Of The Effects Of All Alternatives</td>
<td>20</td>
</tr>
<tr>
<td>2.7</td>
<td>Identification Of Preferred Alternative</td>
<td>21</td>
</tr>
<tr>
<td>3.0</td>
<td>AFFECTED ENVIRONMENT</td>
<td>22</td>
</tr>
<tr>
<td>3.1</td>
<td>Introduction</td>
<td>22</td>
</tr>
<tr>
<td>3.2</td>
<td>Air Quality</td>
<td>22</td>
</tr>
<tr>
<td>3.3</td>
<td>Noise</td>
<td>24</td>
</tr>
<tr>
<td>3.4</td>
<td>Wastes, Hazardous Materials, and Stored Fuels</td>
<td>26</td>
</tr>
<tr>
<td>3.5</td>
<td>Water Resources</td>
<td>27</td>
</tr>
<tr>
<td>3.5.1</td>
<td>Ground Water</td>
<td>27</td>
</tr>
<tr>
<td>3.5.2</td>
<td>Surface Water</td>
<td>27</td>
</tr>
<tr>
<td>3.5.3</td>
<td>Waste Water</td>
<td>28</td>
</tr>
<tr>
<td>3.5.4</td>
<td>Water Quality</td>
<td>28</td>
</tr>
<tr>
<td>3.5.5</td>
<td>Wetlands</td>
<td>29</td>
</tr>
<tr>
<td>3.6</td>
<td>Biological Resources</td>
<td>29</td>
</tr>
<tr>
<td>3.6.1</td>
<td>Vegetation</td>
<td>29</td>
</tr>
<tr>
<td>3.6.2</td>
<td>Wildlife</td>
<td>30</td>
</tr>
<tr>
<td>3.6.3</td>
<td>Threatened And Endangered Species</td>
<td>30</td>
</tr>
<tr>
<td>3.7</td>
<td>Socioeconomic Resources</td>
<td>30</td>
</tr>
<tr>
<td>3.8</td>
<td>Cultural Resources</td>
<td>31</td>
</tr>
<tr>
<td>3.9</td>
<td>Land Use</td>
<td>31</td>
</tr>
<tr>
<td>3.10</td>
<td>Transportation Systems</td>
<td>31</td>
</tr>
</tbody>
</table>
3.11 Airspace/Airfield Operations ............................................ 32
3.11.1 Aircraft Safety .................................................... 32
3.11.2 Airspace Compatibility .......................................... 32
3.12 Safety and Occupational Health ...................................... 32
3.13 Environmental Management .......................................... 33
3.13.1 Installation Restoration Program .............................. 33
3.13.2 Geological Resources ........................................... 33
3.13.2.1 Physiography and Topography ............................ 33
3.13.2.2 Soil Type Condition ........................................ 34
3.13.3 Pesticide Management .......................................... 34
3.14 Environmental Justice ................................................ 34

4.0 ENVIRONMENTAL CONSEQUENCES ...................................... 35
4.1 Introduction ................................................................... 35
4.2 Air Quality ..................................................................... 35
4.2.1 Alternative 1 (Proposed Action) ................................ 35
4.2.2 Alternative 2 .......................................................... 35
4.2.3 Alternative 3 (No Action) .......................................... 35
4.3 Noise ........................................................................... 35
4.3.1 Alternative 1 (Proposed Action) ................................ 35
4.3.2 Alternative 2 .......................................................... 35
4.3.3 Alternative 3 (No Action) .......................................... 35
4.4 Wastes, Hazardous Materials, and Stored Fuels ...................... 36
4.4.1 Alternative 1 (Proposed Action) ................................ 36
4.4.2 Alternative 2 .......................................................... 36
4.4.3 Alternative 3 (No Action) .......................................... 36
4.5 Water Resources .......................................................... 36
4.5.1 Alternative 1 (Proposed Action) ................................ 36
4.5.2 Alternative 2 .......................................................... 36
4.5.3 Alternative 3 (No Action) .......................................... 36
4.6 Biological Resources ..................................................... 37
4.6.1 Alternative 1 (Proposed Action) ................................ 37
4.6.2 Alternative 2 .......................................................... 37
4.6.3 Alternative 3 (No Action) .......................................... 37
4.7 Socioeconomic Resources ............................................... 38
4.7.1 Alternative 1 (Proposed Action) ................................ 38
4.7.2 Alternative 2 .......................................................... 38
4.7.3 Alternative 3 (No Action) .......................................... 38
4.8 Cultural Resources ......................................................... 38
4.8.1 Alternative 1 (Proposed Action) ................................ 38
4.8.2 Alternative 2 .......................................................... 38
4.8.3 Alternative 3 (No Action) .......................................... 38
4.9  Land Use........................................................................................................38
  4.9.1 Alternative 1 (Proposed Action).......................................................... 38
  4.9.2 Alternative 2......................................................................................... 38
  4.9.3 Alternative 3 (No Action).................................................................... 39

4.10 Transportation Systems........................................................................... 39
  4.10.1 Alternative 1 (Proposed Action)......................................................... 39
  4.10.2 Alternative 2......................................................................................... 39
  4.10.3 Alternative 3 (No Action).................................................................... 39

4.11 Airspace/Airfield Operations.................................................................... 39
  4.11.1 Alternative 1 (Proposed Action).......................................................... 39
  4.11.2 Alternative 2......................................................................................... 39
  4.11.3 Alternative 3 (No Action).................................................................... 39

4.12 Safety and Occupation Health................................................................. 39
  4.12.1 Alternative 1 (Proposed Action).......................................................... 39
  4.12.2 Alternative 2......................................................................................... 39
  4.12.3 Alternative 3 (No Action).................................................................... 40

4.13 Environmental Management................................................................. 40
  4.13.1 Alternative 1 (Proposed Action).......................................................... 40
  4.13.2 Alternative 2......................................................................................... 40
  4.13.3 Alternative 3 (No Action).................................................................... 40

4.14 Environmental Justice............................................................................. 40
  4.14.1 Alternative 1 (Proposed Action).......................................................... 40
  4.14.2 Alternative 2......................................................................................... 40
  4.14.3 Alternative 3 (No Action).................................................................... 40

4.15 Indirect And Cumulative Impacts............................................................. 41

4.16 Unavoidable Adverse Impacts................................................................. 41

4.17 Relationship Between Short-Term Uses and Enhancement of
Long-Term Productivity.................................................................................. 41

4.18 Irreversible And Irretrievable Commitment of Resources...................... 41

5.0  LIST OF PREPARERS..................................................................................42

6.0  LIST OF AGENCIES AND PERSONS CONSULTED AND/OR
     PROVIDED COPIES.................................................................................... 43

7.0  REFERENCES..............................................................................................44

APPENDICES
  A  Location Map
  B  Cultural Resource Probability Map
  C  Environmental Site Map
  D  AF Form 813
## List of Tables

<table>
<thead>
<tr>
<th>Table No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6-1</td>
<td>Summary of Environmental Impacts</td>
<td>20</td>
</tr>
<tr>
<td>3.2-1</td>
<td>Climate Data for Grand Forks AFB, ND.</td>
<td>22</td>
</tr>
<tr>
<td>3.2-2</td>
<td>NAAQS and NDAAQS</td>
<td>24</td>
</tr>
<tr>
<td>3.3-1</td>
<td>Typical Decibel Levels Encountered in the Environment and Industry</td>
<td>25</td>
</tr>
<tr>
<td>3.3-2</td>
<td>Approximate Sound Levels of Construction Equipment</td>
<td>25</td>
</tr>
</tbody>
</table>
### ACRONYMS, ABBREVIATIONS, AND TERMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAM</td>
<td>Annual Arithmetic Mean</td>
</tr>
<tr>
<td>ACM</td>
<td>Asbestos Containing Material</td>
</tr>
<tr>
<td>AFB</td>
<td>Air Force Base</td>
</tr>
<tr>
<td>AFI</td>
<td>Air Force Instruction</td>
</tr>
<tr>
<td>AICUZ</td>
<td>Air Installation Compatible Use Zone</td>
</tr>
<tr>
<td>AMC</td>
<td>Air Mobility Command</td>
</tr>
<tr>
<td>APZ</td>
<td>Accident Potential Zone</td>
</tr>
<tr>
<td>ARPA</td>
<td>Archeological Resource Protection Act</td>
</tr>
<tr>
<td>ARW</td>
<td>Air Refueling Wing</td>
</tr>
<tr>
<td>Ave</td>
<td>Avenue</td>
</tr>
<tr>
<td>BASH</td>
<td>Bird Aircraft Strike Hazard</td>
</tr>
<tr>
<td>Blvd</td>
<td>Boulevard</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>CAA</td>
<td>Clean Air Act</td>
</tr>
<tr>
<td>CWA</td>
<td>Clean Water Act</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CO</td>
<td>Carbon Monoxide</td>
</tr>
<tr>
<td>dBA</td>
<td>Decibel</td>
</tr>
<tr>
<td>DNL</td>
<td>Day-Night Average A-Weighted Sound Level</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>EIAP</td>
<td>Environmental Impact Analysis Process</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>EPCRA</td>
<td>Emergency Planning and Community Right-to-Know Act</td>
</tr>
<tr>
<td>ESA</td>
<td>Endangered Species Act</td>
</tr>
<tr>
<td>F</td>
<td>Fahrenheit</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
</tr>
<tr>
<td>ft</td>
<td>Feet</td>
</tr>
<tr>
<td>ft³/s</td>
<td>feet cubed per meter</td>
</tr>
<tr>
<td>HAP</td>
<td>Hazardous Air Pollutants</td>
</tr>
<tr>
<td>hr</td>
<td>Hour</td>
</tr>
<tr>
<td>H₂S</td>
<td>Hydrogen Sulfide</td>
</tr>
<tr>
<td>IRP</td>
<td>Installation Restoration Program</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>LT</td>
<td>Long-Term</td>
</tr>
<tr>
<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
</tr>
<tr>
<td>MFH</td>
<td>Military Family Housing</td>
</tr>
<tr>
<td>mph</td>
<td>Miles Per Hour</td>
</tr>
<tr>
<td>MSDS</td>
<td>Material Safety Data Sheet</td>
</tr>
<tr>
<td>MSL</td>
<td>Mean Sea Level</td>
</tr>
<tr>
<td>μg/m³</td>
<td>Micrograms Per Meter Cubed</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NAGPRA</td>
<td>Native American Graves Protection and Repatriation Act</td>
</tr>
<tr>
<td>ND</td>
<td>North Dakota</td>
</tr>
<tr>
<td>NDAAQS</td>
<td>North Dakota National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NDAC</td>
<td>North Dakota Administrative Code</td>
</tr>
<tr>
<td>NDDH</td>
<td>North Dakota Department of Health</td>
</tr>
<tr>
<td>NDPDES</td>
<td>North Dakota Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NESHAP</td>
<td>National Emission Standards for Hazardous Air Pollutants</td>
</tr>
<tr>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
<tr>
<td>NOx</td>
<td>Nitrogen Oxides</td>
</tr>
<tr>
<td>NO₂</td>
<td>Nitrogen Dioxide</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>NPL</td>
<td>National Priorities List</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>NWR</td>
<td>National Wildlife Refuge</td>
</tr>
<tr>
<td>O₃</td>
<td>Ozone</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Act</td>
</tr>
<tr>
<td>Pb</td>
<td>Lead</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Particulate Matter 10 Microns In Diameter</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Particulate Matter 25 Microns In Diameter</td>
</tr>
<tr>
<td>POL</td>
<td>Petroleum Oil Lubricant</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts Per Million</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
</tr>
<tr>
<td>RACM</td>
<td>Regulated Asbestos Containing Materials</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>RI/FS</td>
<td>Remedial Investigation/Feasibility Study</td>
</tr>
<tr>
<td>RV</td>
<td>Recreational Vehicle</td>
</tr>
<tr>
<td>SAGE</td>
<td>Strategic Air Ground Equipment</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>SO₂</td>
<td>Sulfur Dioxide</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>SOX</td>
<td>Sulfur Dioxide</td>
</tr>
<tr>
<td>St</td>
<td>Street</td>
</tr>
<tr>
<td>ST</td>
<td>Short-Term</td>
</tr>
<tr>
<td>tpy</td>
<td>Tons Per Year</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>TSI</td>
<td>Thermal System Insulation</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers</td>
</tr>
<tr>
<td>USAF</td>
<td>United States Air Force</td>
</tr>
<tr>
<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compound</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

The United States Air Force (USAF) proposes to construct an addition to building 233 on Grand Forks Air Force Base (AFB), North Dakota.

**Purpose and Need:** The air handler and condenser now exist in the attic of building 233 making maintenance a nightmare. Maintenance personnel must utilize a ladder to access the attic. It also causes a problem for the commander because of dust and fibers entering the duct work.

**Proposed Action:** Grand Forks AFB would construct an addition on the east side of building 233 that would match the entrance addition on the west side. The addition would house a new mechanical room that would be an addition to the small mechanical room that already exists on that side of the building. The existing air handler and condenser would be replaced and installed in the mechanical room. Addition would be approximately 15 feet by 15 feet. Only the air handler and condenser would be installed in the addition. Very little trees and landscaping would need to be removed outside the building to allow for the addition; new landscaping would be installed. Sidewalks on the east side of the building would need to be relocated. No utilities would need to be relocated. There would be an entrance to the addition from both the exterior and interior of the building. The addition would be constructed of concrete foundation, brick exterior, and have a standing seam metal roof.

**Alternate Location Alternative:** The mechanical room addition would be placed on the north side of the building. This alternative would create two mechanical rooms on building 233.

**No Action Alternative:** Grand Forks AFB would not construct a mechanical room on building 233. Personnel would continue to perform maintenance in the building's attic. A ladder must be utilized to access the attic. Dust fibers would continue to enter the duct work of the building causing problems for the commander.

**Impacts by Resource Area**

**Air Quality** - Air Quality is considered good and the area is in attainment for all criteria pollutants. 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) would be implemented to reduce the amount of these emissions.

**Noise** - Short-term operation of heavy equipment in the construction area would generate additional noise. The increase in noise from construction activities would be negligible.

**Wastes, Hazardous Materials, and Stored Fuels** - The increase in hazardous and solid wastes from construction related activities would be minimal and temporary. Construction debris would be disposed of in approved location, such as the Grand Forks Municipal Landfill.
**Water Resources** – Provided BMPs are followed, there would be minimal impacts on ground water, surface water, and water quality. The proposed action would have no impact on waste water or wetlands.

**Biological Resources** – BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species.

**Socioeconomic Resources** - This action would have a minor positive effect on the local economy. 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 contractors and retailers during the construction phase of the project.

**Cultural Resources** - The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer.

**Land Use** – The proposed action would not impact land use.

**Transportation Systems** – The proposed action would have minimal adverse impact to transportation systems on base due to vehicles traveling to and from the construction site.

**Airspace/Airfield Operations** - The proposed action would not impact aircraft safety or airspace compatibility.

**Safety and Occupational Health** – The proposed impact would have beneficial impact as maintenance personnel would no longer be required to utilize a ladder to perform maintenance.

**Environmental Management** – The proposed action would not impact IRP Sites. BMPs would be implemented to prevent erosion. No pesticides would be used as part of this project.

**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 are no minority or low-income populations in the area of the proposed action or alternatives, and, thus, there would be no disproportionately high or adverse impact on such populations.
1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

This Environmental Assessment (EA) examines the potential for impacts to the environment resulting from the construction of an addition to building 233 on Grand Forks Air Force Base (AFB). As required by the National Environmental Policy Act (NEPA) of 1969, federal agencies must consider environmental consequences in their decision making process. The EA provides analysis of the potential environmental impacts from both the proposed action and its alternatives.

1.1 INTRODUCTION

Located in northeastern North Dakota (ND), Grand Forks AFB is the first core refueling wing in Air Mobility Command (AMC) and home to 48 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 action (and the alternative actions) would be at Grand Forks AFB, ND. Grand Forks AFB covers approximately 5,420 acres of government-owned land and is located in northeastern ND, about 14 miles west of Grand Forks, along United States (US) Highway 2. Grand Forks (population 49,321) is the third largest city in ND. Appendix A includes a Location Map. 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 May 2003, is approximately 6,934. Of that, 2,849 are military, 3,747 are military dependents, and 338 civilians working on base (Grand Forks AFB, 2003).

Building 233 is located at 502 H Street on Grand Forks AFB. The building is on the corner of H Street and Steen Boulevard. The main gate to Grand Forks AFB enters onto Steen Boulevard.

1.2 NEED FOR THE ACTION

The air handler and condenser now exist in the attic of building 233 making maintenance a nightmare. Maintenance personnel must utilize a ladder to access the attic. It also causes a problem for the commander because of dust and fibers entering the duct work.

1.3 OBJECTIVES FOR THE ACTION

The purpose of the proposed action is to construct an addition to the maintenance room on building 233, making maintenance activities easier to complete.
1.4 SCOPE OF EA

This EA identifies, describes, and evaluates the potential environmental impacts associated with construction of an addition to building 233 on Grand Forks AFB. This analysis covers only those items listed above. It does not include any previous construction of facilities, parking lots, associated water drainage structures, or other non-related construction activities.

The following 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 construction of an addition to building 233 on Grand Forks AFB. NEPA requires that environmental impacts be considered prior to final decision on a proposed project. The Environmental Management Flight Chief will determine if a Finding of 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 either 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 Action and alternatives are also in this EA. Regulatory requirements including, but not restricted to the following programs will 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
- 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.]

Grand Forks AFB has a National Pollutant Discharge Elimination System (NPDES) permit to cover base-wide industrial activities. Construction of the proposed action or the alternative action would disturb more than less than one acre and would not require a contractor to obtain a separate NPDES from the North Dakota Department of Health (NDDH).

Scoping for this EA included discussion of relevant issues with members of the environmental management and bioenvironmental flights. Scoping letters requesting comments on possible issues of concern were sent to agencies with pertinent resource responsibilities. In accordance with AFI 32-7061, a copy is submitted to the ND Division of Community Services.
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

Selection criteria used to evaluate the Proposed and Alternative Actions include the following:

- Criteria 1: Provide convenient and safe access to Building 233's maintenance room.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

No alternatives were eliminated from detailed study.

2.4 DESCRIPTION OF PROPOSED ALTERNATIVES

This section describes the activities that would occur under three alternatives: the proposed action and the two action alternatives. These three alternatives provide the decision maker with a reasonable range of alternatives from which to choose.

2.4.1 Alternative 1 (Proposed Action): Building Addition

Under the proposed action, Grand Forks AFB would construct an addition on the east side of building 233 that would match the entrance addition on the west side. The addition would house a new mechanical room that would be an addition to the small mechanical room that already exists on that side of the building. The existing air handler and condenser would be replaced and installed in the mechanical room. The addition would be approximately 15 feet by 15 feet. The only additions to the mechanical room would be the air handler and condenser. Very little trees and landscaping would need to be removed outside the building to allow for the addition and new landscaping would be installed. Sidewalks along the east side of the building would need to be relocated. No utilities would need to be relocated. There would be an entrance to the addition from both the exterior and interior of the building. The addition would be constructed of concrete foundation, brick exterior, and have a standing seam metal roof.
2.4.2 Alternative 2: Alternate Location

Under alternative 1, the mechanical room addition would be placed on the north side of the building. This alternative would create two mechanical rooms on building 233.

2.4.3 Alternative 3 (No Action Alternative): Status Quo

Alternative 3, no action alternative, would not construct an addition to the mechanical room on building 233. Personnel would continue to perform maintenance in the building's attic. A ladder must be utilized to access the attic. Dust fibers would continue to enter the duct work of the building causing problems for the commander.

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 demolition projects occurring on Grand Forks AFB in the same time frame. These projects are addressed under separate NEPA documents.

2.6 SUMMARY COMPARISON OF THE EFFECTS OF ALL ALTERNATIVES

Potential impacts from implementing the Proposed Action, Alternative 2, and the No Action Alternative are discussed in detail in Chapter 4.

<table>
<thead>
<tr>
<th>Table 2.6.1: Summary of Environmental Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Action</td>
</tr>
<tr>
<td>Air Quality</td>
</tr>
<tr>
<td>Noise</td>
</tr>
<tr>
<td>Wastes, Hazardous Materials, and Stored Fuels</td>
</tr>
<tr>
<td>Water Resources</td>
</tr>
<tr>
<td>Ground Water</td>
</tr>
<tr>
<td>Surface Water</td>
</tr>
<tr>
<td>Waste water</td>
</tr>
<tr>
<td>Water Quality</td>
</tr>
<tr>
<td>Wetlands</td>
</tr>
<tr>
<td>Biological Resources</td>
</tr>
<tr>
<td>Vegetation</td>
</tr>
<tr>
<td>Noxious Weeds</td>
</tr>
<tr>
<td>Wildlife</td>
</tr>
<tr>
<td>Threatened and Endangered Species</td>
</tr>
<tr>
<td>Socioeconomic Resources</td>
</tr>
<tr>
<td>Cultural Resources</td>
</tr>
<tr>
<td>Land Use</td>
</tr>
</tbody>
</table>
2.7 IDENTIFICATION OF PREFERRED ALTERNATIVE

The preferred action is Alternative 1 (Proposed Action): *Construct Building Addition.*
3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section succinctly describes the operational concerns and the environmental resources relevant to the decision that must be made concerning this proposed action. Environmental concerns and issues relevant to the decision to be made and the attributes of the potentially affected environment are studied in greater detail in this section.

This descriptive section, combined with the definitions of the three 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 three 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°F (Fahrenheit) 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 humidities 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>
<thead>
<tr>
<th>Table 3.2-1: Climate Data for Grand Forks AFB, ND</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>January</td>
</tr>
<tr>
<td>February</td>
</tr>
<tr>
<td>March</td>
</tr>
<tr>
<td>April</td>
</tr>
<tr>
<td>May</td>
</tr>
<tr>
<td>June</td>
</tr>
<tr>
<td>July</td>
</tr>
<tr>
<td>August</td>
</tr>
<tr>
<td>September</td>
</tr>
<tr>
<td>October</td>
</tr>
<tr>
<td>November</td>
</tr>
<tr>
<td>December</td>
</tr>
</tbody>
</table>

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 the following air permits: 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 (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), 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 (H₂S) in ND.

Prevention of significant deterioration (PSD) regulations establish SO₂, particulate matter 10 microns in diameter (PM₁₀), and NO₂ 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 (NOₓ), volatile organic compounds (VOCs), or sulfur oxides (SOₓ), or 15 tpy of PM₁₀) 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 O₃, CO, NO₂, SO₂, Pb, and particulate matter. Ground disturbing activities create PM₁₀ and particulate matter 2.5 microns in diameter (PM₂.₅). Combustion creates CO, SO₂, PM₁₀, and PM₂.₅ particulate matter and the precursors (VOC and NO₂) to O₃. Only a small amount of Hazardous Air Pollutants (HAP) are generated from internal combustion processes or earth-moving activities. The Grand Forks AFB Final Emissions Survey Report (USAF, 1996) reported that Grand Forks AFB only generated small levels HAPs, 10.3 tpy of combined HAPs and 2.2 tpy maximum of a single HAP (methyl ethyl ketone). Methyl Ethyl Ketone is associated with aircraft and vehicle maintenance and repair. Secondary sources include fuel storage and dispensing (USAF, 2001a).
### Table 3.2-2
National Ambient Air Quality Standards (NAAQS) and ND Ambient Air Quality Standards (NDAAQS)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>NAAQS (\mu g/m^3) (ppm)(^a)</th>
<th>NDAAQS (\mu g/m^3) (ppm)(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary(^b)</td>
<td>Secondary(^c)</td>
</tr>
<tr>
<td>O(_3)</td>
<td>1 hr</td>
<td>235 (0.12)</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>8 hr(^d)</td>
<td>157 (0.08)</td>
<td>Same</td>
</tr>
<tr>
<td>CO</td>
<td>1 hr</td>
<td>40,000 (35)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>8 hr</td>
<td>10,000 (9)</td>
<td>None</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>AAM(^d)</td>
<td>100 (0.053)</td>
<td>Same</td>
</tr>
<tr>
<td>SO(_2)</td>
<td>1 hr</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>3 hr</td>
<td>None</td>
<td>1,300 (0.5)</td>
</tr>
<tr>
<td></td>
<td>24 hr</td>
<td>365 (0.14)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>AAM</td>
<td>80 (0.03)</td>
<td>None</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>AAM</td>
<td>50</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>24 hr</td>
<td>150</td>
<td>Same</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>AAM</td>
<td>65</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>24 hr</td>
<td>15</td>
<td>Same</td>
</tr>
<tr>
<td>Pb</td>
<td><em>(\frac{1}{2}) year</em></td>
<td>1.5</td>
<td>Same</td>
</tr>
<tr>
<td>H(_2)S</td>
<td>1 hr</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>24 hr</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>3 mth</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>AAM</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

\(^a\) 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.
### Table 3.3-1
#### Typical Decibel Levels Encountered in the Environment and Industry

<table>
<thead>
<tr>
<th>Sound Level (dBA) \ Exposure Limits</th>
<th>Source of Noise</th>
<th>Subjective Impression</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Threshold of hearing</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Stills recording studio; Rustling leaves</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Quiet bedroom</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Soft whisper at 5 ft; Typical library</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Quiet urban setting (nighttime); Normal level in home</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Large transformer at 200 ft</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Private business office; Light traffic at 100 ft; Quiet urban setting (daytime)</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Window air conditioner; Men’s clothing department in store</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Conversation speech; Data processing center</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>Busy restaurant; Automobile at 100 ft</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>Vacuum cleaner in home; Freight train at 100 ft</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Threshold of moderately loud</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>Ringing alarm clock at 2 ft; Kitchen garbage disposal; Loud orchestral music in large room</td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>Printing press; Boiler room; Heavy truck at 50 ft</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Heavy city traffic</td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>Freight train at 50 ft; Home lawn mower</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Threshold of very loud</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Pile driver at 50 ft; Heavy diesel equipment at 25 ft</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>Banging on steel plate; Air Hammer</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Jet plane overhead at 500 ft</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>Jet plane taking off at 200 ft</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>Civil defense siren at 100 ft</td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>400</th>
<th>800</th>
<th>1,600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-end Loader</td>
<td>84</td>
<td>78</td>
<td>72</td>
<td>66</td>
<td>60</td>
<td>54</td>
</tr>
<tr>
<td>Dump Truck</td>
<td>83</td>
<td>77</td>
<td>71</td>
<td>65</td>
<td>59</td>
<td>53</td>
</tr>
<tr>
<td>Truck</td>
<td>83</td>
<td>77</td>
<td>71</td>
<td>65</td>
<td>59</td>
<td>53</td>
</tr>
<tr>
<td>Tractor</td>
<td>84</td>
<td>78</td>
<td>72</td>
<td>66</td>
<td>58</td>
<td>52</td>
</tr>
</tbody>
</table>

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.

3.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

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 (90-day), satellite accumulation points, and spill cleanup equipment and materials storage (USAF, 2001c). 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 523 and 530. Petroleum contaminated soils generated from excavations throughout the base can be treated at the land treatment facility located on base. These solid wastes are tilled or turned several times a year to remediate the soils to acceptable levels.

Hardfill, 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.

Recyclable materials from industrial facilities are collected in the recycling facility, off the southeast corner of building 408. Paper, glass, plastics, cardboard, and wood are collected in separate storage bins. Curbside containers are used in housing for recyclable materials. A contractor collects these materials and transports them off base.

The Environmental Management Flight manages the hazardous material through a contract with Pacific Environmental Services. Typical hazardous materials include reactive materials such as explosives, ignitables, toxics, and corrosives. Improper storage can impact human health and the safety of the environment.

Since Grand Forks AFB is a military installation with a flying mission, there are several aboveground and underground fuel storage tanks. None of the alternatives would impact fuel storage tanks.
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 a 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 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 85 to 90 percent of its water for industrial, commercial and housing functions from the City of Grand Forks and 10 to 15 percent 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 (ft³/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.

Kelly’s Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kelly’s 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). Appendix C contains a map depicting floodplains. Any development in or modifications to floodplains must be coordinated with the Corps of Engineers and the Federal Emergency Management Agency (FEMA).

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 NDR02-0314 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 Kelly’s Slough and then the Turtle River. All drainage from these surface water channels ultimately flows into the Red River. The Bioenvironmental Engineering 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 waste water 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. Waste water effluent is discharged under ND Permit ND0020621 into Kelly’s Slough. Waste water discharge occurs for about one week, sometime between mid-April though October. Industrial waste water 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 from Grand Forks and 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 Engineering Squadron tests the water received on base daily for fluorine and chlorine. The 319th
Bioenvironmental Flight collects monthly bacteriological samples to be analyzed at the ND State Laboratory.

3.5.5 Wetlands

About 246,900 acres in the county are drained wetland Type I (wet meadow) to Type V (open freshwater). Approximately 59,500 acres of wetland Type 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. EO 11990 requires zero loss of wetlands. Grand Forks AFB has 49 wetlands, covering 23.9 acres of wetlands (see Appendix C), including 33 jurisdictional wetlands covering 12.2 acres. Wetlands on Grand Forks AFB occur frequently in drainage ways, low-lying depressions, and potholes. Wetlands are highly concentrated in drainage ways leading from the waste water treatment lagoons to Kellys Slough NWR. The majority of wetland areas occur in the northern and 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. Any activity in wetlands cannot occur without a Clean Water Act section 404 permit from the Army Corps of Engineers. No dumping, filling, dredging, or changing of the wetland hydrologic structure is permitted without a permit.

3.6 BIOLOGICAL RESOURCES

3.6.1 Vegetation

Plants include a large variety of naturally occurring native plants. Because of the agrarian nature of Grand Forks County, cropland is the predominant element for wildlife habitat. Pastures, meadows, and other non-cultivated areas are overgrown with grasses, legumes, and wild herbaceous plants. Included in the grasses and legumes vegetation species are tall wheat grass, bromegrass, sweet clover, and alfalfa. Herbaceous plants include little bluestem, goldenrod, green needle grass, western wheat grass, and bluegrama. Shrubs such as juneberry, dogwood, hawthorn, and snowberry also are found in the area. In wetland areas, predominant species include 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. Prior to 1993 field investigations, ten natural communities occurring in Grand Forks County were identified in the ND Natural Heritage Inventory (1994). Of these, only one community, Lowland Woodland, is represented within the base boundaries. Dominant trees in this community are 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 understory in this area. Wood nettle (*Laportea*...
canadensis), stinging nettle (Urtica dioica), beggars’ ticks (Bidens frondosa), and waterleaf (Hydrophyllum virginianum) are typical forbes.

One hundred and forty two total taxa, representing less than a third of the known Grand Forks County plant taxa, were identified in the ND Natural Heritage Inventory. No rare plants species are known to exist on Grand Forks AFB.

3.6.2 Wildlife

Ground Forks County is primarily cropland although there are wildlife areas located 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 migratory birds. 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.

There is minimal habitat for wildlife on Grand Forks AFB due to extensive development. White tail deer, eastern cottontail, and ring-neck pheasant can be found on base. The proposed project area only provides low-quality foraging habitat for small animals.

3.6.3 Threatened and Endangered Species

According to the 1994 ND Natural Heritage Inventory, “There are no known federally threatened or endangered species populations on or adjacent to Grand Forks AFB.” The base does have infrequent use by migratory threatened and endangered species, such as the bald eagle and peregrine falcon, but there are no critical or significant habitats for those species present. The inventory also indicated that red-breasted nuthatch and moose are two special concern species. They have been observed on base near Turtle River. The inventory also indicated that there is no habitat on or near Grand Forks AFB to sustain a moose population. Red-breasted nuthatches prefer woodland habitats dominated by conifers. These birds are transients and pose no particular concern. 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.

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 mean wage in Oct 2001 was $26,715 (Job Service of ND, 2001). Grand Forks AFB is one of the largest employers in Grand Forks County. As of May 2003, Grand Forks AFB had 3,165 active duty military members and 338 civilian employees. The total annual economic impact for Grand Forks AFB is $325,647,980.
3.8 CULTURAL RESOURCES

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. None meet the criteria of eligibility of the NRHP established in 36 CFR 60.4. There is no evidence for Native American burial grounds, or other culturally sensitive areas. Paleosols (soil that developed on a past landscape) remain a management concern requiring Section 106 compliance. 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. The base is currently consulting with the ND Historical Society on the future use of eight Cold War Era facilities. These are buildings 313, 606, 703-707, and 714.

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. Wildlife habitat is very limited in the county. Kelly's 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.

The main base encompasses 5,420 acres, of which the USAF owns 4,830 acres and another 590 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 ballfields, 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 2,910 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 waste water. Agricultural outleased land (1,040 acres) is also classified as unimproved. Land use at the base is solely urban in nature, with residential development to the south and cropland, hayfields, and pastures to the north, west, and east.

3.10 TRANSPORTATION 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, 3,000, based on the average capacity of 1,500 per hour per lane. Roadways adjacent to Grand Forks AFB are quite capable of accommodating existing traffic flows (USAF, 2001a).

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 is connected to Steen Boulevard (Blvd), which is the main east-west road, and the south gate is connected to Eielson Street (St), which is the main north-south road.

3.11 AIRSPACE/AIRFIELD OPERATIONS

3.11.1 AIRCRAFT SAFETY

Bird Aircraft Strike Hazard (BASH) is a major safety concern for military aircraft. 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. Daily and seasonal bird movements create various hazardous conditions. Although BASH problems are minimal, Kellys Slough NWR is a major stopover for migratory birds. Canadian Geese and other large waterfowl have been seen in the area (USAF, 2001b).

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 INSTALLATION 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 are considered closed, OT-05 and ST-06. 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 ft 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 ft per mile.

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 Round-up, are used to maintain areas adjacent to roadways. Military Public Health and Bioenvironmental Engineering provide information on the safe handling, storage, and use of pesticides. Military Public Health maintains records on all pesticide applicators. The Fire Department 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 97.6 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 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

The effects of the proposed action and the alternatives on the affected environment are discussed in this section. The project involves construction of an addition to building 233 on Grand Forks AFB.

4.2 AIR QUALITY

4.2.1 Alternative 1 (Proposed Action)

No long-term effects; however short term effects involve heavy construction equipment emissions (not a concern as they are mobile sources) and fugitive dust (mentioned on our Title V permit). Air Quality is considered good and the area is in attainment for all criteria pollutants. 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.

4.2.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.2.3 Alternative 3 (No Action)

The no action alternative would not impact air quality.

4.3 NOISE

4.3.1 Alternative 1 (Proposed Action)

The short-term operation of heavy equipment in the construction area would generate additional noise. These noise impacts would exist only during construction and would cease after completion. The increase in noise from construction activities would be negligible.

4.3.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.3.3 Alternative 3 (No Action)

The no action alternative would not impact noise generation.
4.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

4.4.1 Alternative 1 (Proposed Action)

The increase in hazardous and solid wastes from construction related activities would be minimal and temporary. Construction debris would be disposed of in approved location, such as the Grand Forks Municipal Landfill, which is located within 12 miles of the construction site. Demolition debris must be checked for lead and asbestos.

4.4.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.4.3 Alternative 3 (No Action)

The no action alternative would not impact hazardous or solid waste generation.

4.5 WATER RESOURCES

4.5.1 Alternative 1 (Proposed Action)

Ground Water: Excavation could potentially intercept the high water table. If the excavated area fills with ground water, water could be directly exposed to contaminants released from construction equipment. The potential for release is minimal.

Surface Water: Surface water quality could degrade in the short-term, during actual construction, due to possible erosion contributing to turbidity of runoff. Surface water could also be impacted if, due to ground water inflow to the excavation, the contractor would need to pump out the excavation. The contractor shall deploy silt fences and hay bales to control surface water runoff and to minimize erosion. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation to control erosion.

Water Quality: The proposed action would have minimal impact to water quality.

Waste Water: The proposed action would have no impact on waste water.

Wetlands: There are no wetlands in this area; therefore, the proposed action would have no impact on wetlands.

4.5.2 Alternative 2

Impacts would be similar to those generated under the proposed action.
4.5.3 Alternative 3 (No Action)

The no action alternative would have no impact on water resources.

4.6 BIOLOGICAL RESOURCES

4.6.1 Alternative 1 (Proposed Action)

**Vegetation:** BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. The amount of vegetation disturbed would be kept to the minimum required to complete the action. Disturbed areas should be re-established. There would be a short-term minimal loss of vegetation from the removal of trees.

**Noxious Weeds:** Public law 93-629 mandates control of noxious weeds. Possible weed seed transport should be limited from infested areas to non-infested sites. Activities in or adjacent to heavily infested areas should be avoided or seed sources and propagules removed from the site prior to conducting activities, or operations limited to non-seed producing seasons. All vegetation and soil should be washed or otherwise removed from equipment before transporting to a new site. Activities which expose the soil should be mitigated by covering the area with weed seed free mulch and/or seed the area with native species. Covering the soil would reduce the germination of weed seeds, maintain soil moisture, and minimize erosion. If any fill material is used, it should be from a weed-free source.

**Wildlife:** Construction would have insignificant impacts to wildlife. These areas provide foraging habitat for small mammals, such as mice and rabbits. The area is improved and frequently maintained by the grounds maintenance contractor. Due to the abundance and mobility of these species and the profusion of natural habitats in the general vicinity, any wildlife disturbed would be able to find similar habitat in the local area.

**Threatened or Endangered Species:** According to the 1994 ND Natural Heritage Inventory (1994), “There are no known federally threatened or endangered species populations on or adjacent to Grand Forks AFB.” A threatened species, the bald eagle, has been observed using GFAFB sewage lagoons in Oct/Nov of 2003. However, the construction area does not include optimal habitat for the bald eagle or any other transient federal-or state-listed species that may occur in Grand Forks County.

4.6.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.6.3 Alternative 3 (No Action)

The no action alternative would not impact biological resources.
4.7 SOCIOECONOMIC RESOURCES

4.7.1 Alternative 1 (Proposed Action)
Secondary retail purchases would make an additional contribution to the local communities. The implementation of the proposed action, therefore, would provide a short-term, minimal beneficial impact to local retailers during the construction phase of the project.

4.7.2 Alternative 2
Impacts would be similar to those generated under the proposed action.

4.7.3 Alternative 3 (No Action)
The no action alternative would not impact socioeconomics.

4.8 CULTURAL RESOURCES

4.8.1 Alternative 1 (Proposed Action)
The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer.

4.8.2 Alternative 2
Impacts would be similar to those generated under the proposed action.

4.8.3 Alternative 3 (No Action)
The no action alternative would not impact cultural resources.

4.9 LAND USE

4.9.1 Alternative 1 (Proposed Action)
The proposed action would not impact land use.

4.9.2 Alternative 2
Alternative 2 would not impact land use.
4.9.3 Alternative 3 (No Action)

The no action alternative would not impact land use.

4.10 TRANSPORTATION SYSTEMS

4.10.1 Alternative 1 (Proposed Action)

The proposed action would have minimal adverse impact to transportation systems on base due to vehicles traveling to and from the construction site.

4.10.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.10.3 Alternative 3 (No Action)

The action would not impact transportation.

4.11 AIRSPACE/AIRFIELD OPERATIONS

4.11.1 Alternative 1 (Proposed Action)

The proposed action would not impact aircraft safety or airspace compatibility.

4.11.2 Alternative 2

The action would not impact aircraft safety or airspace compatibility.

4.11.3 Alternative 3 (No Action)

The no action alternative would not impact aircraft safety or airspace compatibility.

4.12 SAFETY AND OCCUPATIONAL HEALTH

4.12.1 Alternative 1 (Proposed Action)

The proposed impact would have beneficial impact as maintenance personnel would no longer be required to utilize a ladder to perform maintenance. If the construction area contains lead or asbestos, workers must wear the proper personal protective equipment.

4.12.2 Alternative 2

Impacts would be similar to the proposed action.
4.12.3 Alternative 3 (No Action)

The no action alternative would not impact safety and occupational health.

4.13 ENVIRONMENTAL MANAGEMENT

4.13.1.1 Alternative 1 (Proposed Action)

IRP: The proposed action would not impact IRP Sites.

Geology: Sediment located at the proposed construction site would be temporarily disturbed during construction. Underlying geology in some areas could be affected by construction activities. BMPs would be implemented to prevent erosion. The hazard of wind erosion is moderate and considerable erosion could occur on stockpiled soils. BMPs, such as daily watering and revegetating soils as soon as possible would reduce the impacts of erosion. At the conclusion of construction, the disturbed soils would be rolled and reseeded.

Pesticides: No pesticides would be used as part of this project.

4.13.1.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.13.1.3 Alternative 3 (No Action)

The no action alternative would not impact IRP Sites or geological resources. No pesticides would be used as part of this project.

4.14 ENVIRONMENTAL JUSTICE

4.14.1 Alternative 1 (Proposed Action)

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 are no minority or low-income populations in the area of the proposed action or alternatives, and, thus, there would be no disproportionately high or adverse impact on such populations.

4.14.2 Alternative 2

Impacts would be similar to those generated under the proposed action.

4.14.3 Alternative 3 (No Action)

The no action alternative would not impact 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 Action or Alternative with other ongoing construction in the area would produce and increase in solid waste generation; however, the increase would be limited to the timeframe of each construction project. The area landfill used for construction and demolition debris does not have capacity concerns and could readily handle the solid waste generated by the various projects.

4.16 UNAVOIDABLE ADVERSE IMPACTS

The use of construction-related vehicles and their short-term impacts on noise, air quality, and traffic is unavoidable.

4.17 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed action and alternative would involve the use of previously developed areas. No croplands, pastureland, wooded areas, or wetlands would be modified or affected as a result of implementing the Proposed Action or Alternative and, consequently, productivity of the area would not be degraded.

4.18 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the proposed action, fuels, manpower, economic resources, fill and other construction materials related to the construction of an addition to building 233 would be irreversibly lost.
5.0 LIST OF PREPARERS

Steve Braun
USTs and Special Programs
319 CES/CEVC
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Heidi Nelson
Community Planner
319 CES/CECP
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Everett “Gene” Crouse
Chief, Airfield Management
319 OSS OSAA
695 Steen Blvd
Grand Forks AFB ND 58205

Larry Olderbak
Environmental Restoration Manager
319 CES/CEVR
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Heidi Durako
Natural and Cultural Resources
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Gary Raknerud
Chief, Pollution Prevention
319 CES/CEVP
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Mark Hanson
Contract Attorney
319 ARW/JA
460 Steen Blvd
Grand Forks AFB ND 58205

Kristen Rundquist
Natural Resources/Air Program Manager
319 CES/CEVC
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Gary Johnson
Ground Safety Manager
319 ARW/SEG
679 4th Avenue (Ave)
Grand Forks AFB ND 58205

Capt Brad Schulte
Bioenvironmental Engineering Flight Commander
319AMDS/SGPB
1599 J St
Grand Forks AFB ND 58205

Chris Klaus
Water Programs Manager
319 CES/CEVC
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205

Lt Col Patrick McCormack
Chief of Safety
319 ARW/SE
779 Eielson St
Grand Forks AFB ND 58205
6.0 LIST OF AGENCIES AND PERSONS CONSULTED AND/OR PROVIDED COPIES

Mr. Terry Dwelle  
State Health Officer  
North Dakota Department of Health  
600 East Boulevard Ave  
Bismarck, ND 58505-0200

Mr. Merlan E. Paaverud  
State Historic Preservation Officer  
State Historical Society of North Dakota  
612 East Boulevard Ave  
Bismarck ND 58505-0200

Mr. Dean Hildebrand  
Commissioner  
North Dakota Game and Fish  
100 North Bismarck Expressway  
Bismarck, ND 58501
7.0 REFERENCES


Dunn, Curtis, 2001. Personal communication. ND Department of Transportation, Grand Forks District Office.


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


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


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


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


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


APPENDIX A
LOCATION MAP
Construct Building Addition

Building 233
APPENDIX B
CULTURAL RESOURCE PROBABILITY MAP
APPENDIX C
ENVIRONMENTAL SITE MAP
APPENDIX D
AF FORM 813
**REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS**

**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

<table>
<thead>
<tr>
<th>1. TO (Environmental Planning Function)</th>
<th>2. FROM (Proponent organization and functional address symbol)</th>
<th>2a. TELEPHONE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>319 CES/CEVA</td>
<td>319 CES/CEOF</td>
<td>7-4032</td>
</tr>
</tbody>
</table>

3. TITLE OF PROPOSED ACTION

Construct Addition to Building 233 for Mechanical Room

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

See Attached.

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

See Attached.

6. PROONENT APPROVAL (Name and Grade)

<table>
<thead>
<tr>
<th>6a. SIGNATURE</th>
<th>6b. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerome LaHaise</td>
<td>3/10/04</td>
</tr>
</tbody>
</table>

Chief, Facility Maintenance

### SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY

<table>
<thead>
<tr>
<th>7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. WATER RESOURCES (Quality, quantity, source, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16. OTHER (Potential impacts not addressed above.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

### 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.
Block 4: Purpose and Need for Action

4.1 Purpose: The purpose of the proposed action is to construct an addition to the maintenance room on building 233.

4.2 Need for Action: The air handler and condenser now exist in the attic of building 233 making maintenance a nightmare. Maintenance personnel must utilize a ladder to access the attic. It also causes a problem for the commander because of dust and fibers entering the duct work.

Block 5: Description of Proposed Action and Alternatives

5.1 Proposed Action: Under the proposed action, Grand Forks AFB would construct an addition on the east side of building 233 that would match the entrance addition on the west side. The addition would house a new mechanical room that would be an addition to the small mechanical room that already exists on that side of the building. The existing air handler and condenser would be replaced and installed in the mechanical room. The addition would be approximately 15 feet by 15 feet. The only additions to the mechanical room would be the air handler and condenser. Very little trees and landscaping would need to be removed outside the building to allow for the addition and new landscaping would be installed. Sidewalks along the east side of the building would need to be relocated. No utilities would need to be relocated. There would be an entrance to the addition from both the exterior and interior of the building. The addition would be constructed of concrete foundation, brick exterior, and have a standing seam metal roof.

5.2 Alternative 1: Under alternative 1, the mechanical room addition would be placed on the north side of the building. This alternative would create two mechanical rooms on building 233.

5.3 No Action Alternative: The no action alternative would not construct an addition to the mechanical room on building 233. Personnel would continue to perform maintenance in the building's attic. A ladder must be utilized to access the attic. Dust fibers would continue to enter the duct work of the building causing problems for the commander.
AF Form 813 Continuation Page, Addition to Building 233

7. AICUZ/LAND USE: The short-term operation of heavy equipment in the construction area would generate additional noise. These noise impacts would exist only during construction and would cease after completion. The increase in noise from construction activities would be negligible.

8. AIR QUALITY: No long-term effects; however short term effects involve heavy construction equipment emissions (not a concern as they are mobile sources) and fugitive dust (mentioned on our Title V permit). Air Quality is considered good and the area is in attainment for all criteria pollutants. Fugitive emissions 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.

9. WATER RESOURCES: Provided BMPs are followed, there would be minimal impacts on groundwater, surface water, water quality, and wetlands. The proposed action would have no impact on wastewater.

10. SAFETY AND OCCUPATIONAL HEALTH: The proposed impact would have beneficial impact as maintenance personnel would no longer be required to utilize a ladder to perform maintenance.

11. HAZARDOUS MATERIALS/WASTE: The increase in hazardous and solid wastes from construction related activities would be minimal and temporary. Construction debris would be disposed of in approved location, such as the Grand Forks Municipal Landfill, which is located within 12 miles of the construction site.

12. BIOLOGICAL RESOURCES: BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species. BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum.

13. CULTURAL RESOURCES: The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction activities, the contractor would be instructed to halt construction and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer.

14. GEOLOGY AND SOILS: No effect; project area was previously disturbed.

15. SOCIOECONOMIC: This action would have a minor positive effect on the local economy. 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 contractors and retailers during the construction phase of the project.
16. OTHER: No effect.
### EIAP Checklist

**Title**: B8B8 Addition  
**RCS**: 04-0810

**Coordination**

<table>
<thead>
<tr>
<th>Email Sent</th>
<th>Date Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS/SGGB (Bio)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>ARW/JA (Legal)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>ARW/SE (Safety)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CECP (Community Planner)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEV (Env)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVA (Cultural)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVC (Air/Natural Mgr)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVC (Asbestos/LBP/tanks)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVC (Water Mgr)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVP (Haz Mat/Waste)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>CES/CEVR (IRP)</td>
<td>1/11/03</td>
</tr>
<tr>
<td>OSS/OSA (Airfield Operations)</td>
<td>1/11/03</td>
</tr>
</tbody>
</table>

**Date Received**

| CES/CECP (Community Planner) | 1/11/03 |
| CES/CEV (Env) | 1/11/03 |
| CES/CEVA (Cultural) | 1/11/03 |
| CES/CEVC (Air/Natural Mgr) | 1/11/03 |
| CES/CEVC (Asbestos/LBP/tanks) | 1/11/03 |
| CES/CEVC (Water Mgr) | 1/11/03 |
| CES/CEVP (Haz Mat/Waste) | 1/11/03 |
| CES/CEVR (IRP) | 1/11/03 |
| OSS/OSA (Airfield Operations) | 1/11/03 |

**Public Notice**

<table>
<thead>
<tr>
<th>Coordination w/Public Affairs</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2/15/04</td>
</tr>
</tbody>
</table>

**Route**

<table>
<thead>
<tr>
<th>CEV</th>
<th>2/4/04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal</td>
<td>3/22/04</td>
</tr>
<tr>
<td>ARW/CV</td>
<td>PH</td>
</tr>
</tbody>
</table>

**External**

<table>
<thead>
<tr>
<th>1/11/03</th>
<th>Email Fabrication reports 2/13/picked up copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/11/03</td>
<td>Email Gnyb n'this a project?</td>
</tr>
</tbody>
</table>
AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA
COUNTY OF GRAND FORKS

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

a printed copy of which is hereafter annexed, was printed and published in every copy of the following issues of said newspaper, for a period of __________ time(s) to wit:

1-15 Yr. 2007
1-17 Yr. 2007

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 $15.18;

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 22 day of Jan. A.D. 04

Elaine Johnson
Notary Public, Grand Forks, ND
**REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS**

**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 numbers.

**SECTION I - PROponent INFORMATION**

1. **TO** (Environmental Planning Function)
2. **FROM** (Proponent organization and functional address symbol)

3. **TITLE OF PROPOSED ACTION**
   - Addition to Building 273, Fire Mech. Room

4. **PURPOSE AND NEED FOR ACTION**
   - Purpose is to move fire handlers from attic area to new mech rm.

5. **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**
   - Add an addition area 20 x 50 to East side of Existing Building

6. **PROponent APPROval**
   - Name: Laurence
   - Signature: [Signature]
   - Date: 12/03/2003

**SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE</td>
<td>x</td>
</tr>
<tr>
<td>8.</td>
<td>AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>9.</td>
<td>WATER RESOURCES (Quality, quantity, source, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>10.</td>
<td>SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>11.</td>
<td>HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>12.</td>
<td>BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>13.</td>
<td>CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>14.</td>
<td>GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>15.</td>
<td>SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)</td>
<td>x</td>
</tr>
<tr>
<td>16.</td>
<td>OTHER (Potential impacts not addressed above.)</td>
<td>x</td>
</tr>
</tbody>
</table>

**SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION**

17. **PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) #**

18. **REMARKS**

**ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>19a.</td>
<td>SIGNATURE</td>
<td>[Signature]</td>
</tr>
<tr>
<td>19b.</td>
<td>DATE</td>
<td>12/03/2003</td>
</tr>
</tbody>
</table>
**BASE CIVIL ENGINEER WORK REQUEST**

(See Back of This Form Set For Instructions)

<table>
<thead>
<tr>
<th>1. FROM (Organization)</th>
<th>2. OFFICE SYMBOL</th>
<th>3. DATE OF REQUEST</th>
<th>4. WORK REQUEST NO. (For BCE Use)</th>
</tr>
</thead>
<tbody>
<tr>
<td>319 CES</td>
<td>CEF</td>
<td>9/29/2003</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. NAME AND PHONE NO. OF REQUESTER</th>
<th>6. REQUIRED COMPLETION DATE</th>
<th>7. BUILDING, FACILITY OR STREET ADDRESS WHERE WORK IS TO BE ACCOMPLISHED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerry L. Naisie</td>
<td></td>
<td>23 E</td>
</tr>
</tbody>
</table>

8. DESCRIPTION OF WORK TO BE ACCOMPLISHED (Include Sketch or Plan, when appropriate)

Build addition on east side of building matching the entrance addition on west side to house new mechanical room. Replace air handler and condenser and install in new mechanical room.

Project required submission of an AP Form 813 to 319 CES/CIV.

Environmental Analysis is required prior to the start of work.

9. BRIEF JUSTIFICATION FOR WORK TO BE ACCOMPLISHED (Not required for maintenance and repair)

Air handler and condenser now exist in attic of building making maintenance a nightmare also causing a problem for the Commander because of dust and fibers entering the duct work.

<table>
<thead>
<tr>
<th>10. DONATED RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNDS</td>
</tr>
</tbody>
</table>

11. NAME OF REQUESTER: Jerry L. Naisie

12. GRADE OF REQUESTER: W-5-13

13. SIGNATURE OF REQUESTER (See instructions on back):

14. COORDINATION:

| 300 05 | 190 04-05 |

15. WORK ORDER (Place an "x" in the appropriate box):

| IN-SERVICE | SELF-HELP | CONTRACT | SABER |

16. DIRECT SCHEDULED WORK (Place an "x" in the appropriate box):

| EMERGENCY | ROUTINE | SELF-HELP | M/C |

17. SELF-HELP (Place an "x" in the appropriate box):

BRIEFING REQUIRED: ADEQUATE COORDINATION: INSPECTION REQUIRED

SECTION III - COMPLETE ONLY IF WORK IS TO BE ACCOMPLISHED BY WORK ORDER

| 18. WORK CLASS | 19. PRIORITY | 20. ESTIMATED HOURS | 21. ESTIMATED FUNDED COST | 22. ESTIMATED TOTAL COST |

23. REMARKS: Ensure no Asbestos containing material is disturbed.

24. APPROVED: 25. DISAPPROVED:

CF-10 must be the fire rate of construction, heat detected IAN NPR 72

SECTION IV - APPROVING AUTHORITY

| 28. NAME AND GRADE (Please Type or Print) | 29. SIGNATURE | 30. DATE |

(U.S. GPO: 300-522-314/80356)
MEMORANDUM FOR 319 CES/CEVA

FROM: 319 ARW/JA

SUBJECT: Construct Addition to Building 233 EA/FONSI

1. I reviewed the Environmental Assessment (EA) and Findings of No Significant Impact (FONSI) for the above-referenced project. The proposed EA and FONSI are both legally sufficient and comply with the requirements of 32 CFR Part 989. I recommend that Mr. Koop approve the FONSI.

2. The EA contains the need for the proposal, alternatives to the proposal, environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted for EA preparation. The EA and FONSI were made available for public comment in the Grand Forks Herald (15 and 17 January 2004). From a legal perspective the project will not have a significant environmental impact. Therefore, the EA is legally sufficient and a FONSI is appropriate.

3. If you have any questions about these comments, please contact me at 7-3606.

I concur.

MARK W. HANSON, GS-12, DAF
Chief, General Law

BARR D. YOUNKER, JR., Lt Col, USAF
Staff Judge Advocate

30 March 2004
Publication Fee $15.18

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA } SS.
COUNTY OF GRAND FORKS } of said State and County being first duly sworn, on oath says:

That \{ she \} 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

\[ \text{annexed copy}\]

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 \( \text{time (s) to w} \)

\[
\begin{array}{ll}
1-15 & \text{Yr. 07} \\
1-17 & \text{Yr. 07} \\
\end{array}
\]

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 $15.18.

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 22 day of Jan. A.D. 07

Notary Public, Grand Forks, ND
January 16, 2004

Ms. Heidi Durako
319 CES/CEVA
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

Re: Environmental Assessment for Mechanical Room Addition to Building 233
Grand Forks Air Force Base, Grand Forks County

Dear Ms. Durako:

This department has reviewed the information concerning the above-referenced project submitted under date of January 8, 2004, 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. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. 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. 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.

4. The construction project overlies undifferentiated perched aquifers. Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality.
All spills must be immediately reported to this Department and appropriate remedial actions performed.

5. 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.

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, Chief
Environmental Health Section

LDG:cc
Attach.
Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.
January 22, 2004

Heidi Durako, 319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB, ND 58205-6434

ND SHPO Ref.: 97-0527, Draft EA, Addition to Building 233, Grand Forks AFB, ND.

Dear Ms. Durako:

We have reviewed: Environmental Assessment: Building Addition, Building 223 At Grand Forks AFB, North Dakota (Draft Version, 8 Jan 04), and have the following comments:

Appendix A: A location map should have been provided in the draft.

Appendix B: A cultural resource probability map should have been provided in the draft.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in any further correspondence for this specific project. If you have any questions please contact Duane Klinner at (701) 328-3576.

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer
(North Dakota)
Mr. Dean Hildebrand, Commissioner  
North Dakota Game and Fish  
100 North Bismarck Expressway  
Bismarck, ND 58501  

RE: Environmental Assessment for Grand Forks Air Force Base, North Dakota.  

Dear Mr. Hildebrand:  

The U.S. Air Force is preparing an environmental assessment (EA) on constructing an addition to building 233 for a mechanical room. Attached is a copy of the EA. Please review the document and identify any additional resources within your agency’s responsibility that may be impacted by the action. Comments should be sent within 15 days of receipt of this letter to:  

Ms. Heidi Durako, 319 CES/CEVA  
525 Tuskegee Airmen Blvd.  
Grand Forks AFB, ND 58205-6434  

Your assistance in providing information is greatly appreciated. If you have any questions, please call Ms. Durako at 701-747-4774.  

Sincerely,  

WAYNE A. KOOP  
Environmental Management Flight Chief  

Attachment:  
Environmental Assessment  

North Dakota Game & Fish Dept.  
100 N. Bismarck Expressway  
Bismarck, ND 58501-5095  

We have reviewed the project and foresee no identifiable conflict with wildlife or wildlife habitat based on the information provided.  

Michael G. McKenna  
Chief, Conservation & Communication Division  
Date: 11/15/09
view the enclosed FONSI and EA for the proposed “Construct Addition to Building 233 for Mechanical Room”. The Affidavit of Publication from the Grand Forks Herald is enclosed regarding the public notice requirements of EIAP process.
Mr. Terry Dwelle  
State Health Officer  
North Dakota Department of Health  
600 East Boulevard Avenue  
Bismarck, ND 58505-0200  

RE: Environmental Assessment for Grand Forks Air Force Base, North Dakota.  

Dear Mr. Dwelle:

The U.S. Air Force is preparing an environmental assessment (EA) on constructing an addition to building 233 for a mechanical room. Attached is a copy of the EA. Please review the document and identify any additional resources within your agency’s responsibility that may be impacted by the action. Comments should be sent within 15 days of receipt of this letter to:

Ms. Heidi Durako, 319 CES/CEVA  
525 Tuskegee Airmen Blvd.  
Grand Forks AFB, ND  58205-6434  

Your assistance in providing information is greatly appreciated. If you have any questions, please call Ms. Durako at 701-747-4774.

Sincerely,

WAYNE A. KOOP  
Environmental Management Flight Chief  

Attachment:  
Environmental Assessment
Mr. Merlen E. Paaverud  
State Historic Preservation Officer  
State Historical Society of North Dakota  
612 East Boulevard Avenue  
Bismarck ND  58505-0200

RE: Environmental Assessment for Grand Forks Air Force Base, North Dakota.

Dear Mr. Paaverud:

The U.S. Air Force is preparing an environmental assessment (EA) on constructing an addition to building 233 for a mechanical room. Attached is a copy of the EA. Please review the document and identify any additional resources within your agency’s responsibility that may be impacted by the action. Comments should be sent within 15 days of receipt of this letter to:

Ms. Heidi Durako, 319 CES/CEVA  
525 Tuskegee Airmen Blvd.  
Grand Forks AFB, ND  58205-6434

Your assistance in providing information is greatly appreciated. If you have any questions, please call Ms. Durako at 701-747-4774.

Sincerely,

[WAYNE A. KOOP]
Environmental Management Flight Chief

Attachment:  
Environmental Assessment
Mr. Dean Hildebrand, Commissioner  
North Dakota Game and Fish  
100 North Bismarck Expressway  
Bismarck, ND 58501

RE: Environmental Assessment for Grand Forks Air Force Base, North Dakota.

Dear Mr. Hildebrand:

The U.S. Air Force is preparing an environmental assessment (EA) on constructing an addition to building 233 for a mechanical room. Attached is a copy of the EA. Please review the document and identify any additional resources within your agency’s responsibility that may be impacted by the action. Comments should be sent within 15 days of receipt of this letter to:

Ms. Heidi Durako, 319 CES/CEVA  
525 Tuskegee Airmen Blvd.  
Grand Forks AFB, ND 58205-6434

Your assistance in providing information is greatly appreciated. If you have any questions, please call Ms. Durako at 701-747-4774.

Sincerely,

WAYNE A. KOOP  
Environmental Management Flight Chief

Attachment:  
Environmental Assessment
ROUTING AND TRANSMITTLAL SLIP

Date 8 Jan 04

1. CEV
2. 
3. 
4. 
5. 

<table>
<thead>
<tr>
<th>Action</th>
<th>File</th>
<th>Note and Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval</td>
<td>For Clearance</td>
<td>Per Conversation</td>
</tr>
<tr>
<td>As Requested</td>
<td>For Correction</td>
<td>Prepare Reply</td>
</tr>
<tr>
<td>Circulate</td>
<td>For Your Information</td>
<td>See Me</td>
</tr>
<tr>
<td>Comment</td>
<td>Investigate</td>
<td>1 Signature</td>
</tr>
<tr>
<td>Coordination</td>
<td>Justify</td>
<td></td>
</tr>
</tbody>
</table>

REMARKS

Bldg 233 Addition Fonsi, EA, Coord letters, & Public Notice

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: Heidi Durako, Natural Resources Program Manager

Room No. - Bldg. 747-4774

OPTIONAL FORM 41 (Rev. 1-94) Prescribed by GSA
MEMORANDUM FOR NORTH DAKOTA DIVISION OF COMMUNITY SERVICES
ATTENTION: Jim Boyd
14th Floor State Capitol Building
600 East Blvd
Bismarck ND 58502-0170

FROM: 319 CES/CEV
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434

SUBJECT: Finding of No Significant Impact (FONSI)

1. Attached for your information is the FONSI for the project “Construct Addition to Building 233 for Mechanical Room” at Grand Forks AFB.

2. The FONSI is being submitted to your office in accordance with Air Force Instruction 32-7061 which requires Grand Forks AFB to notify the OMB Circular Clearing House whenever a FONSI has been completed.

3. If you have any questions concerning this matter, please contact Ms. Kristen Rundquist, 319 CES/CEVC at (701) 747-4774.

WAYNE A. KOOP, B.E.M., GM-13
Environmental Management Flight Chief

Attachment:
FONSI
DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)
Kristen Rundquist, 319 CES/CEVC, Air Quality and Natural Resource Program Manager

DO NOT use review and sign the memorandum regarding the Environmental Assessments and FONSI's that were done for the “On-Base Snowmobile Trail” and “Building 233 Addition”.

J 04
April 13, 2004

Wayne A. Koop, R.E.M.
Dept. of the Air Force
319 CES/CEV
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.: ND040413-0133

Dear Mr. Koop:

SUBJECT: FONSI - construct Addition to Building 233 for a Mechanical Room

The above referenced FONSI 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