

Appendix B
Section 4(f) Evaluation

Draft Section 4(f)/(49 U.S.C. 303) Evaluation

1.0 Introduction

The Alaska Department of Transportation and Public Facilities (DOT&PF) and the Federal Aviation Administration (FAA) have undertaken an airport master plan for Takotna. The purpose of this master plan is to identify Takotna's long-term aviation needs and to bring the airport into compliance with FAA Advisory Circular (AC) 150/5300-13 Change 9 standards and DOT&PF's Alaska Aviation System Plan (AASP) recommendations. The result of the planning effort is an outline of necessary airport improvements over a 20-year period (DOT&PF 2002) and includes a Phase 1 Report, an Environmental Assessment (EA), an Airport Layout Plan, and a final Airport Master Plan.

The Phase 1 Report presents background information on the community and existing conditions at the airport, and analyzes aviation demand and facility requirements for a 20-year planning period. An important function of the scoping phase was to inform the community, airport users, government agencies, and other organizations that have a stake in airport improvements, about the project, and to obtain information from them for developing alternatives that will achieve the purposes of the project. Using the information and input gathered during the scoping process, one development option was identified that meets the project objectives.

The village of Takotna is located in Interior Alaska on the north bank of the Takotna River in the Kilbuck-Kuskokwim Mountains. It is located approximately 17 air miles west of McGrath and 240 air miles northwest of Anchorage. It lies at approximately 62° 59' N Latitude, 156° 04' W Longitude (Sec. 35, T034N, R036W, Seward Meridian). The only year-round access to the village is via Takotna Airport, the only airport serving the community. Aircraft are the primary means of transporting mail, freight, and people to the village.

Section 4(f) of the U.S. Department of Transportation Act, recodified as 49 U.S.C. 303, requires that no Administration approval may be granted for a project using land from a publicly owned park, recreation area, wildlife and waterfowl refuge, or any significant historic site, unless there are no prudent and feasible alternatives. The proposed project would involve segments of the Iditarod National Historic Trail (INHT), including the Takotna Flat Primary Iditarod Trail (IDT-059), the Takotna-Nixon Fork Winter Trail (IDT-268), the Takotna-Nixon Fork Summer Trail (IDT-267), and the McGrath-Takotna Trail Spur (IDT-068).

2.0 BLM Easements on the Iditarod National Historic Trail

Takotna is also a checkpoint for the Iditarod Trail Sled Dog Race, and is located near the INHT. The INHT is protected by several easements owned by the Bureau of Land Management (BLM). According to the BLM, these easements are described as follows:

- 25-Foot Trail Easement: Accommodates foot traffic, dogsleds, animals, snowmobiles, two- and three-wheeled vehicles, and small all-terrain vehicles (ATVs) less than 1,361 kg (3,000 lbs) gross vehicle weight.
- 50-Foot Trail Easement: Allowed uses include foot traffic, dogsleds, animals, snow machines, two- and three-wheeled vehicles, small and large ATVs, track vehicles, and four-wheel-drive vehicles.
- 60-Foot Road Easement: Accommodates foot traffic, dogsleds, animals, snowmobiles, two- and three-wheeled vehicles, small and large ATVs, four-wheel-drive vehicles, autos, and trucks.
- 1-Acre Bridge Site: This site, located on the south bank of the Takotna River at the Takotna River

bridge, is designated for vehicle parking (aircraft, boats, ATVs, snow machines, cars, and trucks), temporary camping, loading, and unloading. Temporary camping, loading, and unloading are limited to 24-hour periods.

None of these easements necessarily preclude airport development, primarily because the State of Alaska describes Revised Statute (RS) 2477 rights-of-way identical to portions of the INHT and other trails in the vicinity of Takotna, as described in Section 1.1.2.

3.0 State of Alaska Revised Statute 2477 Rights-of-Way

The Alaska Department of Natural Resources (ADNR), Division of Mining, Land, and Water, has identified several Revised Statute (RS) 2477¹ rights-of-way in the vicinity of Takotna. RS 2477 was a law enacted to grant public right-of-way across unreserved federal land when people used or constructed routes to guarantee access as land was transferred to State or private ownership. Once a right-of-way was established, it became a “valid existing right” owned by the State. The RS 2477 qualification in Alaska ended in December 1968. Any homesteads, home sites, Native allotments, federal parks, etc., created after RS 2477 was accepted would be subject to these rights-of-way. The following five RS 2477 easements have been identified in the vicinity of Takotna:

- **RST 138 (IDT-068): McGrath-Takotna Trail Spur.** Starting from the west bank of the junction of the Takotna and Kuskokwim rivers at McGrath, this 18-mile trail heads west, crossing Candle Creek and the Tatalina and Takotna Rivers to arrive at the community of Takotna. The route is shown on the USGS Iditarod D-1 and McGrath D-6 maps. Constructed in 1923 by the Alaska Road Commission, the McGrath-Takotna Winter Trail formed part of the mail route from Nenana to Flat.
- **RST 201 (IDT-059): Takotna-Flat Winter Trail Via Moore Creek.** From the Takotna Airport, this 93-mile route heads south along the Takotna River, Fourth of July Creek, Moore Creek, and Bonanza Creek. It ends near the junction of Bonanza and Prince Creeks, at the Prince Creek Trail. It is shown on the USGS Iditarod B-3, B-4, C-2, C-3, and D-1 maps. RST 201 was a winter mail trail, passable by dog team, during the early days of the Iditarod-Flat mining district.
- **RST 203 (IDT-268): Takotna-Nixon Fork Winter Trail.** This is a 14.5-mile route connecting the community of Takotna with McGrath and Medfra. It is shown on the USGS Medfra A-6 and Iditarod D-1 maps. From the early 1900s to the present, RST 203 has been used for hauling freight and people between these communities.
- **RST 204 (IDT-267): Takotna-Nixon Fork Summer Trail.** This trail extends east from Takotna along Porcupine Ridge roughly 15 miles to where the Nixon Fork empties into the Takotna River. The Alaska Road Commission identified this trail as route 80G. DOT&PF’s 1973 *Trails Inventory* shows this route as Trail 5 on Maps 79 (Iditarod Quadrangle) 80 (McGrath Quadrangle) and 89 (Medfra Quadrangle). The route is shown on the USGS Iditarod D-1, McGrath D-6, and Medfra A-6 maps. Constructed by the Alaska Road Commission in 1924, this trail was traveled by packhorses in summer and sleds in winter, to transport freight from the Nixon Fork to Takotna.
- **RST 206: Takotna-Twin Peaks Trail.** Roughly 123 miles long, this trail runs northwest from Takotna and bends north near the headwaters of Canadian Creek. It continues north along ridge tops, passing east of Robert Creek and paralleling it to the east, then traveling north and northeast over the northern slopes of the Cloudy Mountains to the terminus at Twin Peaks. The route is shown on the

¹ Revised Statute 2477 from the Mining Act of 1866.

USGS Iditarod D-1 and Ophir A-1 quadrangles. Historically a summer packhorse trail, RST 206 gave prospectors in the district access to their mines.

4.0 Proposed Action

4.1 Alternative C – Proposed Action

Alternative C would relocate the airport approximately 0.9 miles east of the village. Table 1 describes the proposed action, which is based on forecast demand and the design aircraft, the Piper PA-31, with modifications to accommodate the L-100 aircraft.

Table 1.
Proposed Action and Airport Design Standards for Takotna Airport

<i>Design Element</i>	<i>Proposed Action</i>
Primary Runway (4/22) Length	4,000 ft
Primary Runway (4/22) Width	60 ft Shoulders: 10 ft
RSA Length Beyond Runway	240 ft each end
RSA Width	120 ft
OFA Length (beyond runway end)	240 ft each end
OFA Width	400 ft
Runway Protection Zone (RPZ)	Inner width: 500 ft Outer Width: 700 ft Length: 1,000 ft beyond runway end
Taxiway	45 ft
Taxiway Safety Area Width	118 ft
Lighting	MIRL, MITL
Apron	200 ft by 350 ft (70,000 ft ²)
Aviation Support Area	100 ft by 300 ft (30,000 ft ²)
M&O Area	100 ft by 100 ft (10,000 ft ²)
Equipment Building	heated, double bay
Service Access	Road to village: 24 ft by 0.9 mi. (2 lane gravel)

The proposed airport facility has several modifications to the standards and recommendations established by FAA's AC 150/5300-13 Change 9 and DOT&PF's AASP in order to accommodate larger aircraft that are necessary to service the community. In addition to runway length, the taxiway and taxiway safety area width have also been increased. Another modification from the AASP recommendations is the increased apron size. These changes are described in more detail in Section 3.

The new runway would be aligned approximately 56 degrees east from true north, parallel to the prevailing winds as described by pilots and residents. The recommended minimum wind coverage under FAA standards is 95%. The proposed action has adequate wind coverage. Furthermore, Alternative C, the proposed action, is aligned parallel to the Takotna River Valley, as suggested by residents and air taxi operators.

A 24-foot-wide by 0.9-mile-long access road connecting the airport with existing roads at the eastern limits of the village would be constructed, as well as 0.9 mile of power line extension for airport lighting. Culverts would be installed where needed to maintain existing drainage patterns along the access road and runway.

Alternative C would have lighting that meets DOT&PF's AASP recommendations. A 44- by 50-foot heated storage building for airport snow removal equipment would be constructed adjacent to the aviation support area. An airport rotating beacon would be installed on the new building. Fuel for snow removal equipment would be stored in a double-walled, skid-mounted tank with a 500-gallon capacity. However, no fuel for aircraft use would be stored in the equipment storage building.

To meet the anticipated demand for fill and surfacing materials, an existing material site (Material Site 3) would be expanded and two new materials sites (Material Sites 5 and 6) would be developed. Material Site 3 is an active rock quarry located immediately adjacent to the existing Takotna airport. Material Site 5 is 0.6 miles east of the community, immediately south of the Takotna-Nixon Fork Winter Trail, between the west end of the proposed runway and the proposed airport access road. Material Site 6 is located approximately 1.8 miles east of the community, southeast of the proposed airport location and adjacent to the Takotna River.

5.0 Description of 4(f) Property and Determination of Eligibility for IDT-068

5.1 Takotna-Flat Primary Iditarod Trail (IDT-059)

The Iditarod Trail, originally the Seward to Nome mail trail, was surveyed by the Alaska Road Commission in 1908 as a winter trail for sled dog freight and mail carriers. The main trail route, which ran through Takotna and other major mining communities, eventually became known as the INHT. Long before the gold rush in the area in 1907, the route was used by Ingalik and Dena'ina Indians, and later by Russian fur traders.

Construction of the trail from Seward to Nome began in 1910-1911. Because parts of the route were already in use between Nome and inland gold camps, the trail was constructed from both ends. The two ends met at the Iditarod Mining District. As the gold rush continued, the mail trail expanded into a trail system with over 1,300 miles of connecting trails. The Iditarod Trail system was a main route for winter travel, commerce, and communications between mining camps, trading posts, and other settlements founded during the Alaska gold rush era. Early 20th Century gold seekers disembarking at Seward or the town of Knik on Cook Inlet followed the Iditarod Trail across the Alaska Range on their way to gold fields in the interior of Alaska.

The segment of the INHT near Takotna is designated as the Takotna-Flat Primary Iditarod Trail. It runs along the north side of the Takotna River floodplain and through the village, and is the main trail in the area. The Iditarod Trail is recorded with the State as a public right-of-way (RS 201). It was one of many historic rights-of-way granted to the State of Alaska under RS 2477 of the Mining Act of 1866. The trail is also recorded with the BLM as a National Historic Trail under the National Trails System Act, Public Law 90-543 of October 2, 1968. Public Law 95-625 (the National Parks and Recreation Act) specifically named the Iditarod Trail as a National Historic Trail.

5.2 McGrath-Takotna Trail Spur (IDT-068)

The trail designated as the McGrath-Takotna Winter Trail (IDT-0068), constructed by the Alaska Road Commission in 1923, was part of the mail route from Nenana to Flat. This trail is also one of the historic rights-of-way granted to the State of Alaska under RS 2477 of the Mining Act of 1866; the State's designation for the trail is RST 138. The 18-mile trail begins on the western bank of the Kuskokwim River at McGrath, near the junction of the Takotna and Kuskokwim Rivers. The trail runs generally westward, crosses to the northern side of the Takotna River about 1 mile east of the village, and connects to the Takotna-Flat Primary Iditarod Trail (IDT-059). The McGrath-Takotna Winter Trail was part of the historic transportation

and communication associated with the INHT. As one of the connecting trails, the McGrath-Takotna Winter Trail provided access to communities not located on the primary Iditarod route. The trail is relatively unchanged, and still has integrity of location, setting, and association.

The ADOT&PF and the FAA have consulted with the State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800 and regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470). These agencies have determined that the McGrath-Takotna Winter Trail (IDT-0068) is eligible for listing on the National Register of Historic Places under Criterion A (events), as established in a Determination Of Eligibility (DOE) for listing in the National Register of Historic Places completed for this property (Appendix B). The McGrath-Takotna Winter Trail is not included in BLM mappings of trails with National Historic Trail designations.

5.3 Takotna-Nixon Fork Winter and Summer Trail Segments (IDT-268 & IDT-267)

The Takotna – Nixon Fork Winter Trail (IDT-268) is a 14.5 mile winter access trail that runs northeastward from Takotna, along the foothills above the Takotna River. The trail segment has been in use since the early 1900s, and is the oldest of the three identified INHT segments. It may date as early as 1908, when Takotna was first established. The winter trail segment intersects with winter trails connecting McGrath and Medfra, and was used throughout the early 1900s for winter sled transportation and freight delivery.

The Takotna-Nixon Fork Summer Trail (IDT-267) segment was constructed by the Alaska Road Commission (ARC) in 1924. The summer trail segment extends 15.5 miles east from Takotna along Porcupine Ridge, to the point where Nixon Fork empties into the Takotna River. The summer trail segment was used for pack-horse transportation of goods from the Forks to Takotna, which could not be moved by boat.

Both the Takotna-Nixon Fork Winter and Summer Trail segments were established by the state under the State of Alaska Revised Statute (RS) 2477 of the Mining Act of 1866. The trail segments are designated as RST 203 and RST 204. Both trail segments are part of the same historic transportation and communication associated with the INHT. Similarly to the McGrath-Takotna Winter Trail, the Takotna-Nixon Fork Winter and Summer Trail segments are eligible for listing in the National Register of Historic Places based on criterion A (events), as component parts of the INHT.

5.4 Other Properties

Mining activity from the early 1910s and 1920s left a number of historic sites in the area of Takotna, such as cemeteries and other historic structures. The Twitchell/Anderson Cabin (IDT-269) is also within the project area and was determined eligible for listing in the National Register. However, with the exception of the INHT, there are no publicly owned parks, recreation areas, refuges, or other historic sites in the project area that would fall under the jurisdiction of Section 4(f) of the U.S. Department of Transportation Act, recodified as 49 U.S.C. 303.

6.0 Impacts to Section 4(f) and Cultural Properties

6.1 Section 4(f) Property

The INHT-Takotna-Flat Primary Iditarod Trail (IDT-059) runs north of the proposed runway and access road, varying between approximately 700 feet and 100 feet in distance from the runway. Approximately 1,215 feet of the INHT is within the airport boundaries of the proposed build alternative. Additionally, the proposed temporary access road from Material Site 3 will impact the main INHT-Takotna-Flat Primary Trail to the north of the proposed runway and access road, crossing the INHT segment to access the runway. Additional impacts would occur at the northeastern limit of the proposed runway, where an access road from Material Site 6 will cross the trail. Regulations concerning safe operation of the airport would prevent continuing use of the trail across the runway, and the affected length of the trail would be abandoned. Other impacts will affect the trail route, but are temporary access roads that will not affect continued use after the project is constructed. No restrictions would be placed on the INHT.

Approximately 200 feet of the McGrath-Takotna Winter Trail segment would be directly impacted by the project. The runway embankment would cross the McGrath-Takotna Winter Trail approximately 1.5 miles east of Takotna, near the intersection of this trail and the INHT-Takotna-Flat Primary Trail. About 1,150 feet of the trail is within the proposed airport boundaries. In the project area, the main function of this trail is as a connection to the Takotna River and the remaining portion of the trail running south. Regulations concerning safe operation of the airport would prevent continuing use of the trail across the runway, and the affected length of the trail would be abandoned. Additionally, the proposed temporary haul road from Material Site 3 will also impact the western segment/terminus of the McGrath-Takotna trail.

Locating the runway across the McGrath-Takotna Winter Trail would require that users find an alternative route outside of airport property to the Takotna River that would connect to the remaining portion of the trail that runs south of the Takotna River. Currently, this trail is used by one individual in Takotna for trapping purposes and there are no plans to relocate the trail. A Memorandum of Agreement (MOA) has been reviewed and signed by FAA, BLM, and the SHPO to mitigate the adverse effects the proposed project may have on the integrity and function of the INHT segment.

6.2 Section 4(f) Avoidance Alternatives

A number of alternatives were proposed that would avoid impacts to Section 4(f) property, including the No Action alternative, which would leave conditions as they currently exist. The No Action alternative is evaluated in the Takotna Airport EA.

Several alternatives were identified in Phase I of the project, including:

- Alternative A – improving the runway at the existing airport.
- Alternative B – building a new airport across the river from Takotna.
- Alternative D – using Tatalina Air Force Station.

These alternatives were not brought forward for evaluation in the EA due to environmental and engineering concerns. Alternative A was not considered feasible because safety issues related to winds would not be addressed and the costs of the large fill necessary to lengthen the runway in this location were prohibitively expensive. Alternative B was dropped from consideration because of the amount of wetland impacts, the location of Native allotments in the area, and the prohibitive costs of building a bridge or maintaining the existing road. Tatalina Air Force Station, Alternative D, was not carried forward because of the distance from the community, no support by the Takotna community, and the difficulties in coordination between the DOT&PF and the U.S. Air Force for use of the runway. Only the proposed action would involve the INHT.

6.3 Mitigation and Measures to Minimize Harm

To mitigate this impact, the DOT&PF has agreed, in a MOA (dated June 5, 2006) with the BLM, FAA, and SHPO (the agencies with jurisdiction), to do the following (Appendix B):

- **Trail Easement Relocation.** Trail easement relocation of the affected portions of the Takotna-Nixon Fork Winter Trail (IDT-268) and the McGrath-Takotna Trail Spur (IDT-068) as necessary to provide for continued public trail access.
- **Interpretive Sign and Documentation.** Development of an interpretive sign, photography and documentation of the trail sections of the McGrath-Takotna Trail Spur (IDT-068), Takotna-Nixon Fork Winter Trail (IDT-268), and the Takotna-Nixon Fork Summer Trail (IDT-267) that would be affected by the airport project. This would include the preparation of an Alaska Heritage Resource Survey card for each trail and provide it to the SHPO.

7.0 Coordination

Consultation and coordination with the SHPO, FAA, BLM, and Takotna area Native entities has been ongoing throughout the project. A DOE was completed for all segments of trails affected by this project. In June 2006, the SHPO, FAA, and BLM reviewed and signed an MOA for impacts to affected trails. The DOT&PF and Takotna Village Council are concurring parties on the MOA. The MOA describes the measures that would be incorporated into the proposed action to mitigate impacts to the affected trail segments and the INHT within the project boundaries.

8.0 Conclusion

There are no prudent or feasible alternatives to the use of the Section 4(f) property and all possible planning to minimize harm to the property has been incorporated into the proposed action. The other alternatives considered early in the project had engineering, operational, or environmental concerns associated with them that made them infeasible. Discussions of mitigation for project impacts have been completed through consultation with and to the satisfaction of the BLM, the agency with jurisdiction over the INHT. There are no other Section 4(f) properties in the project area.