
2.0

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTIONS, FORT GREELY, ALASKA

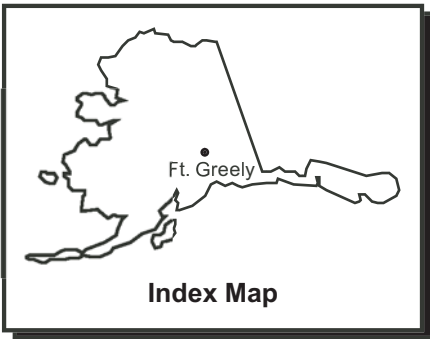
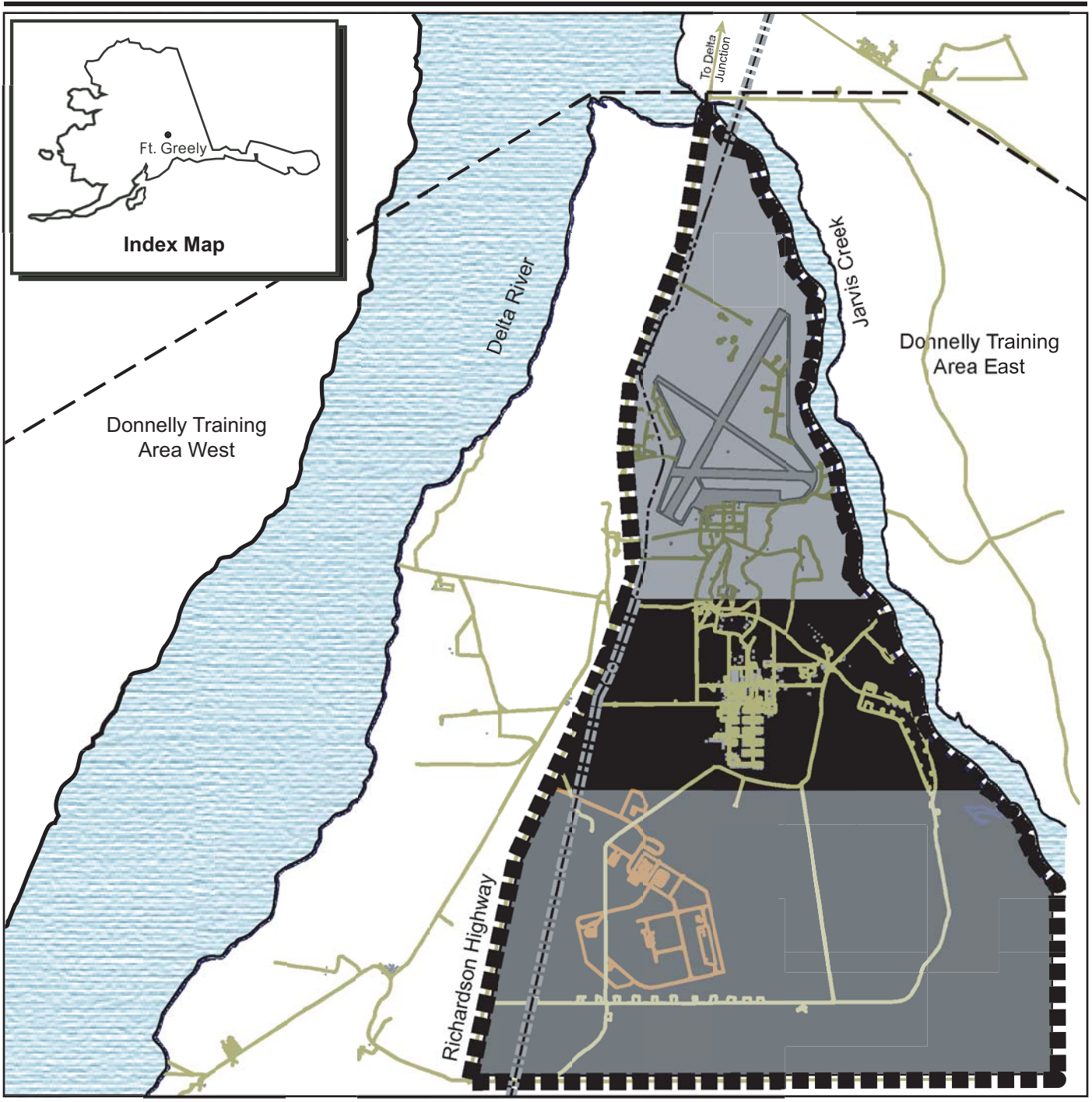
The additional GMD VOC activities analyzed in this supplemental EA would involve the following proposed actions:

- Construction of security fences around three areas: the cantonment area, the southern boundary area, and the Allen Army Airfield
- Extension of the Allen Army Airfield south-north runway (18/36) and the addition of turnarounds and approach lighting at each end
- Improvements to the east-west runway (9/27) to upgrade the runway surface, add turnarounds to each end, and add lateral lighting systems
- Designation of a hotspot at the north end of the 18/36 runway and the northeast end of the northeast-southwest runway (6/24)
- Provisions for deicing activities at the turnarounds at each end of the 18/36 and 9/27 runways
- Modifications to activities at Allen Army Airfield to include adding Class D to the existing Class E controlled airspace, reactivation of the control tower or construction of a new control tower, and installation and use of an ASR-11 or similar type airport surveillance radar

Figure 2-1 depicts the location of Fort Greely and the three general areas of the installation where security fencing is proposed to be installed.

2.1.1 SECURITY FENCING

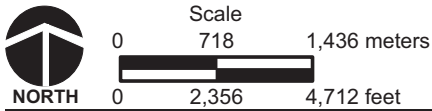
In accordance with Army Regulation 190-11, *Physical Security of Arms, Ammunition, and Explosives*, 12 February 1998, and Army Regulation 525-13, *Antiterrorism*, 4 January 2002, installations are required to take measures to protect the installation's facilities and personnel. To meet this requirement, a series of fences would be installed at Fort Greely in three areas: the cantonment area, the southern boundary area, and the airfield. Gates would be sited to facilitate ease of operations, emergency crew access, and security. The fences would be 2.4-meter (8-foot) high chain-link fencing with barbed wire above. Security measures would be incorporated within the project design and operation procedures. All vegetation would be cleared within a zone of approximately 9.1 meters (30 feet) inside the security fence and approximately 3.7 meters (12 feet) outside the fence. An additional 3 meters (10 feet) of clearing may be necessary in order to windrow (linear pile) the cleared debris; therefore, the fence right-of-way would be a maximum of 15.8 meters (52 feet) wide. The fence alignments have been selected to take advantage of existing roads, trails, and rights-of-way to reduce the amount of clearing required. In some areas, no clearing would be needed, and in others it could range from a width of 6.7 to 15.8 meters (22 to 52 feet). Best Management Practices (BMPs),



EXPLANATION

- Installation Boundary; 2,914 hectares (7,200 acres)
- Trans-Alaska Pipeline
- Primary Roads
- GBI VOC Test Site
- Donnelly Training Area Boundary
- Airfield Area
- Cantonment Area
- Southern Boundary Area
- Water

Fort Greely Overview



Fort Greely, Alaska

Figure 2-1

11-13-02 Ft Greely overview

such as silt fence, straw bales, and protective covering, would be used to reduce the potential for soil erosion. The cleared area would be reseeded with a grass mixture suitable for the area.

There is a possibility that cultural sites could be encountered during construction activities. Personnel would be informed of the sensitivity of cultural resources and the types of penalties that could be incurred if sites are damaged or destroyed. If any cultural items are discovered during the installation of the fence, activities would cease in the immediate area and the Alaska SHPO and potentially affiliated Native Alaskan entities would be notified in accordance with the Fort Greely Environmental Procedures. Subsequent actions would follow the guidance provided. Large mammals, primarily moose, would be herded from the fenced area before enclosing the fences to ensure their safety, as well as that of personnel, and the safety of the mission.

The security fences may be constructed in series or all at one time, depending on funding and additional security requirements. The final designs and layout of the fences have not yet been completed. Because of this, some slight changes to the final requirements and site layout are possible, including the addition of gates if required. Changes of this nature, however, are unlikely to result in meaningful differences in potential environmental impacts. Final plans would be reviewed and compared to this supplemental EA before issuing a notice to proceed with construction work, to ensure no additional potential for environmental effects has been introduced. As part of the GMD VOC EA, plans were analyzed for security fencing around the GBI site. This fence was installed during the summer of 2002.

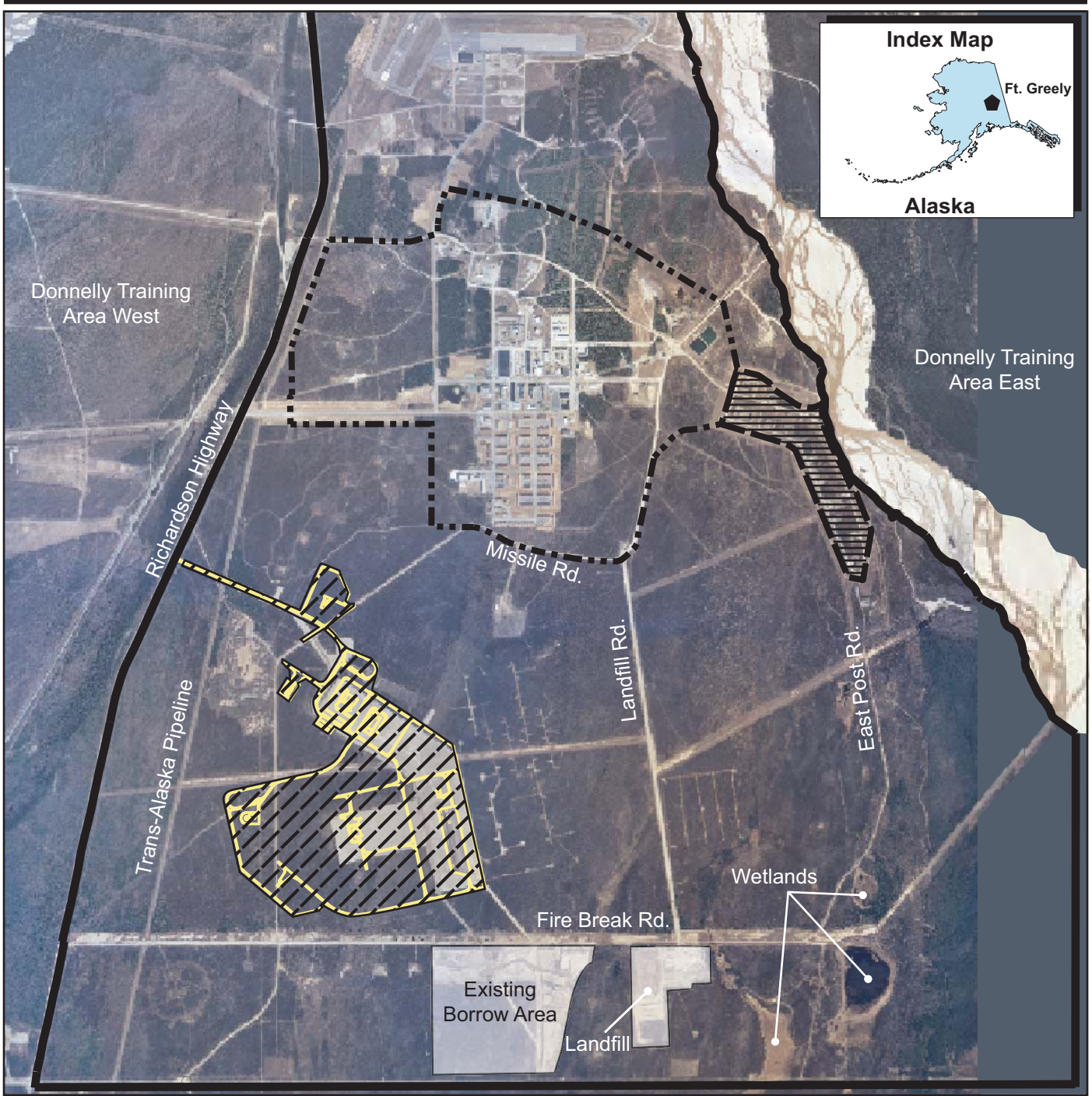
2.1.1.1 Cantonment Area Fence

The first fence proposed for construction would be around the cantonment area as shown in figure 2-2. This would provide protection to the majority of the installation's facilities and personnel. The total area enclosed by this fence would be 318 hectares (787 acres). The cantonment area perimeter requiring fencing is well defined. Although minor changes may be required during design, no other alternative alignments are being considered. If the proposed alignment is not implemented, the No-action Alternative would be selected.

For those areas within the pipeline easement that need to be cleared to meet the 3.7-meter (12-foot) clear zone outside the fence, a Right-of-Way User Guideline would be obtained from Alyeska Pipeline Service Company. The Right-of-Way User Guideline would describe the activities allowed within the pipeline easement.

2.1.1.2 Southern Boundary Fence

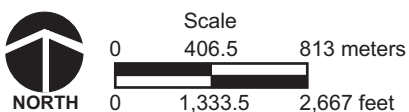
This fence would involve additional proposed fencing alignments around the southern portion of Fort Greely and would provide additional security around the GBI VOC test site described in the GMD VOC EA. The preferred alignment and four alternative alignments for this fence are described in the following paragraphs.



EXPLANATION

- Cantonment Area Security Fencing Length: 7,327 meters (24,040 feet)
Area Within Fence: 318 hectares (787 acres)
- ▨ Existing Fenced Area
- ▬ Installation Boundary
- ▧ GBI VOC Test Site

Proposed Cantonment Area Security Fencing



Fort Greely, Alaska

Figure 2-2

Preferred Alignment

This alternative, shown in figure 2-3, would begin at the intersection of Missile Road and Landfill Road. The fence would proceed south along the west side of Landfill Road until the intersection with Fire Break Road. The proposed route would then go west along the north side of Fire Break Road to 3.7 meters (12 feet) of the easternmost edge of the easement for the Trans-Alaska Pipeline. The easement extends 13 meters (42 feet) east from the centerline of the pipeline. The fence would then go north paralleling the pipeline easement to connect to the installation's Main Gate. This alternative uses the least amount of fence and encloses the smallest area. The total area enclosed by this fence alternative would be 597 hectares (1,475 acres).

Alternative Alignment 1

As shown in figure 2-4, the eastern end of the proposed fence would connect to an existing fenced area and follow East Post Road to the southern boundary of the installation. The fence would then go due west along an existing trail, cross a small wetland, and continue to 3.7 meters (12 feet) of the easternmost edge of the easement for the Trans-Alaska Pipeline. The route would then parallel the east side of the pipeline easement north to connect to the installation's Main Gate. The total area enclosed by this fence alternative would be 1,186 hectares (2,930 acres).

Alternative Alignment 2

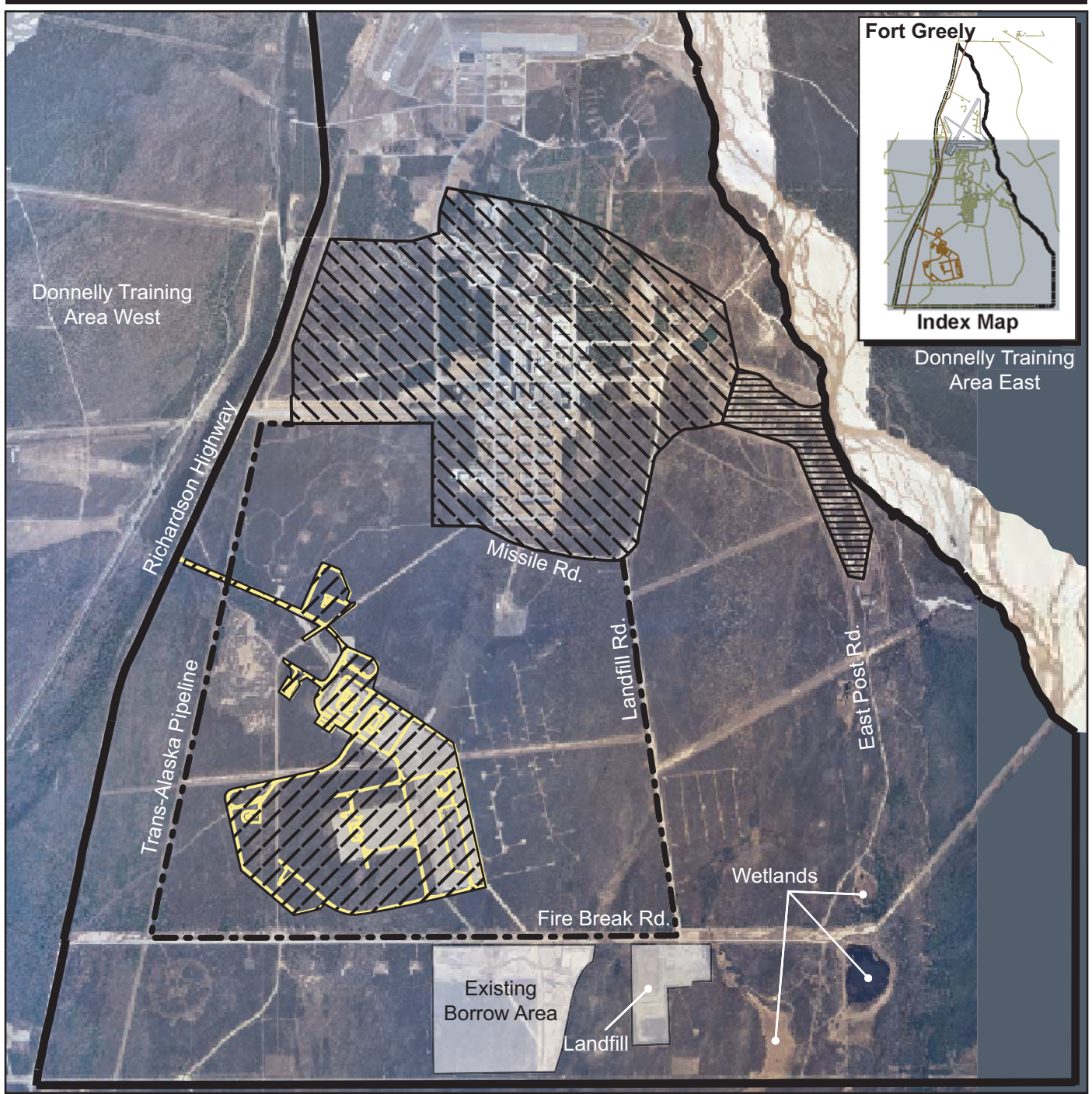
The proposed fence would connect to an existing fenced area (as in Alternative Alignment 1) and follow East Post Road to Fire Break Road, as depicted in figure 2-5. The fence would go west along the north side of Fire Break Road to 3.7 meters (12 feet) of the easternmost edge of the pipeline easement. The landfill would be outside the fenced controlled area. The route would then parallel the pipeline easement north to connect to the installation's Main Gate. The total area enclosed by this fence alternative would be 898 hectares (2,220 acres).

Alternative Alignment 3

In this alternative, shown in figure 2-6, the eastern end of the proposed fence would begin at the intersection of Missile Road and Landfill Road. It would follow Landfill Road south, past East Post Road and around the landfill, until it meets the southern boundary of the installation. The fence would then go due west along the existing trail (avoiding the small wetlands area) to 3.7 meters (12 feet) of the easternmost edge of the pipeline easement. It would then go north paralleling the pipeline easement to connect to the installation's Main Gate. The total area enclosed by this fence alternative would be 842 hectares (2,081 acres).

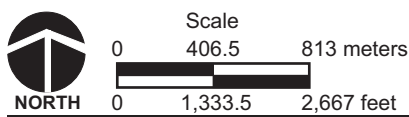
Alternative Alignment 4

Figure 2-7 depicts the eastern end of the proposed fence alternative route that begins at the intersection of Missile Road and Landfill Road (as does Alternative Alignment 3). The fence would follow Landfill Road south, cross East Post Road, and encompass the landfill area. It would then go west along the south side of Fire Break Road to 3.7 meters (12 feet) of the easternmost edge of the pipeline easement. It would then go north paralleling the pipeline easement to connect to the installation's Main Gate. The total area enclosed by this fence alternative would be 633 hectares (1,565 acres).



EXPLANATION

- Southern Boundary Fence Length Alternative 5: 7,958 meters (26,110 feet)
Area Within Fence: 597 hectares (1,475 acres)
- Installation Boundary
- GBI VOC Test Site
- Existing Fenced Area
- Cantonment Area

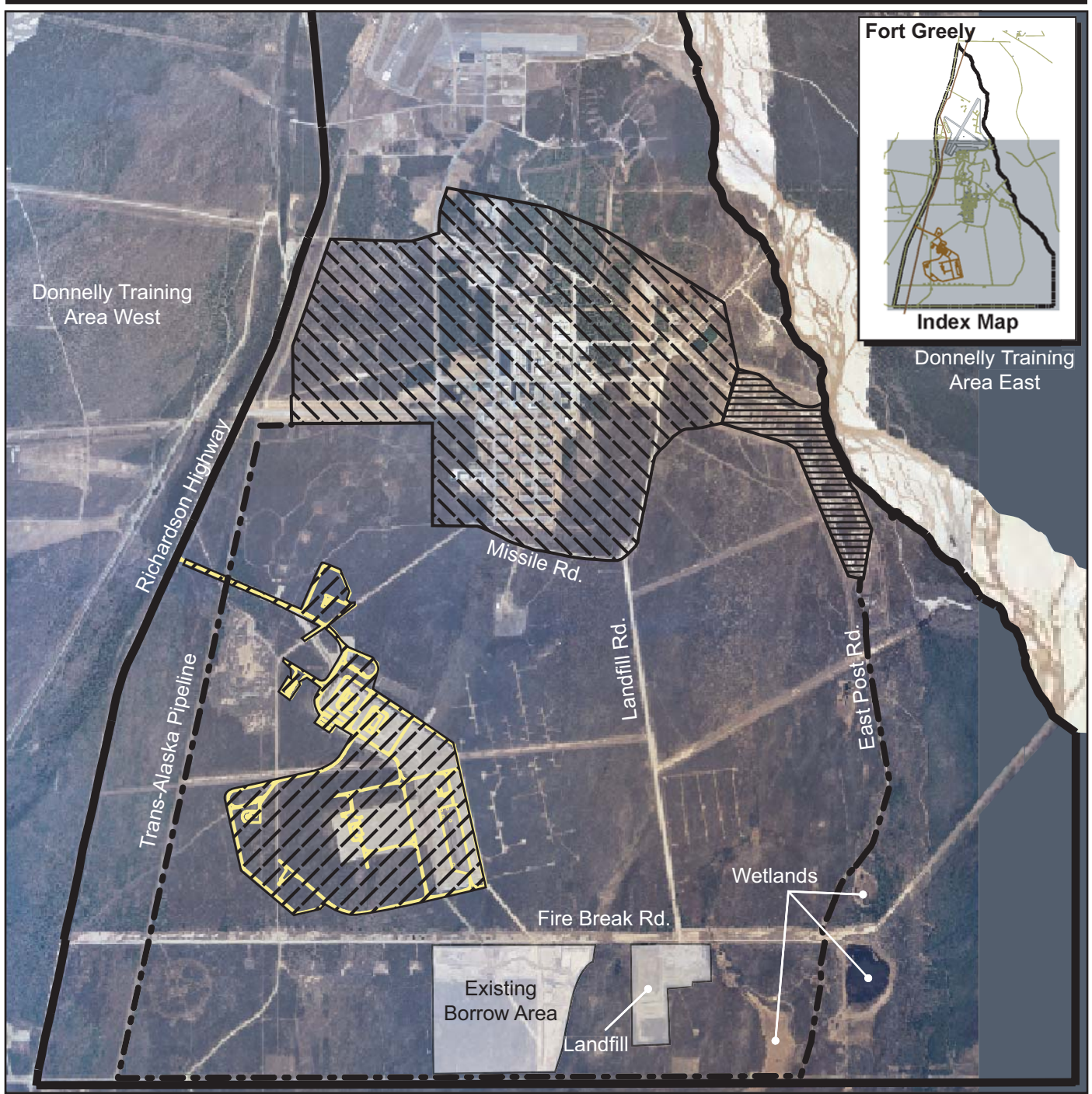


Proposed Southern Boundary Fence Preferred Alignment






Fort Greely, Alaska

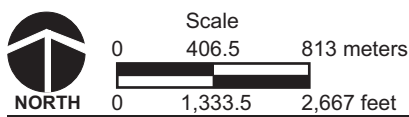
Figure 2-3

11-13-02 Fence Alt 5



EXPLANATION

-  Southern Boundary Fence Length Alternative 1: 10,364 meters (34,003 feet)
Area Within Fence: 1,186 hectares (2,930 acres)
-  Installation Boundary
-  GBI VOC Test Site
-  Existing Fenced Area
-  Cantonment Area

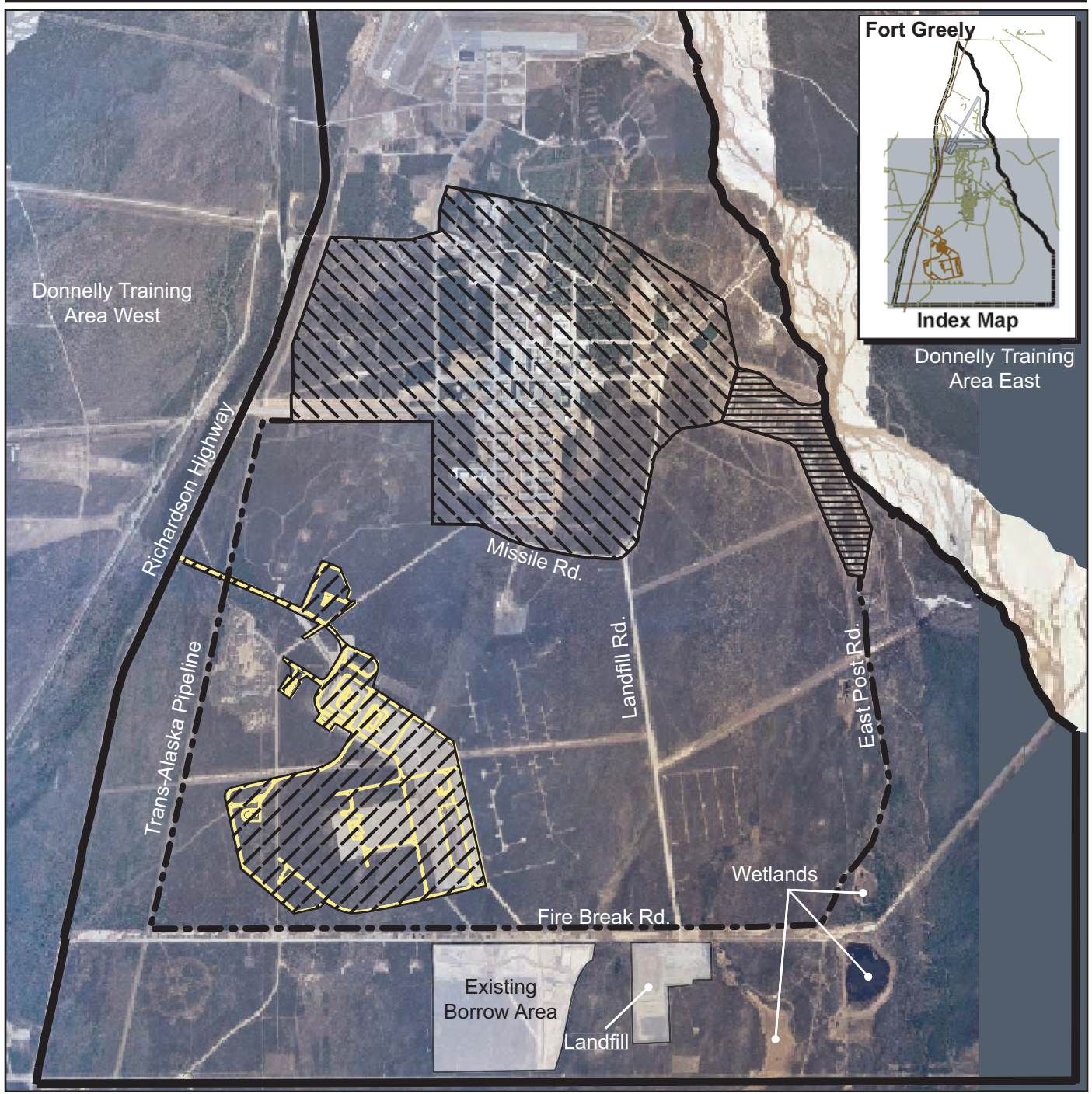


**Proposed Southern
Boundary Fence
Alternative
Alignment 1**






Fort Greely, Alaska

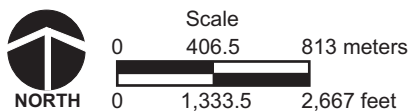
Figure 2-4

11-13-02 Fence Alt 1



EXPLANATION

-  Southern Boundary Fence Length Alternative 2: 8,708 meters (28,569 feet)
Area Within Fence: 898 hectares (2,220 acres)
-  Installation Boundary
-  GBI VOC Test Area
-  Existing Fenced Area
-  Cantonment Area

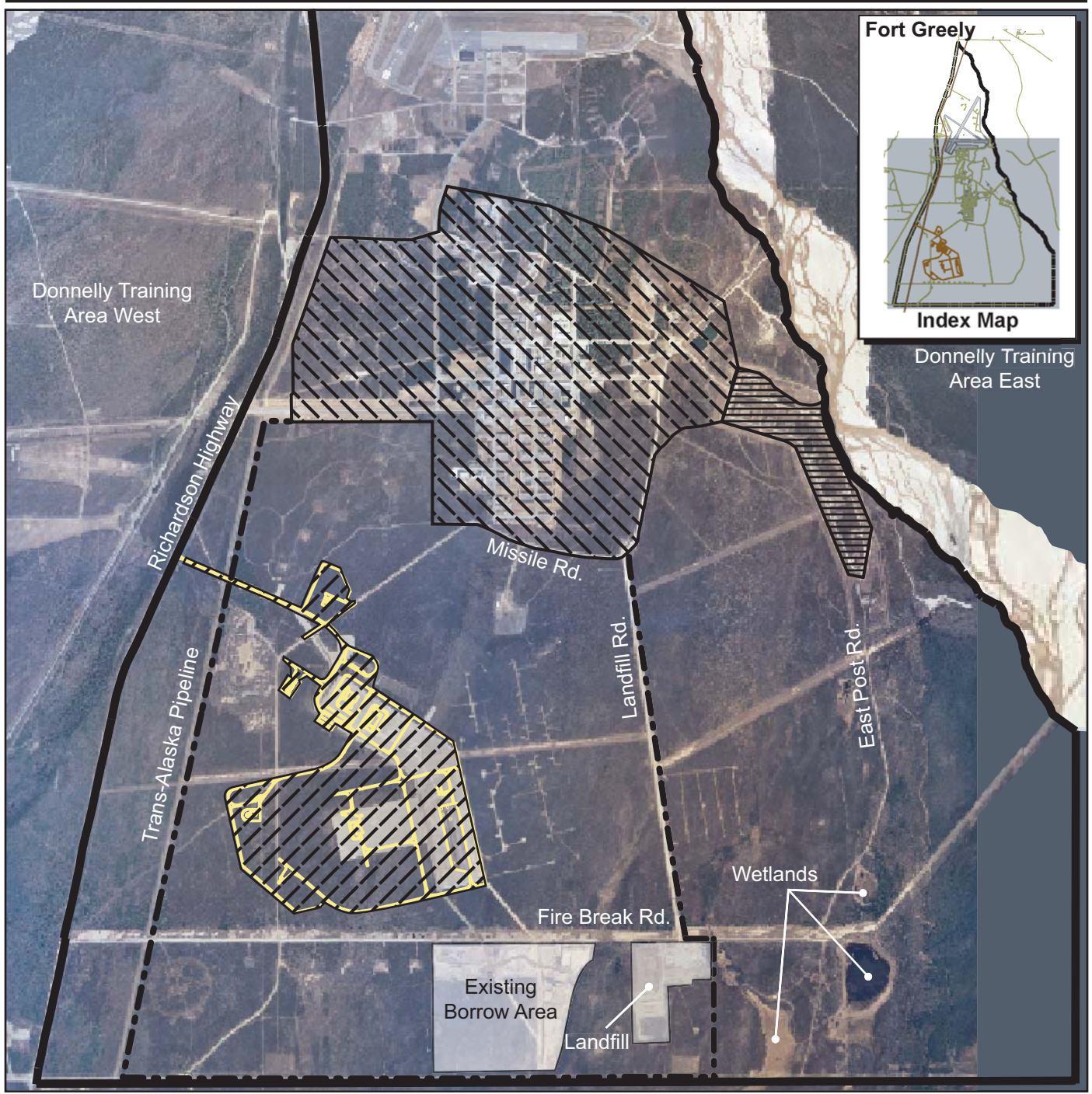


11-13-02 Fence Alt 2






**Proposed Southern
Boundary Fence
Alternative
Alignment 2**

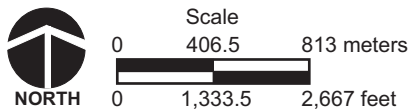
Fort Greely, Alaska

Figure 2-5



EXPLANATION

-  Southern Boundary Fence Length Alternative 3: 10,026 meters (32,895 feet)
Area Within Fence: 842 hectares (2,081 acres)
-  Installation Boundary
-  GBI VOC Test Site
-  Existing Fenced Area
-  Cantonment Area

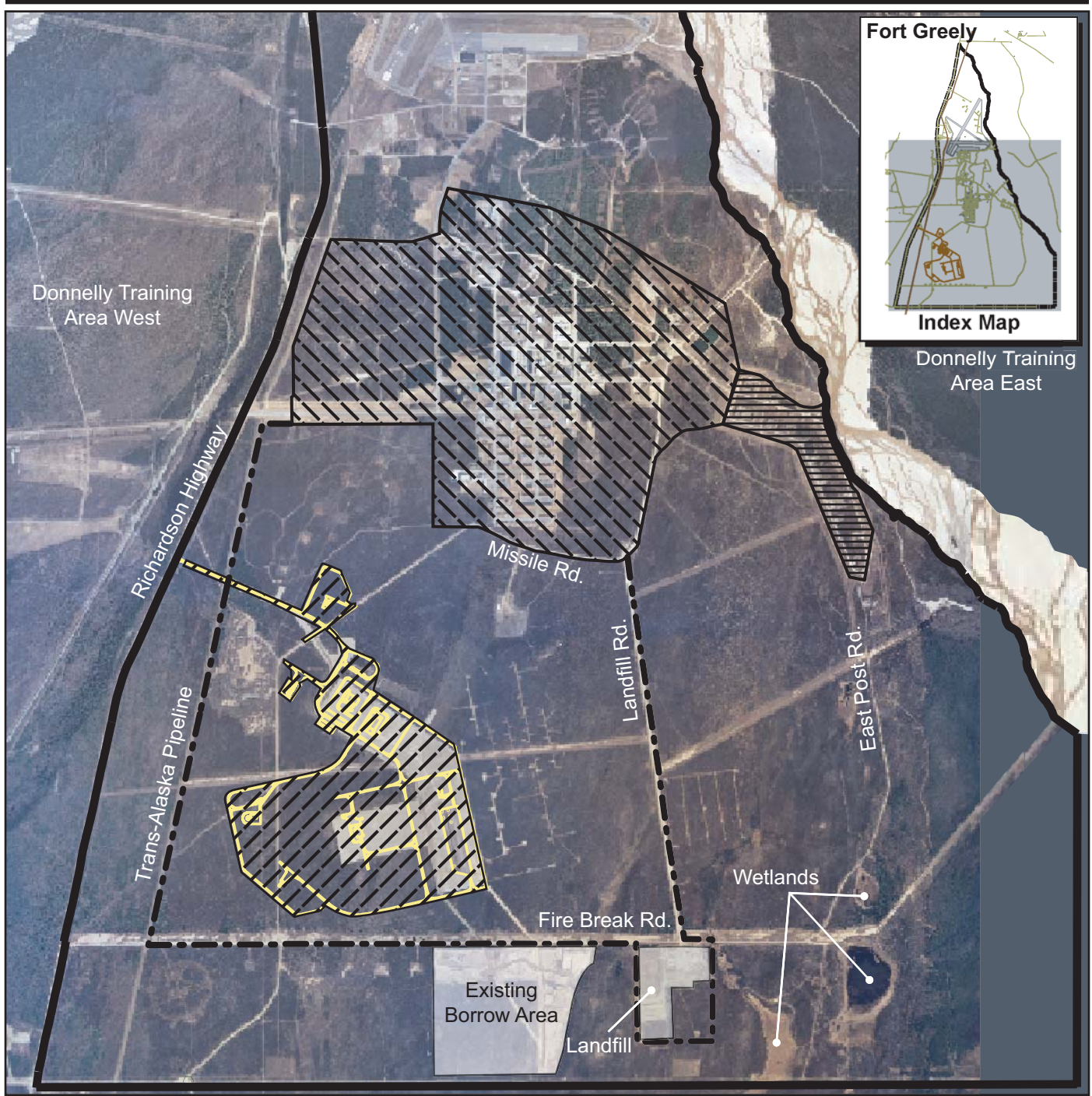


11-13-02 Fence Alt 3






**Proposed Southern
Boundary Fence
Alternative
Alignment 3**

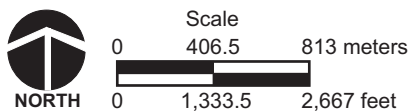
Fort Greely, Alaska

Figure 2-6



EXPLANATION

-  Southern Boundary Fence Length Alternative 4: 9,457 meters (31,026 feet)
Area Within Fence: 633 hectares (1,565 acres)
-  Installation Boundary
-  GBI VOC Test Site
-  Existing Fenced Area
-  Cantonment Area



11-13-02 Fence Alt 4

**Proposed Southern
Boundary Fence
Alternative
Alignment 4**

Fort Greely, Alaska

Figure 2-7

For those areas where the pipeline easement would need to be utilized to meet the 3.7-meter (12-foot) clear zone outside the fence, a Right-of-Way User Guideline would be obtained from Alyeska Pipeline Service Company. The Right-of-Way User Guideline would describe the activities allowed within the pipeline easement.

2.1.1.3 Airfield Fence

The third fence would be the proposed construction of a fence around the airfield portion of the installation (figure 2-8). No portion of the fence would cross the pipeline easement. The total area enclosed by this fence would be approximately 510 hectares (1,260 acres). The fence would enclose this general area with the conceptual alignment shown. No other alternative alignments for the airfield fence are being considered. If this alignment is not implemented, the No-action Alternative would be selected. The proposed fence alignment would likely be modified slightly during design.

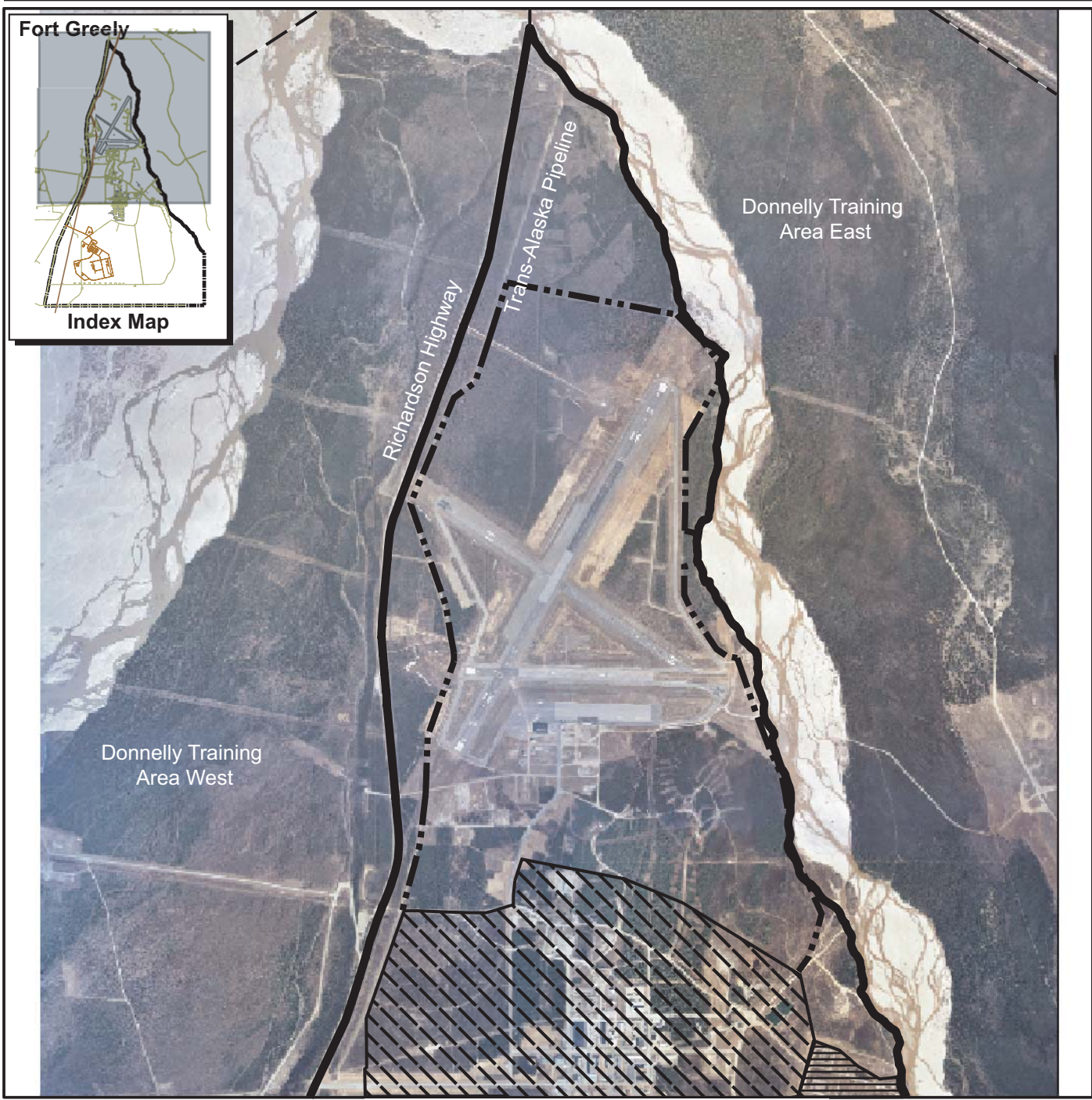
For those areas within the pipeline easement that need to be cleared to meet the 3.7-meter (12-foot) clear zone outside the fence, a Right-of-Way User Guideline would be obtained from Alyeska Pipeline Service Company. The Right-of-Way User Guideline would describe the activities allowed within the pipeline easement.

2.1.2 ALLEN ARMY AIRFIELD MODIFICATIONS AND AIR CONTROL






The utilization of airfields at other installations was evaluated in the GMD VOC EA; however, it has been determined that the safety and security risk to the interceptors would be high due to the long transportation distances over public highways. Therefore, the utilization of Allen Army Airfield is now being proposed. No other alternative sites to the runway modifications at Allen Army Airfield are being considered in this supplemental EA. If the proposed actions are not implemented, the VOC Supplemental EA No-action Alternative would be selected.

The area in the immediate vicinity of Fort Greely has a high density of small civilian aircraft that could present a safety risk to military aircraft. Improving air safety for continued military use of Allen Army Airfield would involve a phased approach that may include all or some of the following actions at Fort Greely:

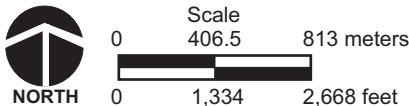
- Extension of the Allen Army Airfield south-north runway (18/36) and the addition of turnarounds and approach lighting at each end
- Improvements to the east-west runway (9/27) to upgrade the runway surface, add turnarounds to each end, and add lateral lighting systems
- Designation of a hotspot at the north end of the 18/36 runway and the northeast end of the northeast-southwest runway (6/24)
- Provisions for deicing activities at the turnarounds at each end of the 18/36 and 9/27 runways
- Modifications to activities at Allen Army Airfield to include adding Class D to the existing Class E controlled airspace, reactivation of the control tower or construction of a new control tower, and installation and use of an ASR-11 or similar type airport surveillance radar



EXPLANATION

-  Airfield Security Fence Length: 8,552 meters (28,057 feet)
 Area Within Fence: 510 hectares (1,260 acres)
-  Installation Boundary
-  Donnelly Training Area Boundary
-  Cantonment Area
-  Existing Fenced Area

Proposed Airfield Security Fencing



Fort Greely, Alaska

Figure 2-8

Airfield Modifications

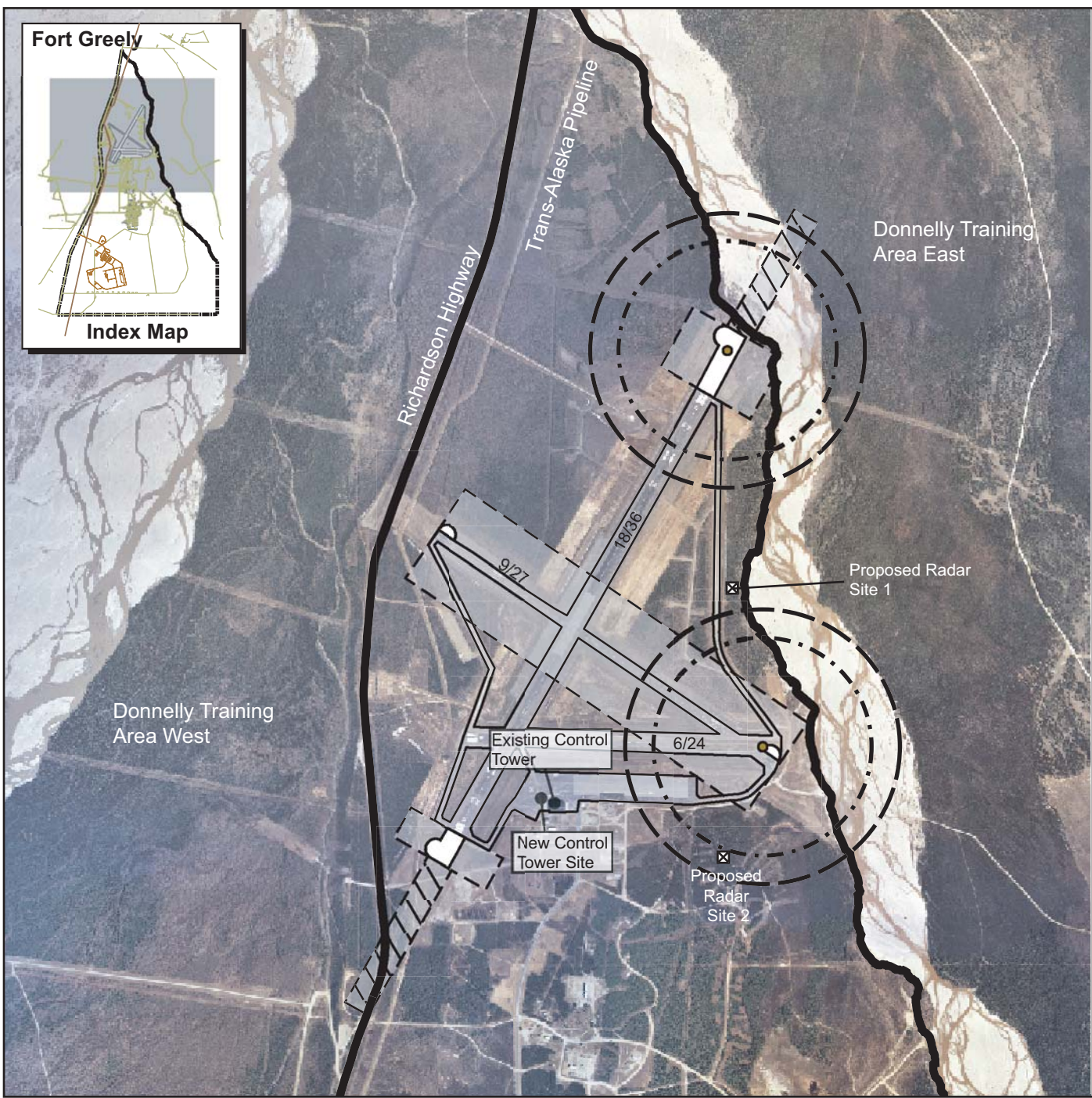
The proposed extension of runway 18/36 at Allen Army Airfield would add approximately 305 meters (1,000 feet) at the north end and approximately 152 meters (500 feet) at the southern end as shown in figure 2-9. Because the runway would also be used as a taxiway, a turnaround area would be added at each end of the runway extension. The additional area would be a semi-circle with an approximate radius of 46 meters (150 feet).

Approach lighting would be added at each end of the extended runway. The lighting would be extended 914 meters (3,000 feet) past the threshold or end of the existing runway on both the north and south ends. Various approach lighting systems could be used with varying number of lights and spacing between structures. Each of the light structures would be constructed to the same height as each other. The lateral areas to each side of the approach light structures would be cleared to a total width of approximately 120 meters (400 feet). Trees, if not totally removed, would be kept below the 50:1 slope requirement from the end of the runway out to the 914-meter (3,000-foot) distance needed for the approach lighting. On the north extension, the lights would need to cross Jarvis Creek a short distance into Donnelly Training Area East, which is under the control of USARAK. Approximately 1.9 hectares (4.7 acres) of clearing south of the runway would cross Richardson Highway into Donnelly Training Area West. For lights in or over the creek, construction of the approach light platforms and trenching for electrical cables would be conducted during the low-flow season. A permit from the U.S. Army Corps of Engineers issued under section 404 of the Clean Water Act would be required. In addition, a Fish Habitat Permit from the Alaska Department of Fish and Game would be required to ensure impacts to stream flows are properly considered.

The area on Donnelly Training Area would require an agreement with USARAK to access, clear, construct, and operate the approach lights. Approximately 1.7 hectares (4.2 acres) would be cleared on Donnelly East and 1.9 hectares (4.7 acres) on Donnelly West. The conversion of this area to a cleared state would not prevent the area from being used for troop training; however, the type of training may be altered to prevent damage to the approach lights.

Hotspot areas would be designated at the north end of the 18/36 runway and the east end of the 9/27 runway for loading and unloading of interceptors. The hotspots require minimum safety setbacks of 434 meters (1,425 feet) for one interceptor and 547 meters (1,795 feet) assuming two interceptors are being loaded/unloaded. Deicing areas would be established at the turnarounds at each end of the 18/36 and 9/27 runways to ensure aircraft safety during all seasons. These areas would be sloped to capture deicing fluid into a sump that would be pumped out after each deicing event. No deicing fluid would be allowed to run off into the storm water system or reach natural ground or waterways. Bio-friendly deicing fluids would be utilized to minimize the risk of contamination to the environment from this activity.

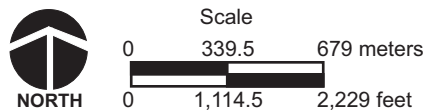
The proposed improvements to runway 9/27 would include repairing and resurfacing the runway surface. Additionally, lateral clearing of approximately 244 meters (800 feet) on each side of the runway would be performed for safety purposes. The runway would not be extended; however, turnarounds would be added to each end of the runway because the runway would also be used as a taxiway. A standard lateral lighting system would be installed, as well as special lighting to be used by the Air National Guard. These improvements would allow aircraft to safely utilize the airfield when the wind direction prohibits the use of the 18/36 runway, as well as allow the Air National Guard to utilize the runway for assault training.



EXPLANATION

- Installation Boundary
- Runway Extensions / Turnarounds
- Lateral Clearing
- Approach Lighting
- Hot Spots
- Proposed Radar Sites
- One Interceptor Safety Buffer; 434 meters (1,425 feet)
- Two Interceptors Safety Buffer; 547 meters (1,795 feet)

Proposed Airfield Modifications



Fort Greely, Alaska

Figure 2-9

Construction fill material would be obtained from the borrow area at the south end of Fort Greely, located west of the landfill. If during the course of construction cultural items are discovered, activities would cease in the immediate area and the Alaska SHPO and potentially affiliated Native Alaskan entities would be notified in accordance with Fort Greely procedures. Subsequent actions would follow the guidance provided.

Air Control

To increase safety for military aircraft approaching Fort Greely, Class D controlled airspace would be added to the existing Class E airspace at Allen Army Airfield. Class D airspace generally extends from the surface to 762 meters (2,500 feet) above ground level for a radius of approximately 7.4 kilometers (4 nautical miles) around the airfield. Class D airspace requires communication between arriving aircraft and the controller before entry, and thereafter those communications are maintained while in the Class D airspace. The controllers would be located at the reactivated Allen Army Airfield Control Tower or a new control tower constructed adjacent to the existing tower.

As an additional safety measure, an ASR-11 or similar type airport surveillance radar would be installed on Fort Greely, as indicated on figure 2-9. The radar would be installed on a tower to place the radar line-of-sight above the trees and to provide coverage below 762 meters (2,500 feet) altitude. An area of approximately 0.4 hectare (1 acre) would be cleared for the radar and associated fencing. Two locations are being considered (figure 2-9). Site 1 is located on a knoll directly east of the center of the airfield, adjacent to Jarvis Creek. Site 2 is located southeast of the center of the runway on a hilltop near the ski area. If during construction cultural items are discovered, activities would stop and the Alaskan SHPO and potentially affiliated Native Alaskan entities would be notified in accordance with Fort Greely procedures. Subsequent actions would follow the guidance provided. As a precautionary measure, signs would be posted at the perimeter of the radar facility advising personnel and the public against approaching the radar facility during operation. Trenching for power and communication lines may be required from the radar site to the modified control tower in Building 100 or a new control tower.

Visual and Instrument Flight Rules would be necessary at the Fort Greely airfield to support GBI requirements and would require an Air Traffic Control presence. Reactivation of the Allen Army Airfield control tower equipment and manpower would be key to controlling Fort Greely airspace. Estimated manpower for the tower would be 14 personnel. The existing tower would be modified or a new tower would be constructed adjacent to the existing control tower (figure 2-9).

No other alternatives to air control are being considered. If Class D controlled airspace is not implemented, then the No-action Alternative would be selected.

2.2 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR FURTHER ANALYSIS

Alternative to Installation Fence at Fort Greely

A potential alternative to construction of a fence at Fort Greely would be the use of additional personnel to provide force protection and security for the installation. This alternative would

require a larger workforce but would not provide the level of force protection and security required.

Boundary Fence at Fort Greely

A potential alternative to the three separate fences would be fencing completely around the installation's perimeter (figure 2-1). This alternative is not considered feasible because the additional force protection and security provided for such a large area are not required, and therefore the additional costs and associated environmental impacts are not warranted.

2.3 NO-ACTION ALTERNATIVE

Under the No-action Alternative, security fence construction, runway 18/36 modifications, runway 9/27 improvements, hotspot designations, deicing provisions, controlled airspace upgrade, control tower reactivation or construction, and radar construction would not be conducted. Without the fence, Fort Greely personnel and facilities would be at a security risk. The airfield and air control activities would not be accomplished, providing less than optimal safety for aircraft activities. The controlled airspace, reactivation of the control tower, and installation of a radar would not be implemented and Class E airspace would remain in effect for the Fort Greely area.