

East Fork Outhouse Replacement  
Denali National Park and Preserve

Cultural Resource Report No. 2024-DENA-010

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April 2024

## Abstract

Denali National Park and Preserve (the Park) is proposing to install a new outhouse at the Upper East Fork Cabin (UEFC), located on the Denali Park Road. The cabin was listed on the National Register of Historic Places in 1986, is part of a draft Park Road Patrol Cabins Cultural Landscape (CL) and is also a contributing resource to the Mount McKinley Park Road Historic District (HD) and Cultural Landscape.

The current outhouse, which is a contributing historic feature of the proposed park road cabin cultural landscape, is at capacity and to have continued use of the UEFC the park needs to have a facility to dispose of canine and human waste. The historic outhouse is no longer pumpable. The Park is proposing to leave the historic outhouse at its current location and installing a new outhouse to the west of the East Fork Cabin. While this would introduce modern construction to the UEFC site and cultural landscape, the new construction would be located out of the historic view of the cabin, would be compatible with the HD and the CL, and would be designed to blend with the landscape. It would also leave the historic outhouse at its historic location and would maintain the integrity of the location and setting of the HD and CL.

As designed, the proposed project will not result in the adverse effect to historic properties and the Park is approaching National Historic Preservation Act, Section 106, consultation under 36 CFR Part 800.5(3)(b) as “No Adverse Effect”.

## 1 Description of Undertaking

Denali National Park and Preserve (the Park) is proposing to install a new outhouse at the Upper East Fork Cabin site (UEFC), located at mile 42.8 of the Denali Park Road. The cabin was listed on the National Register of Historic Places in 1986, is part of a draft Park Road Patrol Cabins Cultural Landscape (CL) and is also a contributing resource to the Mount McKinley Park Road Historic District (HD) and Cultural Landscape.

The current outhouse, which is a contributing historic feature of the proposed park road cabin CL, is at capacity and to have continued use of the UEFC the park needs to have a facility to dispose of canine and human waste. The historic outhouse is no longer pumpable. A draft cultural landscape report for the UEFC recommends installing an accessible restroom to the north of the spur road between the Dean Cabin and the UEFC (to the west). This location would accommodate use by residents of both cabins. The historic outhouse would be left at its current location and a new outhouse placed to the west of the UEFC; approximately halfway between the UEFC and the Dean Cabin. The outhouse would be pumpable, accessible, and be designed to blend with the cultural landscape. The outhouse would require 7'3" x 6'2" footprint to make it accessible.

## 2 Location for the undertaking and Area of Potential Effect

The project area is located at the UEFC along the Denali Park Road at elevations between 2,500-3,500' asl. The Area of Potential Effect (APE) is the area within the boundary of the UEFC as described in the Denali Park Road Patrol Cabin Cultural Landscape Inventory (CLI), see Appendix A. The APE includes 58.3 areas; see Section 6 (Maps & Photos) for visual depictions of the APE.

### 2.2 Upper East Fork Cabin (UEFC) APE

The boundary of the UEFC is encompassed by an irregular polygon containing 54 acres of which 35 acres are designated wilderness. The boundary begins at point A (-149.786874°/ 63.559400°) on the south limit of the Denali Park Road. From point A, the boundary extends east 545 feet alongside the road, crossing the East Fork Cabin turnoff, to meet with point B (-149.783560°/ 63.559436°). The boundary then heads southwest 430 feet to meet with point C (-149.784605°/ 63.558360°) above the neck of the East Fork Cabin turnoff. From there, the boundary extends 837 feet east along the hillside to meet with point D (-149.779499°/ 63.558460°) above the outhouse. The boundary continues southwest towards the stream bed for 492 feet to meet with Point E (-149.776660°/ 63.557908°) at the edge of the tributary to the East Fork River floodplain. The boundary continues eastbound for 1,364 feet to meet with point F (-149.764788°/ 63.556666°) before crossing the tributary to meet with point G (-149.764274°/ 63.555914°) on the south bank. From point G, the boundary proceeds southwest for 817 feet to reach the top of

the adjacent plateau at point H (-149.768926°/ 63.555146°). The boundary continues west along the plateau for 2,220 feet to meet with point I (-149.782032°/ 63.556292°) where the tributary feeds into East Fork River. Finally, the boundary proceeds 1,460 feet north, following the east bank of East Fork River, before proceeding north to meet with point A at the Denali Park Road.

### 3 Results of Inventory and Records Check

DENA cultural resource records, AHRS records, and GIS data were reviewed before this project. The UEFC was listed on the National Register of Historic Places in 1986, is part of a draft Park Road Patrol Cabins Cultural Landscape (CL) and is also a contributing resource of the Mount McKinley Park Road Historic District and Cultural Landscape.

#### 3.1 Mount McKinley Park Road Historic District and Cultural Landscape (HEA-00429/MMK-00171, HEA-00517/MMK-00195)

The 92-mile Mount McKinley Park Road Historic District and Cultural Landscape (PRHD&CL) runs east to west in the foothills north of the Alaska Range in DENA. The road extends from mile 237.3 of the George Parks Highway across several low passes and glacier-fed rivers to the historic mining district of Kantishna, which was incorporated into the park by the Alaska National Interest Lands Conservation Act in 1980. The road was originally constructed from 1922 to 1938 by the Alaska Road Commission (ARC). The ARC and the NPS collaborated on the road design. The road is historically significant for its association with the period of scenic road development in national parks in the 1920s and 1930s, as well as for its association with the Mission 66 park development program in the 1950s and 1960s (Criterion A). The road is also a rustic example of landscape engineering combining NPS aesthetic road design principles with the ARC's experience constructing roads in northern environments (Criterion C).

The areas of significance are Entertainment/Recreation and Transportation for its relation to automobile tourism and Landscape Architecture for its aesthetically oriented design. The period of significance begins in 1922 when the route was originally cleared. It extends to 1972, when the Park Road shuttle bus system was implemented. The PRHD&CL is significant at a national level because it serves as one of the most important corridors for tourism in a national park in Alaska.

The PRHD&CL retains integrity in the areas of significance of entertainment/recreation, transportation, and landscape architecture for the period of significance (1922 to 1972). Overall, the PRHD&CL conveys its historical significance through its location, setting, design, materials, workmanship, feeling, and association. Despite several minor realignments along the road, including a 0.2-mile reroute beginning at mile 4, most of the alignment of the Park Road has not been altered by the NPS or ARC since the period of significance. Consequently, most of the road remains in its original location. Development in the PRHD&CL and its viewshed is minimal. The federally designated DENA wilderness that surrounds the district ensures the preservation of the biotic communities and undeveloped nature of the setting.

Overall, the material associated with the road structure reflects the conditions during the period of significance. Primarily native materials continue to be used, with an earthen roadbed and gravel surface material. Pavement is limited from mile 1.8 to 15, which conveys the feeling and

association with the mid-twentieth century use of the road and its association with the Mission 66 era.

The PRHD&CL retains integrity of design by exhibiting characteristics of a NPS scenic road with alignments associated with the Mission 66 era (particularly between mile 1.8 to 30) that do not detract from the feeling of isolation and wilderness. The preservation of the road alignment, which provides views of the landscape and access to wilderness, and the control of expansion of the road footprint are the most significant elements of the district's integrity. Aspects that allow the road to convey the aesthetic and historic feeling of the historic period include the relatively low design speed, the curvilinear alignment of the road, the exposure of the landscape unprotected by guardrails on the slopes of Polychrome Mountain and between Stony Creek and Grassy Pass, and the panoramic views that result from minimal obstructions.

Prior to the opening of the Denali Highway (Alaska Route 8) in 1957, there were very few private vehicles anywhere on the Park Road, and traffic decreased farther west. Because most of the visitor and vehicular activity originates at the eastern end of the road (near the Alaska Railroad and the George Parks Highway) plans to improve the road have typically been based on a telescoping approach; the road becomes more primitive traveling west. The Mission 66 proposal of 1956-1966 to pave the road to mile 31 and to make it a uniform width (and "oiled") from there to the Eielson Visitor Center at mile 66 was halted due to a national outcry over excessive improvements to a wilderness road.

### 3.2 Patrol Cabin 1986 National Register Nominations

National Park Service (NPS) Historian Gail Evans completed documentation in 1986 for the six historic roadside cabins (five ARC cabins and the Pearson Cabin) and eight historic boundary cabins built or contracted by the NPS. Four of the five Denali Road Patrol Cabins outlined in this inventory and included in the Mt. McKinley National Park Patrol Cabins Historic District nomination, were listed in the National Register of Historic Places on November 25, 1986. Although the Upper Savage Cabin was included in the Patrol Cabins nomination, it was deemed ineligible in 1987 because it was moved from its original location and changed substantially from its original form. Since then, it has been evaluated as a contributing feature of the Denali Park Historic District (placed on the register in 2020) and is included as a contributing feature in the draft Park Road Patrol Cabins Cultural Landscape Inventory (CLI).

Constructed by the Alaska Road Commission (ARC) between 1924 and 1930, the roadside cabins are placed along the roadside approximately every ten miles. These buildings, nearly identical in design, are rectangular shaped, 14 by 16 feet, one-story, one-room, gable-front log buildings with square notching. Logs composing the walls are hewn on three sides. The cabins are characterized by their moderately pitched roof, with broad overhanging eaves and gable ends, exposing rafters and purlins. Four out of the five cabins retain a full-length, open, 6 by 4 feet, wood porch supported by two log posts and a Queen truss. Fenestration is simple, with a single off-center rectangular door piercing the façade and a single, wood, six-pane awning window piercing at least one of the side-gable elevations. Unless otherwise noted, the cabins contain a rolled asphalt roof and an exterior wood board-and-batten door.

The UEFC, (LCS ID. 005232, AHRS No. HEA-00218, contributing building), constructed between 1929 and 1930, is located approximately one quarter mile south of Mile 42.8. It bears wood hinged shutters over the window.

### 3.3 Denali Park Road Cabin Cultural Landscape (proposed)

The Park submitted to the SHPO a draft cultural landscape inventory (CLI) for the Patrol Cabins in 2020, and receive concurrence that the buildings, structures, and landscape characteristics as identified in the Cultural Landscape Inventory contribute to the historic character of the Denali Park Road Patrol Cabins (SHPO letter dated January 21, 2022). The SHPO requested clarification regarding the Savage Cabin before signing the consensus determination of eligibility form, which the Park is still working on. At this time, and for the purposes of this assessment, all of the cabins, including the Savage Cabin, are being treated as part of the eligible cultural landscape. See Appendix A (the Denali Patrol Cabin Cultural Landscape Inventory) for significance and integrity details for the cabins being discussed in this report.

The five Alaska Road Commission (ARC) patrol cabin sites in Denali National Park and Preserve (historically Mount McKinley National Park) that are included in the CLI are significant to the state of Alaska because of their association with two historical themes: the development of a transportation system in a remote area of interior Alaska; and the early efforts of the National Park Service (NPS) to practice wildlife conservation in the first national park in Alaska. The conservation and protection of areas selected for their outstanding natural features and wildlife, and the provision of access to these areas through the development of transportation routes were two premiere objectives embodied in the National Park Service mission and Mount McKinley National Park's enabling legislation. Built between 1925 and 1931 in conjunction with the construction of the only major road in Mount McKinley National Park, the Alaska Road Commission cabins represent the National Park Service's effort to provide access into this mountainous park.

Soon after construction, the five cabins built initially for summer road construction purposes, were utilized by park rangers for winter patrols. The winter use of these cabins illustrates the National Park Service's efforts to conserve the abundant wildlife inside the park boundaries. Utilized for the storage of supplies, overnight stopovers, or as base camps for extended stays, ARC cabins formed the backbone of the patrol route from the main park entrance to Wonder Lake. The spatial distribution and the supporting cultural features of the extant cabins recall the heavy reliance on dog teams to conduct patrols. The cabin sites possess substantial integrity of setting, materials, workmanship, feeling, and association. The Upper Savage Cabin, moved in 1940 from its original location, has experienced some loss of integrity of location and design, but continues to represent the period of park operation after the road construction was complete. The period of significance extends from 1925 when the ARC built the first cabin at Savage River until 1940 when the same cabin was relocated.

From the beginning, the administration of the "unrivaled" scenic and wildlife resources of Mount McKinley National Park embodied the dual tenets of the infant National Park Service philosophy. Access to and through the park to provide for the enjoyment of many and protection of the wildlife assumed a position of seminal importance in the minds of park advocates and

early managers. The intact and nearly complete assemblage of roadside cabins and remote ranger patrol cabins scattered throughout the park visually represent the country's early national park ideal of promoting scenery by providing road access and wildlife conservation.

The Denali Road Patrol Cabins are eligible for Criterion A in the areas of Transportation and Conservation as examples of early National Park Service development within Alaska and the United States. They also represent a unique collaboration between the ARC and the NPS to develop infrastructure for tourism within Alaska. Criteria Consideration B for Moved Properties applies to the Upper Savage Cabin. The cabin originally consisted of two rooms connected by a dog trot through the center and was located at Mile 10. In 1940, half of the cabin was moved to its current location north of the Park Road at Mile 12.9. The other half was later used for firewood. Despite this loss of integrity, the cabin remains an important cultural resource as it is the oldest ARC cabin. The cabin's relocation also reflects the desire of park management to maintain the natural setting of the road. The cabin was moved at the request of Superintendent Frank Been, who in 1939 complained that the ARC camps were "unsightly" (Been, October 9, 1939). The ARC camp at Savage River was particularly visible as it was located in an open area. After the Upper Savage Cabin was moved to a forest location adjacent to the road, it continued to be used by the park on winter patrols.

As the outhouse project could adversely impact the UEFC site and CL (in addition to the information provided in Appendix A) additional information is provided below about the UEFC.

### 3.3.1 Upper East Fork Cabin (UEFC) CL

Constructed between 1929 and 1930, this site is approximately 0.25-mile south of mile 42.8 (Wackrow et al. 2020). The East Fork Cultural Landscape includes both the Cabin Site (HEA-00218) and the East Fork Coal Mine (HEA-00485).

The ARC used the site as a base camp for road construction in the late 1920s and 1930s. The UEFC served as a cook house and food storage for ARC employees who lived in multiple canvas tents. The camp extended from the East Fork Cabin toward the East Fork of the Toklat River. Even before the Park Road was completed in 1938, the NPS used the ARC cabin for winter dogsled patrols. After the road was complete, the cabin served as a summer base camp for wildlife researchers (Welzenbach 2017).

The UEFC was the fourth ARC cabin to be built. This cabin served as the base for road construction crews working on the East Fork Bridge and Polychrome Pass. The crews positioned their white canvas tents in the area between the cabin, Coal Creek to the south, and the East Fork River to the west (Welzenbach 2017).

The East Fork ARC Camp likely operated from 1929 through 1938. By 1985 the cabin maintained its ongoing use as summer quarters for a backcountry ranger and during the winters by NPS dogsled patrols and the Denali Dog Tours concessioner (Evans 1985).

Wildlife biologist Adolph Murie and botanist Louise Murie lived in the UEFC for eight summers between 1939 and 1970, including consecutive summers from 1939 to 1941 (Evans 1985, 1986; Bryant 2011). From the UEFC and Igloo Cabin base camps, Adolph studied wolves, birds, grizzly bears, and other wildlife. Adolph's book *The Wolves of Mount McKinley* was published in 1944.

Adolph and Louise, along with Olaus and Margaret Murie, are renowned in the NPS and conservation communities for their scientific research and successful advocacy for wildlands. Based on his research in Yellowstone National Park and DENA, Adolph was an early advocate for the role of predators in an ecosystem and successfully promoted the elimination of wolf eradication. He also strongly opposed additional development of DENA and persuasively argued for the retention of the gravel surface on the western portions of the Park Road when paving was proposed in the 1950s. The Murie Science and Learning Center at Denali is dedicated to the Murie family's research and conservation efforts.

The East Fork site's scientific legacy was continued with the installation of the Dean Cabin. The cabin has provided a base for research operations since 1975. Housing in DENA's interior has allowed scientists more direct and regular access to their research subjects. Ultimately, multi-year studies based out of the site—including those done by the Muries—provided a greater understanding of the park's ecosystems.

The Dean Cabin is a noncontributing resource in the East Fork Patrol Cabin Cultural Landscape. A different wood building appears in some historic photographs west of the East Fork Cabin, but that building has a gable roof and is much closer to the East Fork Cabin. The Dean Cabin was built in 1975 and is not contributing to the East Fork Cabin Site or Cultural Landscape as it was constructed after the period of significance.

The East Fork Cabin is meaningful to the state of Alaska because of its association with two historical themes; the development of a transportation system in remote areas on interior Alaska, and the early efforts of the NPS to practice wildlife conservation in the first national park in Alaska. It is eligible under Criterion A for transportation and conservation.

#### 3.3.1.1 East Fork Outhouse- (Contributing Feature)

First documented in photographs around 1930, the outhouse is located on a hillside just north of the cabin. In 1930 the door faced north and today it faces west. Though the orientation of the outhouse has changed, its structure and general location have not. The roughly four by four-foot wood structure has a shed roof covered with shakes. While historic photographs do not depict the outhouse roof surface, the original roofing material likely matched the rolled roofing of the adjacent cabin. The structure has a small diamond shaped opening in the center of the façade to the right of the door. The lap siding and vertical plank door are character-defining features.

#### 3.3.1.2 East Fork Outhouse Trail- (Contributing Feature)

A short earthen trail connects the East Fork Cabin to the outhouse. It traverses a small hill and runs north for about 25 feet before heading east for another 25 feet. Since the outhouse is located in an adjacent location to where it was historically, this trail likely runs along the historic alignment. The narrow 12-to-18-inch, unimproved trail maintains integrity.

## 4 Recommendations

The UEFC has experienced few exterior alterations. Following the completion of the park road and the elimination of regular dog patrols in the late 1930s and 1940s, the ARC and the NPS

expended limited funds for improvements or maintenance. The roadside cabins, however, had more substantial visitation and use, serving as seasonal living quarters for park biologists, interpreters, and road maintenance workers. With the re-initiation and integration of dog teams into park operations in the 1970s, the roadside cabins were again utilized for winter patrols. As the result of contemporary uses, periodic improvements and changes have been made to the cabin interiors. The ARC cabins saw the installment of shakes over original lumber and tar paper roofs in the late 1970s. However, when the shakes required replacement original tar paper roofs were restored at all but the Upper Savage Cabin. Several of the cabins sill logs and floors have been replaced due to deterioration and wood stoves have been replaced with propane. Exterior alterations are generally minimal, however, and limited primarily to repairs of existing materials or their in-kind replacement.

The overall cabin sites have experienced minimal development. The completion of the park road to Kantishna in 1938 led park officials to take a more critical view of the ARC camps. In 1939, Superintendent Been informed ARC chief engineer Ike P. Taylor that the camps and cabins were unsightly. He did not object to the cabins themselves, but to the items and refuse haphazardly collected around them. Despite the superintendent's desire to remove and move the cabins, their usefulness to the park took precedence and the park continued to use the cabins for winter patrol. However, because it was out in the open, the Upper Savage Cabin and surrounding equipment storage continued to attract negative attention. The main changes that did occur took place at this cabin, which consisted of two rooms connected by a dog trot. The rooms were separated and moved in 1940, and one of the rooms was demolished in 1964. Over the years, much of the debris at the former ARC camps has been removed and the primary remnant of the substantial camps is the cabins. In addition, some developments along the road, such as the Igloo Campground and Sanctuary Campground, are likely in the same location as former ARC camps.

Additional sheds were constructed after the period of significance at a few of the ARC cabin sites, and several of the outhouses have been replaced. In addition, some of the spur road footprints have expanded and vegetation patterns have changed as a result of climate change and altered use. However, very few incompatible features have been installed at the cabin sites and they retain a rustic character indicative of the period of significance.

The East Fork Outhouse is an original structure at its original location. The outhouse is currently full and cannot be moved to an adjacent location due to lack of space on the land feature it is located on. The proposed new outhouse, to be located out of the historic viewshed of the UEFC but within its CL would use building material visually cohesive with the materials of the historic structure on site, particularly reflecting those of the historic outhouse. The new outhouse would be setback from the Spur road by 15 feet to reduce visibility. The exterior would consist of horizontal unpainted timber siding, a vertical plank door, and a shed roof (similar to the historic outhouse).

The outhouse would utilize a vent pipe as small as possible. The outhouse door would be oriented toward the road, and the vent would be located on the back side of the outhouse, away from the spur road. The concrete pad at the rear of the building and the outlet located 8' in from of the building would be minimized to the extent possible.

While this would introduce modern construction to the UEFC site and CL, the new construction would be located out of the historic view of the cabin, would be compatible with the HD and the

CL, and would be designed to blend with the landscape. Additionally, it would leave the historic outhouse at its historic location and would maintain the integrity of the location and setting of the HD and CL. The historic outhouse trail would also be left intact and its integrity would not be impacted. As designed, this would not adversely affect the UEFC or its proposed cultural landscape.

#### 4.1 Determination of Effects

If cultural resources or items protected by the Native American Graves Protection and Repatriation Act are discovered during project implementation, all project-related activities in the vicinity of the discovery would be stopped and the park archaeologist would be notified immediately. DENA in consultation with the State Historic Preservation Officer and other consulting parties would determine a course of action per 36 CFR Part 800.13

As designed, the proposed project would not result in the adverse effect to historic properties. In this case it is recommended that the Park approach National Historic Preservation Act, Section 106, consultation under 36 CFR Part 800.5(3)(b) as “No Adverse Effect”.

## 5 References

See reference section in Appendix A (Patrol Cabin Cultural Landscape Inventory).

6 Maps & Figures (Additional photos and maps are found in Appendix A).

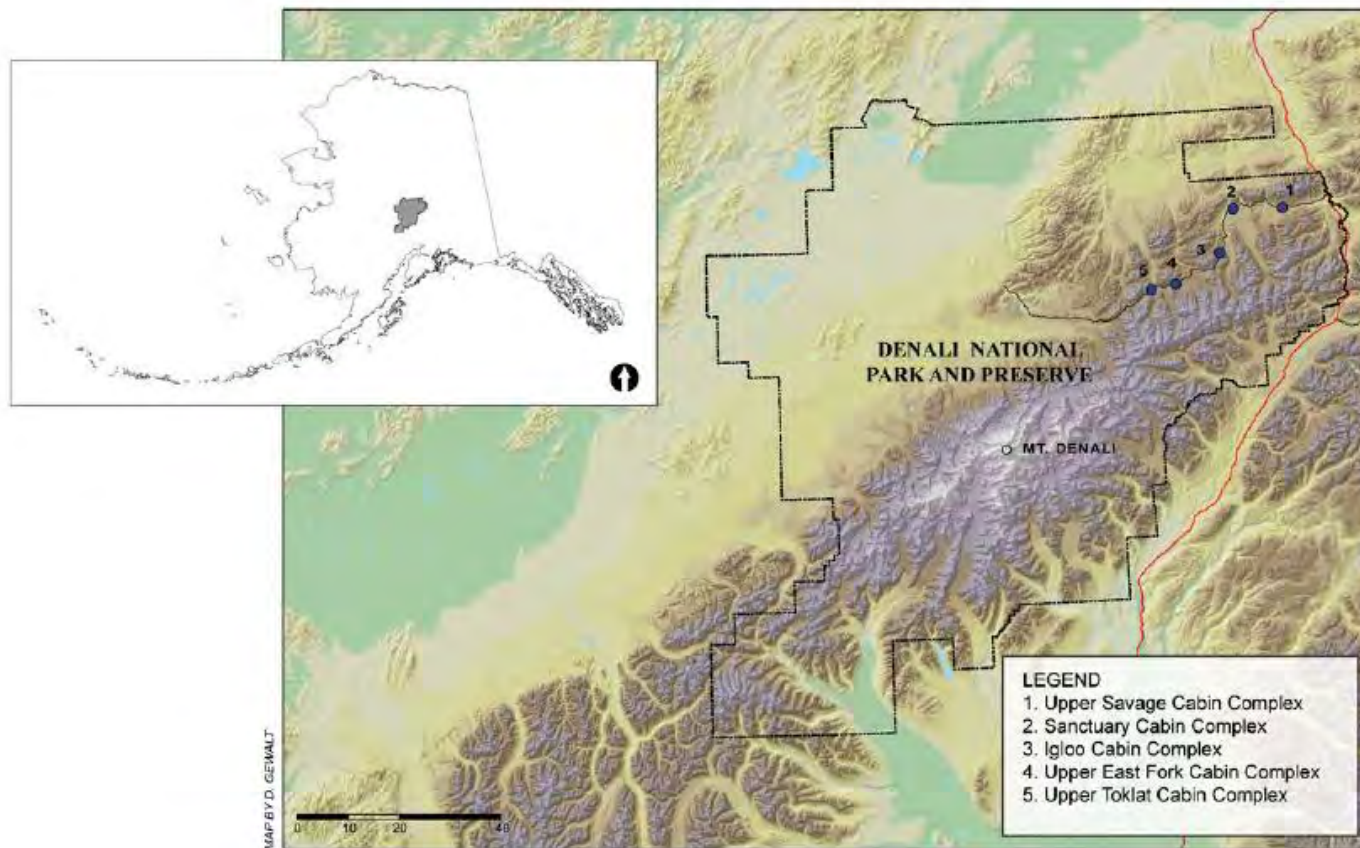


Figure 1- Overview of Project Location- UEFC is #4 on the map.



Figure 5- Overview of the APE for the UEFC.

## East Fork

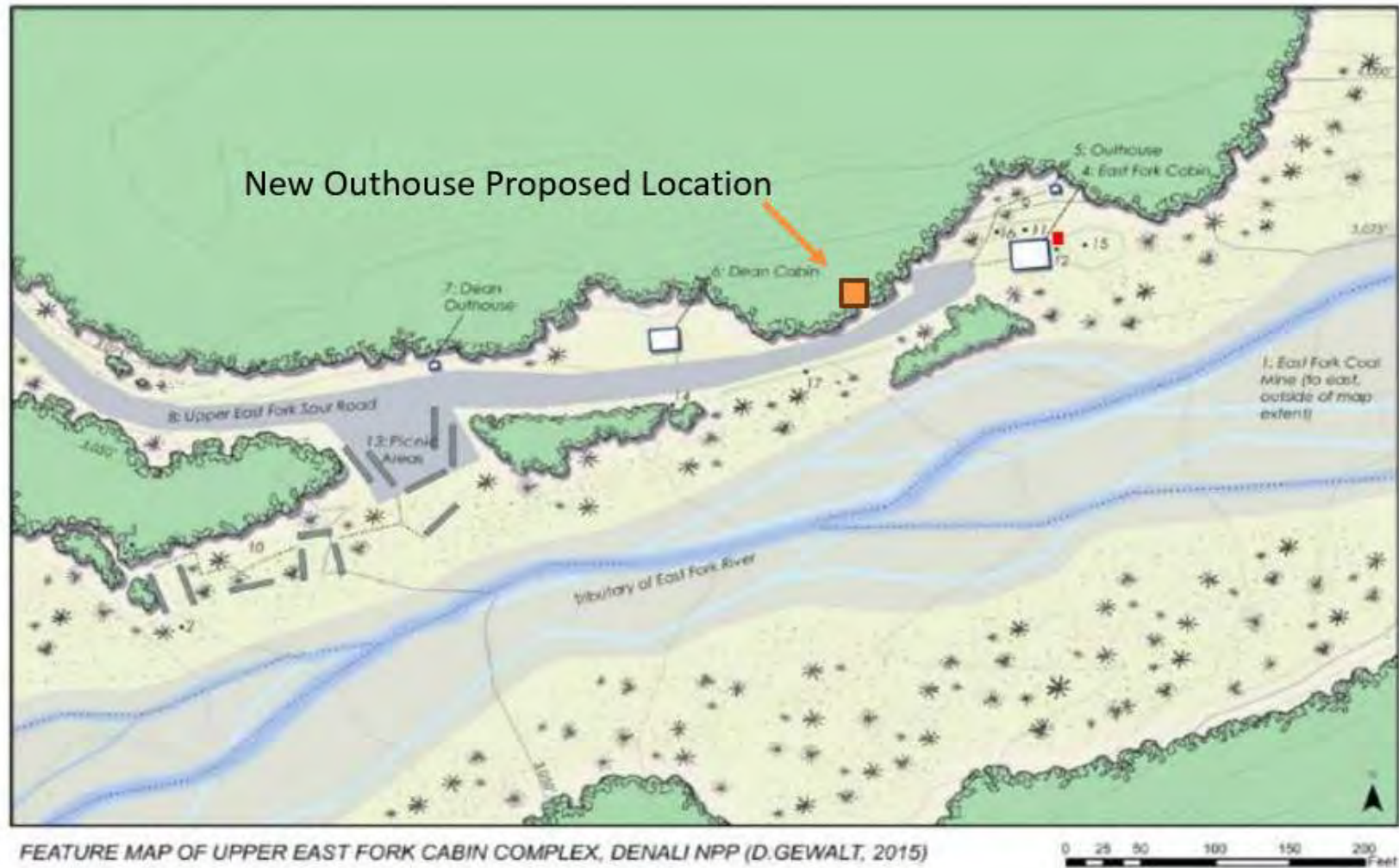


Figure 2- New outhouse proposed location halfway between the Dean Cabin and the UEFC.



Figure 8- East Fork Cabin, 1928 (Alaska State Library); note historic outhouse in background.



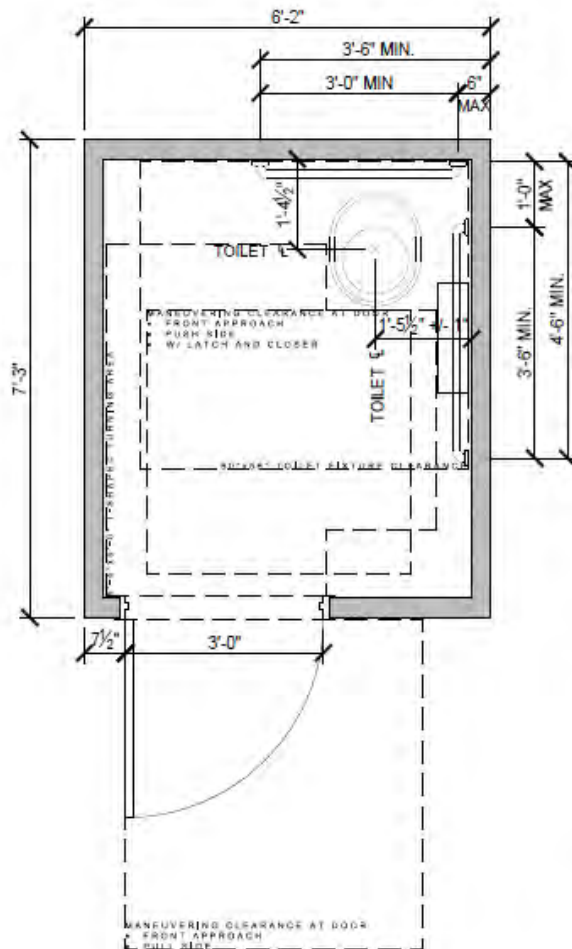
Figure 9- Adolph and Louise Murie at the East Fork Cabin, 1965 (NPS photo).



Figure 10- East Fork Cabin, August 2006 (NPS photo).



Figure 11- East Fork Cabin with Dog team, 2009 (NPS Photo).



ACCESSIBILITY REQ'TS (ICC/ANSI 117.1-2017)

**TURNING SPACES:**

- SHALL BE PROVIDED IN TOILET AND BATHING ROOMS
- 67" DIA CIRCLE OR "T-SHAPED SPACE" AS SHOWN IN ICC/ANSI A117.1 FIG. 304.3.2.1(A), (B), OR (C); OPTION C SHOWN IN THIS DRAWING (64"x80" WITH 12"x20" VOID ADJACENT TO BASE).
- 67" CIRCLE MAY INCLUDE 10" MAX. OVERLAP OF KNEE AND TOE SPACE; ONLY ONE LEG (EITHER ARM OR THE BASE) OF "T" SHAPED TURNING SPACE MAY OVERLAP KNEE AND TOE SPACE
- DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES.

**FIXTURE CLEARANCES:**

- CLEARANCE AROUND A WATER CLOSET SHALL BE 60 INCHES (1525 MM) MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56 INCHES (1420 MM) MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL.
- THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

MANEUVERING CLEARANCE (AT DOORS):

- FRONT APPROACH, PUSH SIDE = 48" PERP. TO DOOR x FULL WIDTH OF DOOR (OR ADD 12" IF CLOSER AND LATCH USED)
- FRONT APPROACH, PULL SIDE = 60" PERP. TO DOOR x DOOR WIDTH + 18"

**DOOR SWING:**

- DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE.
- DOORS SHALL BE PERMITTED TO SWING INTO THE REQUIRED TURNING SPACE.
- EXCEPTION: WHERE THE TOILET ROOM OR BATHING ROOM IS FOR INDIVIDUAL USE AND A CLEAR FLOOR SPACE COMPLYING WITH 305.3 (30"x48") IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE.

GRAB BARS:

- SIDE WALL GRAB BARS SHALL INCLUDE A HORIZONTAL GRAB BAR (42" MIN. LENGTH, 12" MAX. FROM REAR WALL, EXTENDING MIN. 54" FROM REAR WALLS, MOUNTED WITH HORIZ. CENTERLINE 33" MIN./36" MAX. ABOVE THE FLOOR) AND A VERTICAL GRAB BAR (18" MIN. LENGTH, MOUNTED WITH BOTTOM OF BAR 39" MIN./41" MAX. ABOVE THE FLOOR WITH THE VERTICAL CENTERLINE OF THE BAR 39" MIN./41" MAX. FROM THE REAR WALL.)
- REAR WALL GRAB BAR SHALL BE 36" MIN. LENGTH, BE LOCATED 8" MAX. FROM THE SIDE WALL, EXTEND 42" MIN. FROM THE SIDE WALL, AND BE MOUNTED WITH HORIZ. CENTERLINE 33" MIN./36" MAX. ABOVE THE FLOOR.)

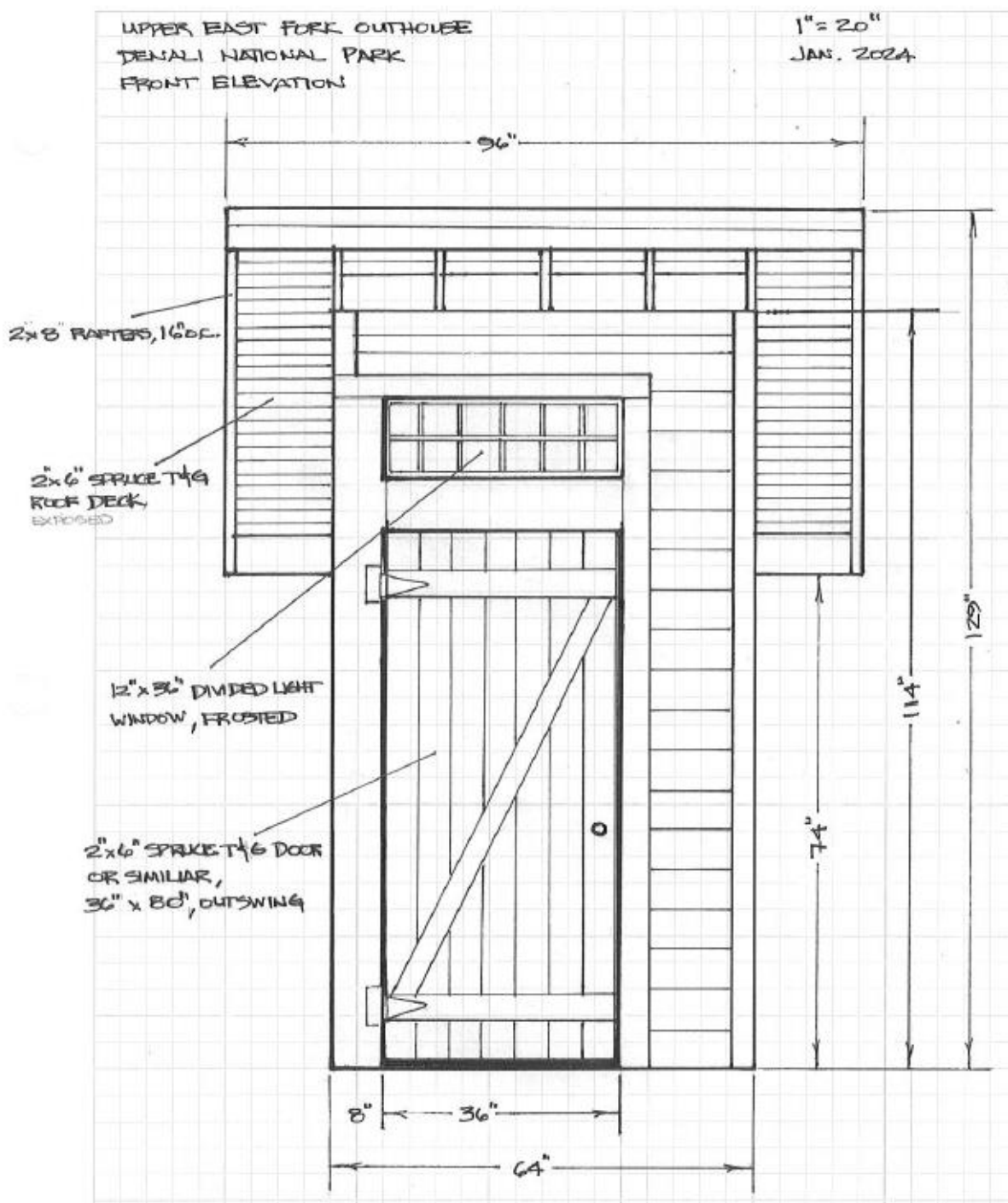


Figure 4- Plans of outhouse entrance; note dimensions are not accurate (those in design are not accessible). Proposed outhouse will follow these plans but be slightly larger than what is pictured here).  
NPS design by T. Dingbaum.

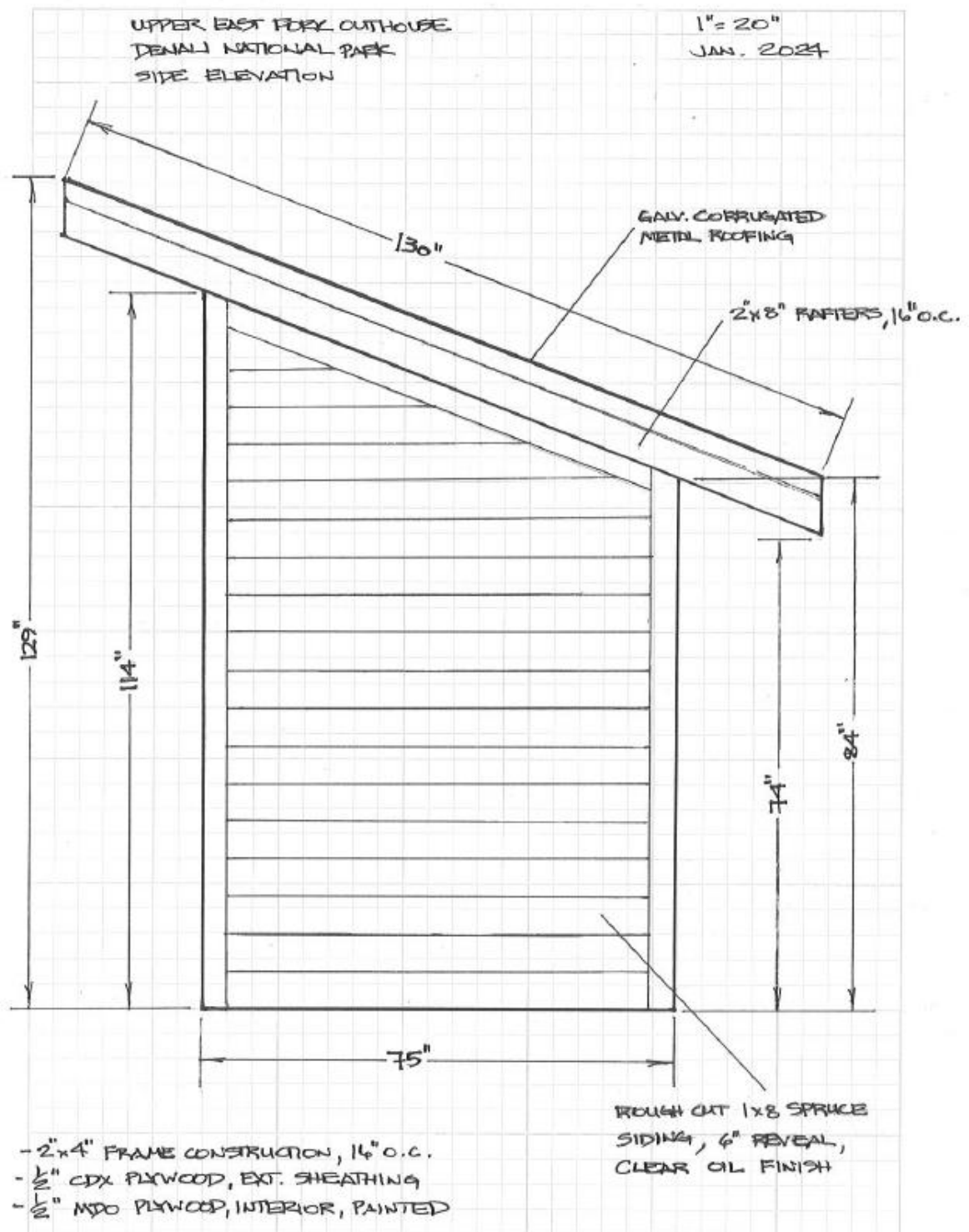


Figure 5- Side Plan; note dimensions are not accurate (those in design are not accessible). Proposed outhouse will follow these plans but be slightly larger than what is pictured here). NPS design by T. Dingbaum.