

Halfway Ranger Station Historic District  
**Historic Structure Report**

Compiled and written by William Clayton, Lee Johnson, Erin Potter, Walt Okstad  
Heritage Resources Program  
Superior National Forest  
8901 Grand Avenue Place  
Duluth, MN 55808

for

Northern Research Station  
1992 Folwell Avenue  
St. Paul, MN 55108

December 2006



Cover photo: Halfway Ranger Station District Office, 1947

## TABLE OF CONTENTS

Title Page.....	i
Table of Contents .....	ii
List of Tables .....	iii
List of Figures .....	iv
Acknowledgements.....	vi
1.0 Summary.....	1
1.1 Introduction .....	1
1.2 Historical Summary.....	1
1.2.1 Historical Data.....	1
1.3 Architectural Summary.....	2
1.4 Maintenance and Repair Needs Summary.....	2
1.5 Recommendations .....	2
2.0 History of the Property.....	3
2.1 Historical Background and Context.....	3
2.2 Chronology of Development and Use.....	15
2.3 Architectural Description .....	15
2.4 Evaluation of Significance .....	18
3.0 Building Description, Condition, and Work Recommendations .....	20
3.1 Building Conditions .....	20
3.1.1. Introduction.....	20
3.1.2. Contributing Buildings .....	21
3.1.2.1 Ranger Dwelling (FS Bldg. #31101).....	21
3.1.2.2 District Office Building (FS Bldg. #31105) .....	24
3.1.2.3 Warehouse (FS Bldg. #31106).....	27
3.1.2.4 Boat House (FS Bldg. #31107).....	30
3.1.2.5 Oil House (FS Bldg. #31111).....	31
3.1.2.6 Pump House (FS Bldg. #31102) .....	32
3.1.2.7 LFSES Dwelling (FS Bldg. #31108).....	34
3.1.2.8 Outhouse (No FS Number).....	36
3.1.2.9 Cellar (FS Bldg. #31103).....	38
3.1.3 Non-Contributing Buildings .....	38
3.1.4.1 LSFES Laboratory Building (FS Building #31109).....	38
3.1.4.2 LSFES Insectory/Garage (FS Building # 31104) .....	39
3.2 Work Recommendations .....	40
3.2.1. Historic Preservation Objectives.....	40
3.2.2. Requirements for Work.....	40
3.2.3. Maintenance and Repair Needs.....	42
4.0 Bibliography.....	48
Appendix A.....	51
Appendix B.....	59

## LIST OF TABLES

Table 1. Existing Superior National Forest historic administrative sites .....	9
Table 2. Chronology of historic events associated with the Halfway Ranger Station .....	15
Table 3. Work recommendations for the Ranger Dwelling .....	42
Table 4. Work recommendations for the District Office Building .....	43
Table 5. Work recommendations for the Warehouse Building .....	43
Table 6. Work recommendations for the Boat House .....	44
Table 7. Work recommendations for the Oil House .....	44
Table 8. Work recommendations for the Pump House .....	45
Table 9. Work recommendations for the LSFES Dwelling .....	45
Table 10. Work recommendations for the Outhouse .....	46
Table 11. Work recommendations for the Cellar .....	46
Table 12. Work recommendations for the LSFES Laboratory .....	46
Table 13. Work recommendations for the LSFES Insectory .....	46

## LIST OF FIGURES

Figure 1. Cold Springs Guard Station ca. 1920s.....	4
Figure 2. View of Isabella Ranger Station ca. 1924.....	5
Figure 3. CCC boys fitting logs at La Croix Guard Station ca. 1940s.....	9
Figure 4. Larry Krefting, LSFES biologist 1945-1966, examining deer browse in Jonvik yard on the Superior National Forest.....	11
Figure 5. LSFES bachelor's quarters/office ca. 1934.....	12
Figure 6. Miron "Bud" Hienselman examining fire scar on Red Pine.....	14
Figure 7. Front view of the Ranger Dwelling in 1934 .....	21
Figure 8. Front view of the Ranger Dwelling in 2006.....	23
Figure 9. Corner view of the Ranger Dwelling in 2006.....	24
Figure 10. Front view of the District Office building in 1947 .....	25
Figure 11. Office building in 2006.....	26
Figure 12. View of the left side of the Warehouse in 1947 .....	27
Figure 13. View of the Warehouse in 1934.....	28
Figure 14. Signature samples copied from the Warehouse ceiling.....	28
Figure 15. View of the Warehouse in 2006.....	29
Figure 16. Boat House ca. 1947.....	30
Figure 17. Current Boat House 2006.....	31
Figure 18. Oil house 1947.....	32
Figure 19. Oil house 2006.....	32

Figure 20. Pump house 1947.....	33
Figure 21. Pump house 2006.....	34
Figure 22. LSFES Office/Dwelling building 2006.....	35
Figure 23. Back side of LSFES Office/Dwelling building 2006.....	36
Figure 24. Outhouse 2006, front elevation.....	37
Figure 25. Outhouse 2006.....	37
Figure 26. Insectory (left) and Laboratory (right) buildings 2006.....	40

## **Acknowledgements**

We would like to thank Rick Sindt of the USDA Northern Research Station, Dan Peterson and the Engineering Unit at Kawishiwi Ranger District, Superior National Forest, Scott Kuzma of the Iron Range Research Center and Margaret Sweet of the Ely-Winton Historical Society for their assistance in gathering the materials necessary to generate this report.

## **1.0 Summary**

### **1.1 Introduction**

This Historic Structure Report was compiled by the Heritage Resources Staff of the Superior National Forest (SNF) in response to the proposed withdrawal of management of the Halfway Administrative Site by the Northern Research Station (NRS), based out of St. Paul, Minnesota. The SNF owns the land upon which this administrative site is situated. It is located in Township 62 North, Range 11 West, Section 33. The site is situated adjacent to the South Kawhishiwi River, approximately 10 miles south of Ely, Minnesota. NRS (formerly North Central Research Station) has been responsible for the management of the Halfway Administrative Site, which includes the buildings of the historic Halfway Ranger Station and the Lakes States Forest Experimental Station (LSFES) (collectively called the Halfway Ranger Station Historic District (HRSHD)), since 1974. NRS has requested this document to assist their compliance process of the National Environmental Policy Act (NEPA) prior to developing alternatives. This document considers the historic character and background as well as the architectural elements of the HRSHD, evaluates the property's eligibility for inclusion on the National Register of Historic Places, and develops recommendations for treatment of its historic buildings.

### **1.2 Historical Summary**

The HRSHD has a dynamic history that tracks almost 100 years of regional development in Northeastern Minnesota. The name Halfway originated during early logging activities which were conducted in the area at the turn of century by the St. Croix Logging Company, operating out of Winton, Minnesota. From at least 1910 until 1950, when the Superior National Forest moved Halfway Ranger District employees to offices in Ely, Minnesota, the site was the location for the Halfway Ranger Station of the Superior National Forest. The southern portion of the site has been the base for forest research since at least 1931, and possibly as early as 1924, when the LSFES started operating in the area. The site received considerable upgrades in the forms of building infrastructure during Roosevelt's Work Project Administration, when 7 of the extant buildings were constructed by locally based CCC companies. Appendix A contains site plan maps of the chronological development of the HRSHD. Since 1968, the buildings at the HRSHD have been utilized by federal biologists conducting long-term, large mammal research, including the wolf study currently conducted by USGS biologists.

#### **1.2.1 Historical Data**

Historical research for this project was limited but has established construction dates for the extant buildings at the HRSHD. The seven remaining buildings of Civilian Conservation Corps (CCC) origin were constructed in early-mid 1934; the LSFES combination dwelling-office structure was built in 1931; and the lab and insectory at the LSFES/North Central portion of the site were built in 1957. Superior National Forest work orders, historic photographs, internal memos, manuscripts, and letters have been thoroughly searched. Portions of the Ely Miner newspaper from 1920-1938 were reviewed at the Iron Range Research Center (IRRC) in Chiselm, Minnesota and the Ely-Winton Historical Society in

Ely, Minnesota. Newsletters and oral recounts from CCC company 704, Halfway Camp were accessed at IRRC in August of 2006. Additional data in the form of recollections of early Superior National Forest employees was gleaned from John Wesley White's "Historical Sketches of the Quetico Superior" (1967-1974), which is a compilation of historic materials prepared for the Superior National Forest's 75<sup>th</sup> anniversary.

### **1.3 Architectural Summary**

The design and construction of U.S. Forest Service (USFS) administrative buildings is often a product of agency funding, policy and initiatives and are therefore historic indicators of agency evolution. The architectural nature of the buildings at the HRSHD reflects USFS design and building construction practices during the 1930s. Seven of the buildings within the HRSHD are prime examples of the nationally recognized architectural design type known as the Rustic or Adirondack style. The origins of the Rustic style can be found in the promotion and utilization of the design in the construction of early 20<sup>th</sup> century administrative buildings of the National Park Service (NPS) and many state agencies. Rustic design was used in the 1930s for the construction of CCC-built Forest Service (FS) buildings.

### **1.4 Maintenance and Repair Needs Summary**

There are multiple maintenance and repair issues, which need to be addressed regarding the historic buildings within the HRSHD. These issues include the repair/rehabilitation of walls, minor architectural elements and the roofs of several of the buildings. Some or all of the utility systems on each building needs to be reviewed and, when warranted, updated or replaced. One issue of particular importance is the need to mitigate the powder-post beetle infestation that plagues the log buildings in the district. Data for building condition and recommendations for maintenance and repair, were compiled from an INFRA conditions assessment report provided by the engineering staff of the NRS, as well as several historic building surveys conducted by the heritage resources staff of the SNF. A recommended approach to any repair or maintenance work conducted on the historic buildings of the HRSHD should be the rehabilitation treatment option. This option is commonly used for historic buildings that will be re-used for purposes other than their original purpose.

### **1.5 Recommendations**

This report finds that the Halfway Ranger Station Historic District is eligible for listing on the National Register of Historic Places and further recommends rehabilitation as the treatment for the HRSHD as outlined in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Weeks and Grimmer 1995). Rehabilitation will comply with these guidelines and with Section 106 of the National Historic Preservation Act of 1966, as amended.

## 2.0 History of the Property

### 2.1 Historical Background and Context

#### *Superior National Forest*

Federal management of Minnesota's pinelands was initiated on June 2<sup>nd</sup>, 1902 with the establishment of a 225,000 acre forest reserve near the headwaters of the Mississippi (White 1967). Instrumental in the creation of this forest reserve (later consolidated into the Chippewa National Forest) was the successful lobbying of Christopher C. Andrews, Minnesota's first forest commissioner. C.C. Andrews was exposed to scientifically managed forests during his appointment as Minister to Sweden and Norway (1869-77). Upon his return from Sweden, Mr. Andrews vigorously organized, lobbied, and lectured on the various benefits of scientific forestry and land conservation. After the successful establishment of Minnesota's first forest reserve in 1902, C.C. Andrews turned his attention to the pinelands of Cook, St. Louis, and Lake County, which would later become the 2.3 million acre Superior National Forest. C.C. Andrews' aspirations regarding scientific management of Minnesota's Arrowhead region are depicted in a 1902 letter to the General Land Office Commissioner Binger Herman: "I have the honor to recommend that the following townships, all public land situated in Cook and Lake Counties, a area in round numbers of 500,000 acres, be set apart by the president as a forest reserve..." (White 1967).

On February 1<sup>st</sup> of 1905, the United States Department of Agriculture (USDA) became the primary management agency of some 63 million acres of public forested lands (Bergoffen 1976; Steen 1991; Williams 2000). These initial USDA landholdings were consolidated from Department of Interior Forest Reserves, which were established in 1891 to protect timber and hydrological resources. In 1907, the Department of Agriculture officially changed the name of the Forest Reserves to National Forests. The development of the National Forest system and the application of management directives geared towards the long-term production of sustainable forest products was fostered through the efforts of Theodore Roosevelt (1858-1919) and Gifford Pinchot (1865-1946). The early 20<sup>th</sup> century conservation movement, personified by the policies and directives of Pinchot and Roosevelt, was largely a response to the "cut and run" policies of early mining, railroad, and timber companies. The alliance between America's great conservationist and America's first scientific forester was indeed successful: despite significant congressional and private opposition, the two conservationists were successful in consolidating some 150 million acres of forested lands under federal ownership by 1907 (Steen 1991).

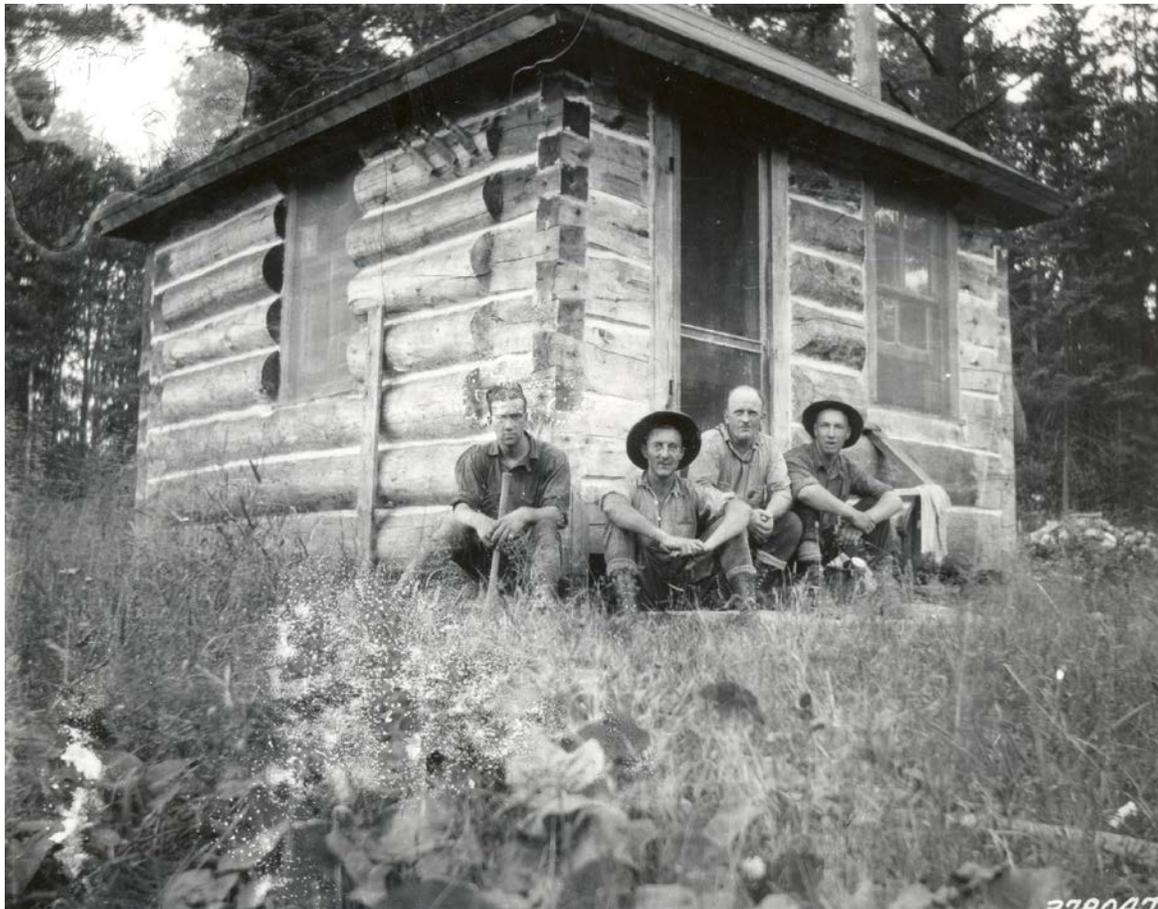
The efforts of Minnesota's early conservation movement bore fruit on February 13<sup>th</sup> 1909, when in Proclamation # 848, President Theodore Roosevelt set aside 1, 018, 638 acres as the Superior National Forest. The amount of land directly administered by the SNF has increased through various executive orders to 2,174,000 acres as of 2006.

On May 1<sup>st</sup>, 1909, Scott Leavitt arrived in Ely, Minnesota, to assume the duties of Acting Forest Supervisor (White 1974c). Mr. Leavitt gave ranger examinations to seven individuals some of whom would later become the Superior National Forest's first forest rangers. The initial duties of the incipient forest crews included clearing portage trails, constructing fire towers and guard

stations, stretching telephone lines, suppressing wildfires, cruising timber, scaling timber harvested from forest lands and verifying timber, stone, and homestead claims.

*Pre-1930s Forest Service Administrative Sites – original Halfway Ranger Station*

Prior to the administrative building boom ushered in during Roosevelt’s Work Project Administration in the mid 1930’s, Superior National Forest lands were managed via remote guard stations and a few, more centralized ranger stations. Guard stations appear to have been built from on-site materials, often in roadless portions of the forest, between the years of 1909-1924. Guard stations are best viewed as satellite facilities radiating out from main administrative centers which, prior to 1930, were based in Ely, Minnesota and the Temperance River area on the North Shore of Lake Superior, respectively. Historically, and yet today, ranger stations were located in or near population centers or on roadways accessing portions of their respective ranger districts. Figures 1 and 2 are examples of early Forest guard stations.



**Figure 1. Cold Springs Guard Station ca. 1920s. Photo courtesy of Superior National Forest.**



**Figure 2. View of Isabella Ranger Station ca. 1924. Photo courtesy of Superior National Forest.**

Since 1909, ranger stations have served as the administrative headquarters for management of defined parcels of federal land known as ranger districts. The following is a list of the ranger districts (from West to East) present on the Superior National Forest in 1930: 1) LaCroix; 2) Mesaba; 3) Halfway; 4) Kawishiwi; 5) Temperance; and 6) Grand Marais. Currently, there are five ranger districts present on the Superior National Forest. They include (from west to east) LaCroix, Kawishiwi, Laurentian, Tofte, and Gunflint. An example of districts which have been consolidated or removed over the course of the past 85 years is as follows: 1) Sawbill (1930); 2) Crane Lake (1930); 3) Virginia (1988); 4) Two Harbors (1970's); 5) Isabella (1990); and 6) Halfway (1974). The location of, and the extent of land managed by a given ranger district has changed throughout the 85 year history of the Superior National Forest. For example, Halfway Ranger Station was within the Stony Ranger District in the 1920's, the Halfway Ranger District through the 1970's, and the Kawishiwi Ranger District following 1974. The dynamic nature of the Superior National Forests administrative facilities should be viewed within a larger, national context, which recognizes changes in policy, directives, and funding through time.

Work records indicate that 1920's era guard stations were often one-room affairs approximately 12' x 14' in size, many of which were associated with fire lookouts. Ranger stations on the other hand, often included large multi-roomed offices up to 18' x 38' in size. In addition, ranger stations often included boathouses, wells, root cellars, barns and outhouses. Locations for these administrative facilities were selected based on agency resource objectives such as proximity to active timber sales, proximity to major water routes accessing roadless areas and proximity to

tote roads and/or spur lines constructed by logging companies. Gerald Williams (2006), the USDA National Historian, explains the dynamic nature and evolution of administrative sites on newly acquired Forest lands:

When the FS took over management of the forest reserves in 1905, the new agency built more of these cabins, especially on NFS lands near potential water power sites. Sometimes these early ranger stations were abandoned homestead cabins. They were termed ranger stations but within a few years they were mostly renamed as guard stations. They were set inside the NF boundary or right on the edge, as well as scattered throughout the forest, often a one day horse ride away from each other where a ranger and his horse could overnight. When roads replaced trails, there was little need for many ranger and guard stations. Later, one central ranger station covered the management of the district that was often 100,000 acres or larger.

For the most part, it appears that guard stations were evenly separated across the Superior National Forest by a one day paddling or hiking distance (approximately 12-20 miles). An article from the "Ely Miner Newspaper", dated July 30<sup>th</sup>, 1909, alludes to the construction of cabins for each district (six at that time) at a cost of \$500 per cabin (White 1974b: 4). The available data indicates that approximately 26 guard stations and 5 ranger stations were constructed on the Superior National Forest between 1909-1927 (Superior National Forest 1927).

Work orders from 1924 indicate that the Halfway Ranger Station was in-use prior to 1921 on the eastern shore of the Kawishiwi River, approximately 10 miles south of Ely, Minnesota. At that time, Halfway was one of two ranger stations situated in the now consolidated Stony Ranger District (the other being Baird Ranger Station). It is possible that the original Halfway Ranger Station utilized buildings that had previously been built by the St. Croix Lumber Company. In an interview with SNF Information Specialist Ray Naddy, dated July 27, 1970, the third Supervisor of the SNF, Joe Fitzwater, mentions that the "Halfway house" was utilized by Forest Service employees during the summer of 1910 (White 1974a: 3).

Work records indicate that the original Halfway Ranger Station included a 24' x 38' 1 1/2 story house, an 18' x 38' four room combination building, a cesspool, a toilet, and a 12' x 24' x 7' boathouse (Superior National Forest 1927). All of the buildings at the original Halfway Ranger Station were constructed of upright logs with rubberized roofs. Helen D. Barnes, daughter of Halfway Ranger Tom A. Denley (1917-1927; 1930-1943), recalls life in the original Halfway Ranger Station (Barnes 1970):

At the Halfway Ranger Station, he made it a point to get up and prepare breakfast for the several guards that worked for him during the summer months.....And somehow it seemed just right in that little old dark kitchen with walls of upright logs chinked with plaster, the wash basin in a corner by a bucket of water; worn oil cloth on the table, and the kerosene lamp chimney smoked and cracked, and the grey enameled dishes ready on the shelf of the warming shelves of the stove for the food he was preparing...Food for the working young men who waited outside to be called in to eat.

Although few photos exist from this early period, the SNF archives do contain numerous daily logs written by forest guards/rangers from 1913-24. The following passage, written by Ed K. Dellman, a forest guard on the Sioux River District during the summer of 1913, describes some of the duties and hardships forest guards encountered in the field:

May 29-Awful night with skeets. Rain all morning. Take wire from Elm Portage to Pauness Lake in afternoon.  
May 30-String wire thru bog and swamp to Pauness Lake. Soaking wet all day.  
May 31-String cable across Pauness Lake and reach Ely by phone. Move part of the outfit to Lookout to get away from "skeets" sleep on top of tower.  
June 1-Cut trail from Pauness Lake portage to Lookout.  
June 2-Pulled wire from Pauness portage to Lookout and hung it as far as the Cascades.  
June 3-Finished line to Lookout and paddled to Loon Lake Point.  
June 4-Went from Loon Lake to station (Echo R.S.) Via Sandpoint with very heavy load.

Guards working out of Halfway were probably responsible for the maintenance of telephone line, trails, and for fire patrol between Halfway and Clearwater Guard Station, which was situated in a roadless area approximately 10 miles to the northeast. Forest guards operating out of the Halfway Ranger Station were also most likely involved in the administration and scaling of the Superior National Forests first timber sale; The "Birch Lake Sale" including approximately 735 acres of pine, spruce and tamarack, much of which was partially damaged by wildfire in 1908 and 1909, was awarded to St. Croix logging company on February 15, 1910 (Forester 2004: 53).

The surrounding area, like most of Northeastern Minnesota at the time, was rugged and predominately roadless. The Halfway Ranger Station was unique in that it offered early forest rangers two transportation options: The Kawishiwi River provided water access to the interior reaches of the Superior National Forest to the north, while the Stony Tote road linked the guard station with Ely and the Stony River drainage to the east.

The Stony Tote road was constructed under contract for the St. Croix Lumber Company ca. 1900-1901. Bedrock outcrops, lakes, and swamps forced the road builders along a circuitous route with a total cost of \$6,000 per mile (Forester 2004: 50). Winding south of Ely, across the Stony and Kawishiwi Rivers, the Stony Tote road connected a series of St. Croix lumber camps before ending approximately 26 miles south of Ely at Source Lake. In the winters of 1901-1914, both draft horses and wood fed steam haulers plied the road with supplies for the winter camps. In a letter to historian J.W. White, dated April 9, 1971, retired Superior National Forest Ranger (1918-1953) M.J. Valentine describes how the Halfway claimed its name:

Mike Kelly drove the four horse tote team that hauled the supplies and equipment to various St. Croix lumber camps scattered throughout that area. In those days it was practically a full day's trip from Ely to the Halfway camp located along the tote road on the opposite side of the river. The following day he would travel on to camp 27 near the Stony River and approximately 27 miles from Ely.

Up until the 1920's, the Stony Tote road was one of the only operable roads in the Ely area. Improvement and paving of newly renamed Highway 1 was completed by St. Louis County in 1921, and the road was extended to Two Harbors the following year (Searle 1977: 20). The evolution of the Stony Tote road from a primitive log-hauling road to an all weather highway facilitated growth in both the local tourist industry while also providing the Forest Service greater access to its landholdings for both resource management and fire suppression. In time, as road networks grew and fire detection techniques improved, guard stations would be replaced by centralized ranger stations responsible for the management of blocks of forest lands in excess of 100, 000 or more. Ranger station facilities, like those at Halfway Ranger Station, would change significantly following the implementation of Roosevelt's Work Project Administration.

### Halfway Ranger District—CCC

Despite nation-wide economic depression, the 1930s ushered in a period of increased activity on the Superior National Forest. This growth, typified by large-scale conservation projects and the construction of new administrative facilities, was largely the result of the successful implementation of Franklin Delano Roosevelt's Emergency Conservation Work program, otherwise known as the Civilian Conservation Corps (CCC). On March 31<sup>st</sup>, 1933, congress signed a bill giving President Roosevelt authority to begin federal programs for relief of unemployment. At the time this bill was signed, Minnesota had a 29% unemployment rate with that figure reaching nearly 70% on the Iron Range (Drake 1987: 9). Seven buildings at the Halfway Ranger District originated during this prodigious period of conservation-orientated development, which occurred on federal and state lands during the Great Depression.

The CCC was jointly operated by the Department of Labor (screening candidates), the United States Army (operation and recruiting), and the Department of Interior, Forest Service and various state entities (work projects and training). Men from local communities, known as Local Experienced Men, or LEMs, were hired to direct building projects and to provide on-the-job training to enrollees. Generally, a CCC camp would house about 200 enrollees, up to 25 army personnel, around 30 staff from the Forest Service, and 10-20 LEMs (Drake 1987: 12).

On the ground, each CCC camp was assigned a company number by the army, and a numerical designation by the U.S. Forest Service. Each camp also usually had a name, which did not necessarily correlate with the name of the nearest post office. The numerical designation indicated what organization the camp was assigned to (Federal, State, or private) and included a unique identifying number. For example, the camp most likely responsible for the construction of the Halfway Ranger District was Company 704, based out of Halfway Camp F-1. It was common for a company to be transferred to another camp, or for a camp to be closed down. This makes it difficult to determine exactly which camps performed a particular job. Historic records are not always complete, and so we are left to piece together information mostly from oral accounts and old CCC newsletters.

In Northern Minnesota, CCC development projects (conducted between 1933 and 1942) included soil conservation, riparian rehabilitation, fish stocking, fire suppression, tree replanting, road improvement, and the construction of recreation and administrative facilities. Figure 3 shows CCC boys fitting logs during construction of the La Croix Guard Station. This is the same type of log construction used on Halfway Ranger Station buildings.

During the years from 1933 to 1942, a total of 28 CCC camps were established on the Superior National Forest (Drake 1987: 17). Associated with these permanent camps were numerous spike camps, which were used for the duration of a given conservation project and subsequently abandoned. At the time of this writing, the Superior National Forest Heritage Resource Office has identified nearly 130 CCC sites within the Superior National Forest (Cultural Resource Inventory forms on file at the Superior National Forest Supervisor's Office, Duluth, Mn.). Table 1 lists nine CCC era "permanent" log structures/complexes.



**Figure 3. CCC boys fitting logs at La Croix Guard Station ca. 1940.  
Photo courtesy of Superior National Forest.**

**Table 1. Existing Superior National Forest historic CCCbuildings/complexes.**

Site	SNF District	County	Construction Date
East Bearskin Lake Guard Station	Gunflint	Cook	1937
Crooked Lake Guard Station	LaCroix	Lake	1934/5
Isabella Ranger Station	Tofte	Lake	1935
Halfway Ranger Station	Kawishiwi	Lake	1934/5
Kekekabic Lake Guard Station	Kawishiwi	Lake	1937
Lac LaCroix Guard Station	LaCroix	St. Louis	1936
Sawbill Lake Guard Station	Tofte	Cook	1938
South Kawishiwi River Pavilion	Kawishiwi	Lake	1934
Tofte Ranger Station	Tofte	Cook	1935/6

Historic documentation suggests that CCC Company 704 (based in Halfway Camp, 10 miles south of Ely, Minnesota) was involved in the construction of the Halfway Ranger Station, the South Kawishiwi River Campground and the Kawishiwi Pavilion. Halfway Camp F-1 was established on May 18, 1933 approximately 3 miles west of the Halfway Ranger District. An excerpt from CCC Co. 704's "Birch Lake Newsletter" states that "During the past year this camp completed the following.....2 office buildings at Ranger Stations.....and 4,337 Mandays maintenance at the Halfway Ranger Station and Lake States Experimental Station" (Birch Lake Newsletter 1935: 6). In addition to Company 704, there were a number of CCC companies based in the area, which could have contributed to the construction of the Halfway Ranger Station. These companies may have included Company 1720 (Dunnigan Camp), 701 (Gegoka Camp), (F54) Baptism Camp and 1721 (Isabella Camp).

The available literature does not list the actual construction dates for the log buildings at the Halfway Ranger Station. We do know however, that congressional support (in the form of budgeted dollars) peaked between 1934-1936, and subsequently decreased in 1937 (Drake 1987: 13). An article from the *Ely Miner* (1934) indicates that money for ranger station construction was being allocated by the spring of 1934:

Forest fire protection and administrative improvements estimated to cost about \$220,000 are being approved for the National Forests of Illinois, Michigan, Minnesota, and Wisconsin and will be constructed by emergency conservation workers from the CCC and NIRA camps during the coming year, according to Regional Forester E.W. Tinker. The improvements include fire lookout towers, various buildings such as ranger stations; warehouses for tools, machinery and other equipment; lookout cabins; garages; wells, and telephone lines. The buildings are plain, neat and simply constructed. They are generally located in isolated parts of the forests and can be built by the CCC boys, but local skilled labor is employed, when the job requires it.

Photographic evidence also supports a ca. summer 1934 construction date for at least some of the log buildings at the Halfway Ranger Station. A photograph of the Halfway warehouse (ranger dwelling in the background) is stamped with a date of September 9, 1934. It is likely that the pump house, office building, boathouse, oil house, and outhouse, all of which are similar in design, workmanship, and materials, were constructed shortly thereafter.

#### Lake States Experimental Station

As Chief of the newly founded National Forest system, Gifford Pinchot sought to institutionalize a research branch aimed at developing and addressing research questions related to scientific forestry. Pinchot, like many of his contemporaries in the early Forest Service administration, was a graduate of newly founded American schools of forestry that adapted “sustained yield” forestry techniques from European institutions. The sustained yield method of forestry utilized scientific data to ensure a continuous supply of wood products while simultaneously conserving soil and water resources.

Prior to 1915, forest research was primarily conducted at the district level, with researchers being subordinate to local administrators. Understandably, this arrangement generated tension between administrators and researchers, and was considered by many to be “stifling” and lacking the independent oversight necessary to conduct objective field studies. Earle Clapp, a forester who would become the chief of the Forest Service branch of research in 1915, stated that “direct district participation had stifled research, for it was impossible to develop real research if the investigator had to cater to local whims” (Steen 1991: 138). In June 1915, then chief of the USDA Forest Service, Henry S. Graves (1910-1920), established the Branch of Research as an independent entity within the newly founded administration. Forest researchers could now investigate fundamental questions completely “independent from the daily pressures of administering the national forests” (Ibid).

By the mid-1920's, the Forest Service Branch of Research had established 12 regional centers, numerous experimental forests, the Forest Products Laboratory in Madison, Wisconsin, and a network of experimental stations/laboratories on National Forest lands throughout the United States (Steen 1991: 141). Raphael Zon, a European immigrant and Cornell graduate who had worked with Pinchot at the Bureau of American Forestry in 1901, was appointed as director of the Lake States Forest Experimental Station (LSFES) in St. Paul, Minnesota in 1923. The

LSFES, renamed North Central Research Station in 1965, was and continues to be responsible for research and interagency cooperation regarding forest research in Minnesota, Wisconsin and Michigan.

One of the first tasks of the LSFES was to provide baseline data regarding the age, types and structure of forests stands on the National Forests in the Upper Midwest and to develop research questions specific to the region. Research questions were tiered to diverse forest types, which covered the region, but included forest regeneration, nursery studies, fire research, drought resistance, insect damage, forest inventory, forest economics and wildlife studies. Portions of the region were divided into work centers or branches, such as the Superior Branch (Halfway Ranger District near Ely, Mn.), the Chippewa Branch (Cass Lake, Mn.), and the Upper Peninsula Branch (Dukes, Mi.). These regional branches, or work centers were often located on existing Forest Service administrative sites. Figure 4 shows an example of experimental forestry practices on the SNF.



**Figure 4. Larry Krefting, LSFES biologist 1945-1966, examining deer browse in Jonvik yard on the Superior National Forest (Photo source: Rudolf 1985: 267).**

The headquarters for the Superior Branch of the LSFES was established on the Halfway Ranger District administrative site in 1931 by F.H. “Windy” Eyre. In addition to persuading the Superior National Forest to allocate a portion of the Halfway Ranger District to LSFES, Eyre also established the 2, 635 acre Kawishiwi Experimental Forest (Rudolf 1985: 19). A combination dwelling-office structure was constructed at the LSFES portion of the Halfway administrative facility in 1931 for a total cost of \$2, 626 (see Figure 5). This combination office-dwelling included a bathroom which was, at that time, the only bathroom available on any of the existing Ranger Stations on the Superior National Forest (Ibid). In 1942, Eyre sponsored the designation of the 640-acre Keeley Creek Scientific and Natural Area (later termed Research and Natural Area or RNA) near the Halfway administrative site. The Keeley Creek SNA, the second

oldest in the North Central Region, continues to protect a unique jackpine, black spruce and sedge meadow ecosystem while also providing scientists with a baseline or reference area by which to monitor long-term ecosystem change.

The relationship between LSFES and Halfway Ranger Station employees and Kawishiwi Summer Home residents appears to have been close in the early years. Marilyn Solberg Russell, who spent her summers adjacent to the Halfway Ranger Station administrative site from the mid-1930's through the 1980's, recalls sight seeing trips (in this instance, to the Keeley Creek SNA) that summer residents enjoyed with LSFES and Halfway employees in the 1930's (Russell ca. 1980's: 2).

Morton's daughter [summer resident on Birch Lake] married one of the men who worked at the Experimental Station which was run at the Halfway Ranger Station. The men did a lot of reforestation study, and in fact planted the stand of Norways and Jack Pines now growing to north of the gravel pit...Every year the researchers would take us to various sites to show us what they were learning. My favorite site was off the Spruce Road in Black Spruce peat bogs. The men were studying growth patterns in various ecological conditions, taking tree borings.



**Figure 5. LSFES bachelor's quarters/office ca. 1934 (Photo source: Rudolf 1985: 218).**

The LSFES received a considerable boost in manpower between the years of 1933-1941, when CCC camps were established in the area. The additional manpower intensified pre-existing LSFES experimental projects which included forest survey, timber stand improvement and replanting. Between 1931 and 1937, CCC labor and WPA funds were used to complete the first large-scale forest inventory of the Lake States region. The LSFES, SNF, and local CCC companies were successful in pooling manpower, technical expertise and experimental data necessary to establish thousands of acres of pine plantation near the Halfway Ranger Station. A newsletter from CCC Co. 704 (Halfway Camp), describes both the working relationship between

the LSFES and CCC Co. 704, as well as the relationship of LSFES to the Superior National Forest (Birch Lake Newsletter 1936: 12):

The Lake States Forest Experimental Station, situated near the Halfway Ranger Station, is the other department with which we are concerned. The relation existing between this division and the Halfway camp are as follows: Fifty men from [the] camp are turned over to the LSFES each day, under the direction of R.K. Lebarron, assisted by foreman Kruse and Isaacson. The work is mainly the furthering of experimental projects relating to forestry. The LSFES, while being classed as in the Forest Service, differs from it in that their work is concerned with the experimental phases of Forestry rather than the management of extensive stands of timber. In other words the results of their experiments are often used profitably by the Forest Supervisor in planning future work.

The Superior National Forest appears to have moved Halfway District employees to the Kawishiwi Ranger Station in the early 1950's. Russell documented this transitional period of Halfway administrative control between Superior National Forest and LSFES as occurring around 1949-1950. At that time, Don Ingerson, a high school principal from St. Louis, "ran a summer boys camp at the ranger station during a period of time when the government ceased using it as a ranger station and before it became a full-time Experimental Station"(Russell ca. 1980s: 12). The SNF continued to assign personnel and District Rangers to the Halfway Ranger District until 1974, although these personnel were based out of the Kawishiwi Ranger Station office in Ely, Mn.

By the 1960's, research conducted out of LSFES had led to the publication of hundreds of scientific articles on diverse topics such as forest genetics, forest regeneration, fire ecology, insect damage and wildlife biology. In 1966, Paul O. Rudolf, LSFES silviculturist from 1930-1966, compiled 172 forest genetic articles which were generated by LSFES researchers. Significant studies included the pioneering work conducted by LSFES silviculturist Miron "Bud" Hienselman (1920-1993) who, between 1948-1974, mapped the extent and severity of wildfires in Northeastern Minnesota (see Figure 6). Hienselman's findings suggested that the forests of Northeastern Minnesota had been exposed to frequent low-intensity, and less frequent high-intensity wildfires; these wildfires played a significant role in determining stand composition and succession (Hienselman 1996: 45, 59). This new data, concerning the role of wildfires in forest ecology, countered the long-standing belief that wildfires were inherently a destructive mechanism. Hienselman's findings have contributed to a more balanced approach to fire management within the Superior National Forest; today many natural ignited wildfires are allowed to burn to accomplish resource objectives.

On July 1, 1974, the Superior National Forest officially consolidated the Halfway Ranger District with the Kawishiwi Ranger District. Although the Superior National Forest continued to retain control of the land, responsibility for management of all the CCC-era buildings at the Halfway administrative site was assumed by North Central Research Station (formerly LSFES). In the late 1960's and early 1970's, wildlife biologists David L. Mech and Lynn Rogers, working for both the United States Fish and Wildlife Service and the North Central Research Station, respectively, conducted some of the first scientific studies of large mammals in the region using tranquilizing drugs and radio-telemetry. David L. Mech, currently employed as a USGS Biological Resource Division biologist and adjunct professor at the University of Minnesota, continues to conduct long-term analysis of wolf-deer population trends on the Superior National Forest out of the historic HRSHD. Rogers and Mech, whose combined scientific publications

exceed 350, illustrate an 80-year tradition of federal sponsored scientific inquiry, which was centered at the Halfway Ranger District administrative site.



Figure 6. Miron "Bud" Hienselman examining fire scar on Red Pine (Photo source: Hienselman 1996: 46).

## 2.2 Chronology of Development and Use

Table 2 lists an overview of the historical timeline of events associated with the HRSHD.

**Table 2. Chronology of historic events associated with the Halfway Ranger Station.**

<b>Time Line for Halfway Ranger District-Lake States Forest Experimental Station</b>	
1900	St. Croix Lumber Co. purchases mill in Winton and begins construction of the Stony Tote Road.
1906	St. Croix Lumber Co. finishes stringing telephone line between Camp 17 and Ely.
Feb 13,1909	Superior National Forest (SNF) established by Presidential Proclamation.
1909-10	First guard stations constructed on SNF.
1910	Halfway RD awards the 225mbf Birch Lake Timber Sale to St. Croix Lumber Co. It is the SNFs 1st sale.
1920	Records indicate that Halfway guard station was built prior to 1920.
1921	The Stony Tote road is paved and renamed Highway 1 by St. Louis County.
1922	Highway 1 is extended to Beaver Bay and Finland.
1923	Lake States Forest Experimental Station (LSFES) is established in St. Paul, Minnesota with Raphael Zon as director.
1931	The SNF allocates a portion of the Halfway administrative site is to LSFES.
1931	LSFES builds a combination dwelling-office at Halfway for \$2,626.
Late 1931	LSFES and SNF establish the 2,635-acre Kawishiwi Experimental Forest near Halfway.
1933	CCC camps established on the SNF.
Ca. 1934	Local CCC companies construct the Kawishiwi Pavilion and at least 9 log buildings at Halfway RD.
May 20,1936	CCC Co. 704 (Halfway Camp) newsletter states that 50 CCC volunteers a day are assigned to LSFES.
1942	LSFES and SNF establish the 640 acre Keeley Creek Scientific and Natural Area near Halfway RD.
1949	An office building is relocated to Isabella Ranger Station from LSFES.
1957	Insectory building and lab are constructed at LSFES.
1950-60's	Miron "Bud" Hienselman conducts pioneering fire history/vegetation studies out of LSFES.
1966	Paul O. Rudolf publishes 172 forest genetic articles garnered through LSFES research from 1924-65.
1968-71	Based out of LSFES, wildlife biologist David Mech conducts the first radio-telemetry studies of wolves in Minnesota.
1974	Management of Halfway Ranger Station assumed by LSFES/North Central due to SNF consolidation.
1974-present	USFWS and USGS conduct large mammal research out of Halfway Ranger Station/LSFES buildings.

## 2.3 Architectural Description

This section consists of an overview of the architectural styles embodied in the buildings included within the HRSHD. It discusses some highlights of USFS administrative building design history, which had some influence on the design of the buildings at the HRSHD. It also deals with two historical issues concerning the construction of the buildings. The issues covered include the original dates of construction for the buildings and the type of original finish used on them. Further discussion of USFS building practices is included in the Superior National Forest historic building evaluation report completed by Dunn (1997) and the national-level historic overview of USFS architecture by Grosvenor (1999). This section relies on material gleaned from both of these works.

The evolution of the USFS as a federal land management agency is reflected in the increasing complexity of form, shape, and design embodied in its administrative buildings. This complexity cannot be completely divorced from other controlling factors such as the evolution of building technology, selected availability of raw material types and so forth. However, the historical situations of the Forest Service have acted, in a limited way, as a determining factor in the design and construction of its administrative buildings.

During the early years of the USFS (1909-1920s), employees were constructing buildings that exhibited significant minimalism and simplicity in design, building materials and construction methods. This is a period of FS history characterized by chronic limitations in funding and support to field operations (Grosvenor 1993: 3). Even before the construction of these simple buildings, employees had to, “carry out their duties in rented rooms in towns, in abandoned homesteads, and in tents in the field” (Grosvenor 1999: 3). Eventually, FS staff got around to constructing buildings for administrative purposes however, due to the same constraints in funding and support, early FS employees built buildings that were “small, poorly designed by employees on the ground, and inadequate for conducting day-to-day business” (Grosvenor 1999: 3). These early FS administrative buildings were also, “largely reflective of the ranger’s personal preferences, as well as the materials, tools, and time available to them” (Grosvenor 1999: 3). In short, the simplicity of the early one-room, hand-made administrative buildings of the USFS was a function of minimal appropriations and resources indicative of the USFS in the early stages of its life as an agency. In other words, design was affected by historical events.

During the decades of the 1920s and 1930s, appropriated support had already begun to flow through the National Forest system and accessibility to remote areas was provided by increases in road construction by the 1920s (Grosvenor 1999: 17). Add to these factors the domestic needs of FS personnel and their families, as well as changes in USFS land management policy goals. One of the notable results of these factors was the increase in complexity of administrative sites and the design of administrative buildings occupying those sites.

During this period of FS change, the LSFES Dwelling was constructed. Supported with funds provided by the Hoover administration’s Public Works Program (Rudolf 1985: 19), the LSFES Dwelling was built in 1931 as an office, laboratory and living quarters. It was probably built to a standardized plan (Grosvenor 1999: 13-17). This balloon or platform-framed building is an example of a vernacular type known as the National Style. The single-story layout of the building, as well as the front entrance porch and finished attic space is indicative of the “gable-front” subgroup or family of that ubiquitous National Folk Style (McAlester and McAlester 2003: 90). Later versions of gable-front buildings of the National design were built with Craftsman detailing and spatial massing. The Craftsman Style was one of the leading residential design modes from the 1900s to the 1920s (McAlester and McAlester 2003: 90, 453-454). There are some of these Craftsman elements, including the low-angle gable roof, and the interior layout in the LSFES Dwelling.

Two additional steps in the evolutionary continuum of the USFS came about during and immediately after the Hoover administration. These initiatives were, the inclusion and standardization of architect positions within the structure of the FS bureaucracy (Grosvenor 1999), and the organization of a large labor force within the federal government with the capacity and mandate to undertake and complete large construction and land management

projects (Merrill 1981; Steen 1991; and Williams 2000). Both additions to the USFS, an agency architect and a large CCC work force, played a direct part in the design and construction of the log buildings at the HRSHD.

When considering FS administrative buildings of this era, it is important to understand that the design for these buildings was part of an administrative plan to standardize the architecture of FS administrative buildings, and to allow for a certain level of regional flexibility. The individual behind this notion was FS architect W. Ellis Groben. Hired specifically to assist the FS in the creation of its “own style of architecture” (Grosvenor 1999: 3), Groben set out to develop a set of standard plans for the design and construction of FS administrative buildings. This set of plans was organized into book format and graced with the title, “*Acceptable Plans, Forest Service Administrative Buildings*” (Groben 1938). With regard to style selection, Groben infused his policy with a level of flexibility based on the need to “blend in” with the local architectural styles found throughout the country (Dunn 1997; Grosvenor 1999: 21-25). Groben even went so far as to develop a typology of styles for different FS regions of the country.

One of Groben’s style-type recommendations for the Eastern Region of the USFS was the use of logs for the construction of administrative buildings (Grosvenor 1999: 32). The architectural details of Groben’s log designs appear to have been borrowed from a nationalized style, originally created and used extensively by the National Park Service during the early part of the 20<sup>th</sup> Century. This style became known as the Rustic or Adirondack style (Bomberger 1991; Dunn 1997). One of the premiere landmark buildings of this style is the National Park Service’s Old Faithful Inn, which was built in 1912, at Yellowstone National Park (National Park Service 1989a; National Park Service 1989b; Bomberger 1991; Dunn 1997). Prior to the construction of log administrative buildings on the SNF, the State of Minnesota was already fashioning their administrative buildings according to tenets of Rustic design. An example of this is the famous Douglas Lodge built in Itasca State Park in 1905 (National Park Service 1989). Notable elements of the rustic style include the use of round, saddle-notched logs accentuated with chisel-shaped log-ends that often ran “proud” of wall planes at corner-junctions.

The Ranger Dwelling, built with notable deviations from the Groben plan (the addition of a full-length porch instead of a stepped-in, partial-length porch), was constructed from Groben’s Plan #48 for Ranger Dwellings (Groben 1938). Its elevation profiles, overall shape, specific details (exposed rafter tails and interior finishes, and interior massing of room units) suggest a direct influence from the Craftsman school (Dunn 1997). However, the overall structure of the walls, corner joining details, and roof are clearly in the mode of the Rustic Style. The rest of the log buildings in the HRSHD, do not have the Craftsman influence, but are fine examples of a Rustic Style of architecture that has been transformed to meet the day-to-day work need requirements of a federal land management agency.

The issue of construction also fits with the overall perspective of this section that the complexity of design that goes into FS administrative buildings is tied to the historic evolution of the agency. The point to be made here is the involvement of the CCC, which instituted a never-before-seen ability of the FS to undertake massive construction projects such as the development of large ranger station complexes like the HRSHD. In addition, the CCC afforded the FS the opportunity to employ large crews composed of trainee and professional craftspeople. This fact is reflected in the high level of workmanship evident in all of the CCC buildings on the SNF. Because of New Deal organizations like the CCC, not only did the FS

have the ability to implement large construction projects, they also had the ability to produce buildings of high-level quality and uniqueness of design.

As is the case with many architectural endeavors, both formal and informal, design is a function of historical forces that act upon the builder. Furthermore, design choices tend to follow historic trends of fashion. With the buildings in the HRSHD these facts are readily apparent when the historical record of the USFS is consulted and the building designs are looked at with a close eye for detail. At HRSHD, there are at least two separate episodes in the history of the FS represented and three distinct styles of architecture that prevailed during the first half of the Twentieth Century. Between the LSFES Dwelling and the log buildings of the Halfway Ranger Station, there are material manifestations of policies implemented during two Presidential administrations: Hoover and Roosevelt. In addition, between these same buildings are well-built examples of three distinctly American styles of residential design: National Folk, Rustic or Adirondack, and Craftsman.

There is some question as to the date of construction for the CCC era buildings. SNF drawings of some of the simpler buildings such as the Oil House show a date of October 30, 1935 and also show up on a set of photographs taken in 1947 (on file at the SNF Archives in Chisolm, Mn.). It is therefore safe to assume that some of the smaller buildings were constructed some time immediately after 1935. The larger buildings, the Warehouse and the Ranger Dwelling, do appear in a set of photographs taken in 1934 (Ibid). This suggests that the larger buildings were constructed first, possibly in the spring or early summer of 1934.

For future rehabilitation planning it is important to note that the present finish on the buildings of the HRSHD is probably not a close match to the original. The 1934 and 1947 photographs that are referenced in this report show that the original finish on the buildings was probably some kind of clear finish. Given the period of construction, the finish was probably a clear varnish. Eventual testing of the logs themselves could possibly reveal the nature of the original finish.

## **2.4 Evaluation of Significance**

The HRSHD is eligible as an historic district for the National Register of Historic Places. It is nationally significant under Criterion A for its apparent association with a federal agency, the USFS, and a federal program, the CCC. The USFS (1905-present) is part of the historic trend of federal involvement in the management and conservation of the Nation's public lands. The HRSHD was developed as a USFS administrative and logistical center, as well as a forest research station where federal land management activities, and forest science and wildlife research were carried out during the period of significance (1931-1955). The CCC was a result of New Deal Era (1933-1942) federal policies, which were developed to relieve the economic hardships felt by U.S. citizens during the era of the Great Depression (1929-1939). Most of the buildings and landscaping in the HRSHD was the result of CCC construction efforts and a significant portion of the land management activities carried out by the HRSHD during the 1930s was accomplished with CCC labor.

The HRSHD is also eligible for listing under Criterion C because seven of its buildings are prime examples of the nationally significant Rustic design, which was used in numerous private and

government administrative buildings in the first half of the 20<sup>th</sup> Century. These same seven buildings are excellent examples of the high level of quality found in CCC workmanship.

The HRDHS possesses integrity of location, design, setting, materials, workmanship, feeling, and association. The Halfway administrative site has not moved location since its inception in the early 1920s. The existing buildings are all situated in their original locations. The design of the HRSHD was created along river front property to command a view of the South Kawishiwi River. The design of the 1931 LSFES office building to include a bathroom was innovative for its day. The log materials used in the construction of the CCC-era buildings were suggested by FS architect E. W. Groben in his design book, “*Acceptable Plans, Forest Service Administrative Buildings*” (1938). The craftsmanship and workmanship evident in these buildings is superior. The HRSHD is currently occupied and utilized for wildlife studies. It still exudes the feeling of an early ranger station and experimental forest laboratory. Finally, its association with pioneering experimental forestry and wildlife studies and as an early FS administrative site built by the CCCs is still evident today.

## 3.0 Building Description, Condition and Work Recommendations

### 3.1 Building Description

#### 3.1.1 Introduction

The purpose of this section is to provide brief descriptions of the form, structure, notable architectural elements, significant alterations, and current conditions of each building within the Halfway Ranger Station Historic District, and to describe the qualities and conditions of the buildings in order to illustrate the architectural uniqueness, significance and integrity of the district. An additional intent of this section is to describe current conditions and structural problems for each building in order to provide a baseline of information for adequate maintenance and rehabilitation planning.

The section is divided into two primary subsections: buildings determined to be contributing, and those that have been determined not to be contributing to the historic significance of the district. The guiding factor for this determination, as outlined in 36 CFR 67.5, is that a building within the boundaries of a historic district that is less than fifty years old is commonly considered to be non-contributing to the historic significance of a district (i.e. LSFES Laboratory Building and LSFES Insectory/Garage). To date, the Halfway Ranger Station Historic District contains eight contributing and two non-contributing buildings, and one contributing structure (cellar).

This section is further divided into several subsections, each dealing with the description of a specific set of architectural elements or condition-related issues for a particular building. The first section describes significant architectural elements that include the ground plan, building form, interior layout, and conspicuous architectural elements and notable finishing details. The second section describes the building's structural system and is organized around the primary structural units of a building which include the foundation, wall, and the roof (McAlester and McAlester 2003). The third section documents clearly visible alterations made to the buildings over time. Most of the alterations discussed within this section are primarily those that occurred to exterior features of the buildings. There are two reasons for this: 1) the limited evidence and documentation on interior alterations makes accurate description an impossible task, and 2) the recommended treatment method of rehabilitation, as outlined in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Weeks and Grimmer 1995), allows for more extensive alteration to interior details than exterior details. Exact dates for most of the alterations described herein are unknown. The fourth section outlines work recommendations for each building and is organized in table format. Cost estimates for work recommendations are not included in this document.

Background data for this section were gathered from several historic building surveys of the Halfway Ranger Station Historic District, the South Kawishiwi Historic Pavilion and the Isabella Ranger Station Historic District. The Superior National Forest Heritage Resources Staff conducted these surveys during the 2006 field season, as well as the building condition assessments from the Dunn evaluation report (1997). Additional data regarding present building conditions were gathered from deferred maintenance data provided by the Engineering staff of

the U.S. Forest Service Northern Research Station (1999). Appendix B contains additional photos of the buildings at the HRSHD.

### 3.1.2 Contributing Buildings

#### 3.1.2.1 Ranger Dwelling (FS Bldg. #31101)

*Physical Description: Shape, Form, Significant Details*

The Ranger Dwelling (see Figure 7) is a single-story side-gabled, residential dwelling that is approximately 38' x 38' and once served as a living quarters for the district ranger and family members. The building also possesses a finished attic. Built with notable deviations from Region 9 building Plan #48 for Ranger Dwellings, the building was designed with a square massed floor plan, which included a full-length porch extending out approximately 7-8 feet from the front entrance façade-wall. A low-angle shed roof that extends directly from the eave-line of the principal roof to form a continuous or “extended” roof covers the porch. The floor plan is oriented on the landscape so that the front entrance façade-wall faces to the west. The center axis of the building is roughly perpendicular to the east shoreline of the South Kawishiwi River.



**Figure 7. Front view of the Ranger Dwelling in 1934. Exposure was taken from the west. Photo courtesy of Superior National Forest.**

In order to facilitate description of the interior layout, the massed floor plan of the Ranger Dwelling is arbitrarily divided into two approximate halves: east and west. The west side of the first story includes a combined kitchen and eating space, in addition to living room with a stone fireplace flanked by two casement windows on the north wall. Views of the porch and surrounding yard are accessible through two sets of tall casement windows let into the west façade wall. One set is centered on the kitchen wall and one is on the right half the living room wall. From the porch, the front entrance to the building is located in the center of the west façade wall and is situated on the inside near the southwest corner of the living room wall. The

east half of the building contains a full bath, linen closet and two bedrooms. A narrow hallway joins the bath and bedrooms, as well as the attic staircase. The attic consists of two main rooms on the west side that are joined by a full-length hallway. The east side of the attic is reserved for a continuous storage space that is partitioned off from the hallway by a short knee wall.

The building possesses additional elements, including a dormer, a fireplace chimney, and a smaller, furnace chimney. The centrally positioned dormer is covered by a low-angled shed roof, which is tied into the ridgeline of the principal roof. The dormer roof extends down the entire width of the principal roof plane and terminates with a window wall at the intersection of the porch and principal roof planes. The fireplace chimney, constructed of locally available cut stone quarried from a nearby source of gabbro, is situated on the west half of the north gable wall. A smaller brick chimney that serves as an exhaust outlet for the furnace protrudes just below the ridgeline on the porch-side of the principal roof. This feature is located on the left side of the dormer. A secondary entrance offers direct access to the basement stairs and the kitchen space. This entrance is located in the center south gable wall, and is accessible from the yard by an elevated stoop covered with a small shed roof, which is supported by thin log columns set atop a low, log wall.

The building also possesses unique finishing elements, which include the ceilings, doors, and windows. The ceiling framing was finished with 1 to 1 ½ inch wainscoting, which was covered with at least one coat of high-gloss varnish. In the particular case of the living room ceiling, the wainscoting was installed in between exposed log beams, which were set perpendicular to the west façade wall and spaced approximately 2 feet on center across the length of the room.

The Ranger Dwelling possesses at least three different types of doors that vary according to construction method. These include the front entrance door, located in the approximate center of the west façade wall, which consists of vertically oriented dimensional planks strengthened with hand-forged iron tie bands that were finished with a hand-hammered dimpling texture. Other door types in the Ranger Dwelling include the storage space doors in the attic, which were finished on the hallway side with the same wainscoting used to construct the ceilings and the interior room, and side entrance doors, which were constructed in the typical rail-and-stile fashion. Also notable is the screen door, which was constructed in typical rail-and-stile fashion with two rails located on either side of the vertical midpoint uniquely connected with a row of turned dowels. This unique screen door type originally hung on many of the buildings within the district, and also appeared on the Kawishiwi Pavilion located directly north of the district, across Highway 1 on the north side of the South Kawishiwi Campground.

With the exception of the dormer, all the windows in the building appear to be of original construction consisting of multiple glass panes encased in a joined frame tied together with a squared latticework of rabbeted muntins. The windows in the Ranger Dwelling were constructed according to two common patterns: casement and double hung. The casement windows were installed primarily in the kitchen and the living room and the double-hung types were installed primarily in the bedrooms and attic rooms. All windows retain the original hardware.

### Structural System

The Ranger Dwelling was constructed on a full-sized, poured concrete basement with at least a 6' wall depth below grade. The outer wall of the porch rests on three large poured concrete footings that are approximately 3' x 3' square. The walls are constructed with peeled round logs prepared from locally available pine and aspen logs (Dunn 1997) that were laid with alternating butt and tip ends and connected by means of a standard saddle-notch. In keeping with the rustic style, log ends were intentionally cut to run proud of the wall intersection and finished off by shaping the ends to chisel-edge point. In order to facilitate a tight, weatherproof, chink-less fit, the logs were prepared by shaping a groove or flute along the entire length of the bottom of each log to promote a tighter fit between logs without having to scribe them. The roof of the Ranger Dwelling was constructed with purlins made of logs of small diameter, relative to the wall logs, and covered over with 1" thick dimensional lumber for sheathing. The original roof covering appears, from photographic evidence, to have consisted of standard asphalt shingles, which have been replaced several times over the years. Figure 8 shows the current building front elevation.



**Figure 8. Front view of the Ranger Dwelling in 2006. Exposure was taken from the west-northwest. Note removal of stair log railing. Photo courtesy of Superior National Forest.**

### Changes

Overall, with the exception of the exterior finish and some minor detailing, the Ranger Dwelling has undergone little in the way of changes to its original form, shape, layout, surrounding landscape features or significant architectural elements. Changes since construction are minor and consist of several episodes of exterior repainting, replacement of window screening, replacement of front and side entrance stoops as well as several episodes of roof re-shingling

including the most recent one witnessed by the Heritage Resources Staff during a photographic survey trip in the fall of 2006. The most significant change to the overall architecture consists of the removal of the log railing wall on the front entrance stoop, which can be seen in a 1934 photo (see Figure 7) of the front elevation. The timing of this particular change is unknown but was probably completed when the present version of the front stoop was constructed (see Figure 9).



**Figure 9. Corner view of the Ranger Dwelling in 2006. Exposure was taken from the north-northwest. Photo courtesy of Superior National Forest.**

### **3.1.2.2 District Office Building (FS Bldg. #31105)**

#### *Physical Description: Shape, Form, Significant Details*

The Office Building (see Figure 10) is a single-story side gabled dwelling that once served as the administrative office for the Halfway Ranger District. It is now vacant. The building was constructed with a linear, double-room, rectangular floor plan and a newer bathroom addition connected to the south corner. The long axis of the building is oriented in a northwest-southeast direction resulting in a northwest facing entrance façade wall, and northeast-southeast facing gable walls. In the original floor plan, the two rooms consisted of a kitchen/living area on the northeast side of the building and a bedroom on the southeast side that opens on the east wall to the modern bathroom addition. The rooms are divided by a log wall and are accessible by a slightly offset doorway. The main entrance door is located roughly in the center of the northwest façade wall and allows direct access to the right side of the kitchen/living space. A small, cross-gable roof that connects to the west plane of the principle roof approximately midway down from the ridge covers the entrance doorway. The entrance roof, supported by

two log columns that rest directly on a rough-cut stone platform that serves as a stoop, is accessible from the road via a rough stone sidewalk and stone stairs.

Other architectural details include several twin sets of double-hung windows and the three doors. Two sets of windows flank the front door, one set is centered along each of the gable walls and one centered on the rear or east façade wall. All doors were constructed in typical rail-and-stile fashion. The front entrance door is lighted at the top with a single row of three elongated rectangular windows. A secondary screen door is also hung on the exterior of the front entrance and is similar in construction and design to the one hanging on the front entrance of the Ranger Dwelling porch and the side entrance of the South Kawishiwi Pavilion.



**Figure 10.** Front view of the District Office building in 1947. View is from the north-northwest. Note the curved log brackets supporting the porch roof and hanging half-log gutters. Photo courtesy of Superior National Forest.

### *Structural System*

The Office Building is situated on a short knee-wall foundation, approximately 12” in height, which was constructed from poured concrete. The walls of the building are constructed of round logs and are fitted in the same manner as the Ranger Dwelling. The roof is constructed with 1-inch dimensional lumber sheathing laid perpendicular to four log purlins that are tied into the top of the gable walls and supported in the middle by the central dividing wall.

### *Changes*

Based on survey and photographic evidence the District Office Building has undergone more significant alterations than any of the contributing buildings within the historic district (see Figure 11). The most striking of these changes is the addition of the bedroom and bathroom to the original structure. The building was originally built as a one-room floor plan, the original

room being the present kitchen area. Some time before 1947, a smaller room, (the present bedroom), was attached to the southwestern wall and made accessible by cutting in, and installing, the present doorway. The original window for this wall has been filled in but is still detectable, in outline, in the middle of the central dividing wall. As for dating these additions, it can safely be assumed from photographic evidence that construction of the bedroom addition must have occurred within a 14-year period after the initial construction of the building. On the other hand, there is no available evidence for the construction of the bathroom addition; therefore, the date of that addition is presently unknown.



**Figure 71. Office building 2006. Photo courtesy of Superior National Forest.**

Another significant and striking pre-1947 alteration was the complete replacement of the original support posts for the stoop roof. These posts consisted of two unusually bent logs that originally flanked the front entrance door. Each log was connected to the wall in some, yet, unknown fashion and angled up, from the midway point of the door, to meet with a central support log in the stoop roof. The rationale and date of this particular change is unknown but it did take place sometime after 1947. It is probable that the change was made because of some structural failure detected in the posts, possibly caused by dry rot or powder-post beetle infestation.

Other post-1947 alterations include the removal of the original half-log gutters that were originally suspended from the eaves with metal straps. In addition, the 1947 photo shows the existence of half or quarter-sawn case that once graced the exterior of the windows and is now gone or been replaced with 1 inch dimensional lumber. As is the case with the Ranger Dwelling, and probably the rest of the log buildings in the district, the initial phase of roofing was originally capped at the ridgeline with a metal ridge-cap. These caps, possibly made of tin or zinc-coated steel, ran the length of each principal and dormer roof ridge and terminated at the eave edge with a small decorative sphere.

### 3.1.2.3 Warehouse (FS Bldg. #31106)

#### *Physical Description: Shape, Form, Significant Details*

The Warehouse Building (see Figures 12 and 13) is a single story, side-gabled building that once served as a storage warehouse, garage, and workshop for the Halfway Ranger Station. It was constructed with a rectangular, linear floor plan that encompassed 4 separate units consisting of a large work space/garage room on the northwest side, a narrow garage space in the center, and a shop-storage room combination contained in the southeast end of the building. A stud wall separates the shop and storage area. A low angle, gabled-roof with one large, and two small side-gabled overhangs that breaks up the eave-line on the front entrance façade-wall, covers the entire building. The large overhang is situated over all three garage doors and the two small overhangs cover the two smaller hinge-type doors and are supported with small diameter log struts. Like the Ranger Dwelling and the District Office Building, the Warehouse Building is not oriented to the cardinal direction. Its long axis runs roughly northwest to southeast with the front entrance wall facing roughly to the southwest. The large room on the northwest end of the building is accessible through three doors including two large garage doors and one small hinge-type door. The central garage space is accessible through a garage door and the shop-storage area entrance consists of a standard hinge-door. A small brick chimney is located on, or near, the ridge of the principal roof. It is just to the right of the large central dormer.



**Figure 12.** View of the left side of the Warehouse in 1947. Taken from the south. Photo courtesy of Superior National Forest.

There are several architectural details inherent in the Warehouse Building, which deserve mention. They are the windows, doors, and the eave configuration. The eaves of the building, like all the other contributing log buildings in the district, were left exposed on the bottom. The exposed log rafter and purlin tails run approximately 2-3 feet proud of the supporting wall plane,

capped on the ends with a simple fascia board. The sash operation of all the windows in the building consists of the sliding type. There are two sashes for each window with four lights each in a 2-over-2 configuration. As for doors, there are three modern, sectional garage doors and two modern rail-and-stile doors that are now used in the front façade-wall entryways.



**Figure 13. View of the Warehouse in 1934. Taken from the southeast. Photo courtesy of Superior National Forest.**

An interesting detail to the Warehouse Building, that is still clearly visible on the ceiling boards of the shop space, is several dated signatures applied by early Forest Service personnel during the early years of the Superior National Forest. Because most of the signatures pre-date the construction of the Warehouse Building, it is highly probable that the boards used to finish off the interior of the shop space were actually recycled from an earlier administrative building that may have been part of the original Halfway Ranger District complex. Figure 14 lists some of the more legible signatures.

<p><b>I.V. Anderson May 13, 1918</b></p> <p><b>I.V.A. 1923</b></p> <p><b>Frank Klobuchar</b>  <b>Ely Minn., Box 292</b>  <b>(undecipherable)</b>  <b>April 16<sup>th</sup>, 1924</b></p> <p><b>Emil Kantola, Sept. 23, 1924</b></p> <p><b>“Back from Ely 1150” TJS</b>  <b>Aug. 1918</b></p> <p><b>Henry Anderson, 1922</b></p>
---

**Figure 14. Signature samples copied from the Warehouse ceiling.**

### Structural System

The structural system for the Warehouse Building is similar in design, materials and construction to the District Office Building with the exception of the floor construction. The foundation consists of a short wall made from poured concrete that runs underneath each wall. This foundation wall, which encompasses the entire building plan, surrounds a poured concrete slab that, in turn, makes up the floor of the dwelling. The walls are built with the same log construction methods as the other buildings in the district and the roof is designed and constructed in a similar manner.

### Changes

Alterations to the original construction of the Warehouse Building consist of the replacement of all the exterior doors, the removal of the metal ridge cap on all the gable ridges, and the addition of supporting brackets to both the small eave dormers (see Figure 15). As shown in Figure 12, the original door construction consisted of a board-and-batten structure covered on the exterior side by wainscoting, set in a diamond shape pattern. Surviving examples of this door type hang on the front entrance of the Oil House, the front entrance of the Outhouse, the first Cellar door, and a variation on the front entrance of the Boat House. The date of these alterations is presently unknown. The Warehouse has experienced some structural degradation from powder post beetle infestation.



**Figure 15. View of the Warehouse in 2006. Taken from the southwest. Note original herring-bone doors have been replaced. Photo courtesy of Superior National Forest.**

### 3.1.2.4 Boat House (FS Bldg. #31107)

#### *Physical Description: Shape, Form, Significant Details*

The Boat House, which is still used to store watercraft, is a small front-gabled building situated on the west shoreline of the South Kawishiwi River. Built to a simple single-room rectangular floor plan, the Boat House is accessible through a large sliding door on the right side of the front gable wall and a standard single-leaf door on the rear wall. There is a single window, with a sliding-type sash operation, centered on each of the side façade walls. Each sash consists of six lights in a 2-over-3 configuration.

Aside from its log construction, the most notable detail of the Boat House is the unusual design of the sliding door. The interior side consists of vertical battens. The exterior side partitioned into four quadrants and edged with one-inch trim-boards. Each quadrant is filled in with angled wainscoting, which taken as a whole, forms an interesting diamond shape.

#### *Structural System*

For details on the structural system of the Boat House, please refer to the structural description section for the Warehouse Building.

#### *Changes*

The Boat house has experienced very few alterations except the removal of the original boat ramp consisting of iron rails and a dock, and some structural degradation from powder post beetle infestation. Figures 16 and 17 show these changes.



**Figure 16. Boat House ca. 1947. Note rails in front of door to haul boats from water. Photo courtesy Superior National Forest.**



**Figure 17. Current Boat House 2006. Note newer dock and absence of rails.**  
Photo courtesy of Superior National Forest.

### **3.1.2.5 Oil House (FS Bldg. #31111)**

#### *Physical Description: Shape, Form, Significant Details*

The Oil House, still used to store fuel, is a 12' x 14' single-room, side-gabled, building with the front entrance centered on the front façade wall and a single window opening on each of the two side-gable walls. A low-angled primary roof covers the building and a small cross-gabled dormer covers the front entryway. A single-leaf door provides access to the building. It is finished on the exterior-side with wainscoting set in a diamond-shaped pattern. The inside consists of vertical planking. The original windows are gone. Screen material now covers the window openings.

#### *Structural System*

For details on the structural system of the Oil House, please refer to the structural description section for the Warehouse Building.

#### *Changes*

The Oil House has experienced very few alterations except the removal of the original windows and some structural degradation from powder post beetle infestation (see Figures 18 and 19).



Figure 18. Oil house 1947. Photo courtesy of Superior National Forest.



Figure 19. Oil house 2006. Photo courtesy Superior National Forest.

### 3.1.2.6 Pump House (FS Bldg. #31102)

#### *Physical Description: Shape, Form, Significant Details*

The Pump House still houses pumping equipment and is a 10' x 10' single-room, front-gabled, building with its front entrance on the left side of the front gable wall, which consists of a single leaf door. There are no windows. A low-angled primary roof covers the building. A single-leaf

door, constructed of vertical planking, provides access to the building. A wooden vent stack is positioned at the center of the roof ridge.

### Structural System

For details on the structural system of the Pump House, please refer to the structural description section for the Warehouse Building.

### Changes

The Pump House has experienced very few alterations, with the exception of slight structural degradation from powder post beetle infestation. Figures 20 and 21 show the pump house historically and today.



**Figure 20. Pump house 1947. Note fire box attached. Photo courtesy of Superior National Forest.**



**Figure 81. Pump house 2006. Little has changed, except removal of fire box. White streaks on building are a result of powder post beetle infestation. Photo courtesy of Superior National Forest.**

### **3.1.2.7 LSFES Office and Dwelling (FS Bldg. #31108)**

#### *Physical Description: Shape, Form, Significant Details*

This building, which once served in multiple capacities for the LSFES as an office, laboratory and bachelor's quarters, was built in 1931 and is the oldest extant administrative building on the SNF. This building is a front-gabled, single-story dwelling with a finished attic and a medium-angled gable principal roof. The building is oriented so that its front gable entrance-wall faces roughly to the northwest and the west shore of the South Kawishiwi River.

Description of the architectural features includes a porch, doors, windows, exterior finishing, and elements of the roof. The front entrance is accessible through an offset, enclosed porch, capped by a low-angle gable roof, which is supported on each corner by a small, square column made from 1-inch dimensional stock. The porch is attached to the right half of the front gable-wall. As for windows, there are three double-hung windows on the southwest façade wall, three on the northeast façade wall, two on the front gable and two on the rear, one of each is positioned at the top of the gable-ends for the attic. There is one additional window for the porch, which is positioned immediately to the right of the front entrance door. There is a modern aluminum storm insert for each window. The building is protected with standard lap siding with approximately four inches of reveal between each board. The lapboards tie in at each corner to vertically positioned corner boards made from one-inch dimensional lumber. The roofing elements consist of at least one layer of standard three-tab shingles, two roof vents on the northeast plane and two vent stacks and a brick chimney on the southwest plane. The rafter tails of the roof are left exposed on the bottoms and ends, and there

is a simple fascia board covering each gable edge. Figure 22 shows the building from the river side. Figure 23 shows the back side of the building.



**Figure 22. LSFES Office/Dwelling building 2006. Note modern aluminum window inserts. Photo courtesy of Superior National Forest.**

### Structural System

As mentioned in the introduction, the structural system is described in a bottom-up manner beginning with the foundation, then to the walls and finishing with the roof subsystem. Based on visual inspection from the exterior, the foundation of the building consists of poured concrete walls that may possibly contain a full basement. The walls and both gabled roofs of the dwelling are balloon or platform framed, most likely consisting of standard dimensional lumber.

### Changes

Based on limited information, the LSFES Dwelling appears to have been relatively unaltered since its construction. The few notable alterations, based on photographic evidence, include the addition of aluminum inserts on all the windows and the replacement of the original doors. Interior changes are undocumented at this time.



**Figure 23. Back side of LSFES Office/Dwelling 2006. Photo courtesy of Superior National Forest.**

### **3.1.2.8 Outhouse (No FS Number)**

#### *Physical Description: Shape, Form, Significant Details*

The Outhouse (see Figure 24) is a square, front-gabled dwelling with a low-angled roof. An entrance is on the south side gable-wall and a single window is let into the west façade wall. The door consists of a single leaf type finished on the exterior side with a diamond-shaped geometric pattern outlined in wainscoting. The gable eaves are trimmed with a simple fascia board and there is a vent stack positioned on the ridgeline of the roof.

#### *Structural System*

The foundation of the Outhouse most likely consists of a set of sill logs positioned directly on the ground. The walls and roof are made of log in the same manner as the rest of the buildings within the district.

#### *Changes*

The only alteration made to the Outhouse is its conversion into a sauna (see Figure 25). In order to do this, the bench was removed to make room for a wood sauna stove. An access opening to the stove was cut into the bottom portion of the east façade wall.



Figure 24. Outhouse 2006, front elevation. Note recurrence of diamond pattern door. Photo courtesy of Superior National Forest.



Figure 25. Outhouse 2006. Note powder post beetle infestation, heavy roof duff, and sauna stove pipe. Photo courtesy of Superior National Forest.

### **3.1.2.9 Cellar (FS Bldg. #31103)**

#### Physical Description: Shape, Form, Significant Details

The Cellar is a 12' x 12' subsurface enclosure constructed with poured cement with a dirt floor (see Photo 21 in Appendix B). Although the original purpose is unknown, it may have been used to store seedlings. The structure possesses a double mud-room type entrance, which is located on the west side. The interior of the structure is accessible through two single leaf doors constructed in a plank-style design of dimensional lumber. The exterior of the outer door is finished with the wainscoting diamond pattern. There is a vent stack positioned on the roof of the structure. Whether it was strictly for venting or part of a refrigeration system, is unknown at this time.

#### Structural System

The foundation detail of the structural system for the Root Cellar is unknown at this time. The walls and roof are constructed of poured concrete.

#### Changes

Any alterations made to the structure are unknown at this time.

### **3.1.3 Non-Contributing Buildings**

#### **3.1.3.1 LFSSES Laboratory Building (FS Building #31109)**

#### Physical Description: Shape, Form, Significant Details

The LSFES Laboratory Building is a single-story, multiple room dwelling built according to a massed, rectangular floor plan capped with a low-angle hip roof. The building was built as a laboratory space in 1957 and now serves as an office space. The walls of the building are sided with short-reveal lap siding that is tied into corner boards on all four corners as well as the narrow casing that surrounds the windows. As for windows and doors, the building possesses multiple double-hung and casement windows as well as a wooden interior and metal exterior door set. The building is oriented on the landscape with its long axis laid out in a general east-west direction. The front entrance faces approximately to the north. There is a primary brick chimney extending beyond the height of the roof ridge, on the right side of the front roof plane. A secondary chimney constructed of metal stove pipe extends out of the east roof plane.

#### Structural System

As mentioned in the introduction, the structural system is described in a bottom-up manner beginning with the foundation, then the walls and finishing with the roof subsystem. Based on visual inspection from the exterior, the foundation of the building consists of a block foundation that may possibly contain a full basement. The walls and hip roof of the dwelling are balloon or platform framed with dimensional lumber.

### Changes

Based on limited information, the LSFES Laboratory appears to have been relatively unaltered since its construction.

#### **3.1.3.2 LSFES Insectory/Garage (FS Building # 31104)**

##### Physical Description: Shape, Form, Significant Details

The Insectory/Garage is a single-story, two-unit building covered by a single hip roof. Built in 1957, the same year as the Laboratory Building, the Insectory was initially utilized as a space to raise various species of insects for forestry-related research. It now serves as a storage space. Like the Laboratory Building, the long axis of the Insectory is laid out in an approximate east-west direction. The building possesses a garage space on the eastern end and an open space, presumably for raising insects, on the west end that is enclosed with floor-to-ceiling screening. The single-leaf, main entrance door to the building is located in the center of the front wall.

##### Structural System

As mentioned in the introduction, the structural system is described in a bottom-up manner beginning with the foundation, then the walls and finishing with the roof subsystem. Based on visual inspection from the exterior, the foundation of the building consists of a set of footings for the screened area and a concrete foundation for the garage area. The screened area floor consists of a wooden joist system constructed with dimensional lumber. The garage portion of the building most likely has a concrete slab for a floor. The walls and hip roof of the dwelling are balloon or platform framed with dimensional lumber.

### Changes

Based on limited information, the LSFES Insectory appears to have been relatively unaltered since its construction.

Figure 26 shows the insectory/garage and laboratory buildings as they exist today.



**Figure 26. Insectory (left) and Laboratory (right) buildings 2006. Photo courtesy of Superior National Forest.**

## **3.2 Work Recommendations**

### **3.2.1. Historic Preservation Objectives**

The recommended treatment for the Halfway Ranger Station Historic District is *rehabilitation* for adaptive re-use following *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Weeks and Grimmer 1995). Overall, the contributing buildings on the HRSHD are in good condition and have been continuously occupied, utilized, and maintained since their construction, with the exception of the CCC-era office building. As stated above, the HRSHD is eligible for the National Register of Historic Places because of its association with a nation-wide program (Civilian Conservation Corps), its use as an experimental forestry station and unique wolf study center, and for the method of construction of the CCC-era buildings. It also possesses integrity of location, design, setting, workmanship, materials, feeling, and association. Given the remarkable quality of craftsmanship of the CCC-era buildings, and the association with innovative experimental forestry and renowned wolf studies, it is recommended the contributing buildings of the HRSHD be preserved through adaptive re-use. As noted in the next section, the Federal Government shall consider the preservation of historic properties.

### **3.2.2. Requirements for Work**

Treatment of the Halfway Ranger Station Historic District shall comply with the various laws and policies regarding historic properties. The most important of these are the National Historic Preservation Act of 1966, as amended (NHPA), and the Secretary of Interior's Standards and Guidelines for the Treatment of Historic Properties. As a historic property owned by the U.S.

Forest Service, the HRSHD is subject to these regulations and guidelines and Executive Orders 11593 and 13006.

Briefly, Executive Order 11593 calls for the protection and enhancement of cultural properties, including historically, architecturally, or archeologically significant sites, structures, and objects that are federally owned and states the Federal Government “shall provide leadership in preserving, restoring and maintaining the historic and cultural environment of the Nation...in a spirit of stewardship and trusteeship” (EO 11593: 1971) Executive Order 13006 states “the Federal Government shall *utilize* and *maintain*...historic properties and districts (italics mine)” (EO 13006: 1978).

The NHPA lists the guidelines federal agencies are to follow regarding historic properties. Section 110(a)(1) of this Act states “[T]he heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency” (NCCR 2002: 61) and that those properties listed on or eligible for inclusion on the National Register of Historic Places “are managed and maintained in a way that considers the preservation of their historic, archaeological, architectural, and cultural values in compliance with section 106 of this act” (NCCR 2002: 62).

The above stated laws and policies guide the recommendations for treatment of the HRSHD. The Secretary of the Interior’s Standards for the Treatment of Historic Properties define four approaches to the treatment of historic properties. They are 1) Preservation; 2) Rehabilitation; 3) Restoration; and 4) Reconstruction. The Secretary of Interior defines Rehabilitation as “the process of returning a building or buildings to a state of utility, through repair or alteration, which makes possible an efficient use while preserving those portions and features of the building and its site and environment which are significant to its historic, architectural, and cultural values as determined by the Secretary” (36 CFR 67.2). The 10 Standards for Rehabilitation are listed below (36 CFR 67.7):

- (1) A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- (2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- (3) Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- (4) Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
- (5) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
- (6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

(7) Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

(8) Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

(9) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

(10) New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

To date the HRSHD has been utilized as a ranger station, an experimental forestry station, and a wildlife research station. As there have been minor modifications and updates over the years and future use of the facilities are uncertain, rehabilitation is the most realistic option for preserving the HRSHD’s cultural values, while still allowing needed alterations and changes for adaptive re-use.

### 3.2.3. Maintenance and Repair Needs

The following Tables (3-13) list the recommendations for future review, assessment, rehabilitation, and replacement of specific structural, architectural, landscape and utility elements for the buildings included in the HRSHD.

**Table 3. Work recommendations for the Ranger Dwelling.**

Primary Element	Specific Element	Recommended Task	Source
Landscape	Driveway, sidewalk, parking area	Paving and resurface.	NCRS Differed Maintenance INFRA Report, 1999.
Landscape	Surrounding site	Clean up yard, remove hazardous trees.	NCRS Differed Maintenance INFRA Report, 1999.
Masonry	Fireplace and Furnace Chimneys	Interior Cleaning	NCRS Differed Maintenance INFRA Report, 1999; Dunn Report, 1997.
Masonry	Fireplace chimney	Repoint chimney and fireplace.	NCRS Differed Maintenance Report, 1999.
Exterior	Front and side entrance stoops/steps	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Exterior	Painted surfaces	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006.
Walls	Log walls, structural wood	Treat beetle infestation.	NCRS Differed Maintenance INFRA Report, 1999.
Interior	Select wood surfaces and masonry	Clean with TSP	SNF Heritage Resources Building Survey, 2006.
Interior	Painted/varnished surfaces	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006.
Interior	Living room flooring	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006.

**Table 3. Continued**

Primary Element	Specific Element	Recommended Task	Source
Interior	Health hazard	Terminate bat infestation, seal to prevent further infestation.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006; Dunn Report, 1997.
Roof	Health hazard, insulation	Replace bat guano infested insulation.	NCRS Differed Maintenance INFRA Report, 1999.
Roof	Soffit/Facia	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Windows	Frames, glass, trim, structural	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Windows	Screen	Replace screen.	SNF Heritage Resources Building Survey, 2006; Dunn Report, 1997.
Utilities	Furnace, water heater, utilities controls, fire hydrant, electrical, and plumbing	Review, test and update as necessary.	NCRS Differed Maintenance INFRA Report, 1999.

**Table 4. Work recommendations for the District Office Building.**

Primary Element	Specific Element	Recommended Task	Source
Utilities	Septic, plumbing, electrical	. Review and upgrade	NCRS Differed Maintenance INFRA Report, 1999; Dunn Report, 1997.
Walls	Log walls, structural wood	Treat powder-post beetle infestation.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Roof	Shingles, sheathing and flashing	Replace with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Roof	Gutters	Replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Roof	Soffit and Facia	Rehabilitate or replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Roof	Stoop roof gable dormer	Rehabilitate or replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Windows	Exterior Trim	Rehabilitate or replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Windows	Frames, glass, trim, structural	Assess, rehabilitate or replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Landscape	Front walkway an stairs.	Assess, rehabilitate or replace with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Exterior	Paint and caulking	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006.

**Table 5. Work recommendations for the Warehouse Building.**

Primary Element	Specific Element	Recommended Task	Source
Walls	Log walls, structural wood	Treat powder-post beetle infestation. Assess and rehabilitate logs with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Exterior/Interior	Paint and caulking	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.

**Table 5. Continued**

Primary Element	Specific Element	Recommended Task	Source
Roof	Soffit and fascia	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey
Roof	Cross-gable dormers	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey
Roof	Shingles, sheathing and flashing	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey
Exterior	Doors	Replace with historically sympathetic materials.	Heritage Resources Building Survey

**Table 6. Work recommendations for the Boat House.**

Primary Element	Specific Element	Recommended Task	Source
Walls	Log walls, structural wood	Treat powder-post beetle infestation. Assess and rehabilitate logs with historically sympathetic materials	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Exterior/Interior	Wood surfaces	Clean with TSP	SNF Heritage Resources Building Survey, 2006.
Exterior/Interior	Paint and caulking	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Roof	Soffit and fascia	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey. 2006.
Roof	Cross-gable dormers	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey, 2006.
Roof	Shingles, sheathing and flashing	Assess and rehabilitate with historically sympathetic materials	Heritage Resources Building Survey, 2006.
Foundation	Foundation walls, concrete slab	Assess and rehabilitate logs with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.

**Table 7. Work recommendations for the Oil House.**

Primary Element	Specific Element	Recommended Task	Source
Walls	Log walls, structural wood	Treat powder-post beetle infestation.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Walls	Log walls, structural wood	Assess and rehabilitate logs with historically sympathetic materials when warranted.	SNF Heritage Resources Building Survey, 2006.
Exterior/Interior	Wood surfaces	Clean with TSP	SNF Heritage Resources Building Survey, 2006.
Exterior/Interior	Paint and caulking	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Roof	Soffit and fascia	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey. 2006.
Roof	Cross-gable dormers	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.

**Table 7. Continued**

Primary Element	Specific Element	Recommended Task	Source
Roof	Shingles, sheathing and flashing	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Foundation	Foundation walls, concrete slab	Assess and rehabilitate logs with historically sympathetic materials when warranted.	SNF Heritage Resources Building Survey, 2006.

**Table 8. Work recommendations for the Pump House.**

Primary Element	Specific Element	Recommended Task	Source
Walls	Log walls, structural wood	Treat powder-post beetle infestation.	NCRS Differed Maintenance INFRA Report, 1999 ; SNF Heritage Resources Building Survey, 2006, Dunn Report, 1997.
Walls	Log walls, structural wood	Assess and rehabilitate logs with historically sympathetic materials when warranted.	SNF Heritage Resources Building Survey, 2006.
Exterior	Door	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Exterior/Interior	Wood surfaces	Clean with TSP	SNF Heritage Resources Building Survey, 2006.
Exterior/Interior	Paint and caulking	Assess and rehabilitate with historically sympathetic materials. Apply caulking where necessary.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Roof	Soffit and fascia	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Roof	Cross-gable dormers	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Roof	Shingles, sheathing and flashing	Assess and rehabilitate with historically sympathetic materials.	SNF Heritage Resources Building Survey, 2006.
Utilities	Electrical, plumbing	Review and update	NCRS Differed Maintenance INFRA Report, 1999.
Foundation	Foundation walls, concrete slab	Assess and rehabilitate logs with historically sympathetic materials when warranted.	SNF Heritage Resources Building Survey, 2006.

**Table 9. Work recommendations for the LSFES Dwelling.**

Primary Element	Specific Element	Recommended Task	Condition Source
Utilities	Septic, electrical, water heater, furnace, plumbing	Upgrade or replace.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Exterior	Siding, paint, caulking, and windows	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Interior	Wall finishes	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999.
Roof	Shingles, flashing, soffit, and fascia	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Structural	Foundation, walls, roof	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources Building Survey, 2006.
Chimney	masonry	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources Building Survey, 2006.

**Table 10. Work recommendations for the Outhouse.**

Primary Element	Specific Element	Recommended Task	Source
Exterior	Siding, paint, caulking, and windows	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Interior	Wall finishes	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999.
Roof	Shingles, flashing, soffit, and fascia	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Structural	Foundation, walls, roof	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources Building Survey, 2006.

**Table 11. Work recommendations for the Cellar.**

Primary Element	Specific Element	Recommended Task	Conditions Source
Utilities	Electrical	Review and update	NCRS Differed Maintenance INFRA Report, 1999.
Interior	Floor area	Major cleaning	NCRS Differed Maintenance INFRA Report, 1999.
Interior/Exterior	Paint and wall coverings	Assess and rehabilitate with historically sympathetic materials. Caulk where necessary.	NCRS Differed Maintenance INFRA Report, 1999.
Exterior	Entrance doors	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999.

**Table 12. Work recommendations for the LSFES Laboratory.**

Primary Element	Specific Element	Recommended Task	Source
Utilities	Electrical	Review and update.	NCRS Differed Maintenance INFRA Report, 1999.
Exterior	Siding, paint, caulking, and windows	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Interior	Wall finishes	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999.
Roof	Shingles, flashing, soffit, and fascia	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Structural	Foundation, walls, roof	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources, 2006.
Chimney	masonry	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources Building Survey, 2006.

**Table 13. Work recommendations for the LSFES Insectory.**

Primary Element	Specific Element	Recommended Task	Sources
Utilities	Electrical	Review and update.	NCRS Differed Maintenance INFRA Report, 1999.
Exterior	Siding, paint, caulking, and windows	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.
Interior	Wall finishes	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999.
Roof	Shingles, flashing, soffit, and fascia	Assess and rehabilitate with historically sympathetic materials.	NCRS Differed Maintenance INFRA Report, 1999; SNF Heritage Resources Building Survey, 2006.

**Table 13. Continued**

<b>Primary Element</b>	<b>Specific Element</b>	<b>Recommended Task</b>	<b>Sources</b>
Structural	Foundation, walls, roof	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources, 2006.
Chimney	masonry	Assess and rehabilitate with historically sympathetic materials as needed.	SNF Heritage Resources Building Survey, 2006.

## 4.0 Bibliography

Barnes, Helen D.

1970 Early Canoes by Old Paddlers. *The Superior Paddle*. 27 November.

Bomberger, Bruce D.

1991 The Preservation and Repair of Historic Log Buildings. 26 Preservation Briefs, National Park Service, Washington, D.C.

Bergoffen, W. W.

1976 *100 Years of Federal Forestry*. U.S. Government Printing Office, Washington, D.C.

*Birch Lake Newsletter*

1935 Spirit of 704 Forestry News. 11 February: 6.

1936 Who Do You Work For? Vol.2, No. 3, 20 May: 6,12.

Conrad, David E.

1997 *The Land We Cared For...A History of the Forest Service's Eastern Region*. USDA Forest Service, Milwaukee, Wisconsin.

Drake, Robert S.

1987 The Civilian Conservation Corps – A Brief History. In *It Was a Good Deal: The Civilian Conservation Corps in Northeastern Minnesota*, edited by Edward P. Nelson and Barbara Sommer, pp. 9-15. St. Louis County Historical Society, Duluth, Minnesota.

Dunn, Edith A.

1997 *An Evaluation of Selected Log Structures at Superior National Forest: Isabella Ranger Station, Tofte Ranger Station, North Central Research Station, South Kawishibi River Community Building*. Submitted to USDA Forest Service, Purchase Order: 43-63A9-7-3143.

*Ely Miner*

1934 Four States to Receive Forest Improvement. 20 April. Ely, Minnesota.

Frome, Michael

1962 *Whose Woods These Are: The Story of the National Forests*. Doubleday & Company, Inc., Garden City, New York.

Forester, Jeff

2004 *The Forest For The Trees: How Humans Shaped the North Woods*. Minnesota Historical Society Press, St. Paul, Minnesota.

Goodall, Harrison and Renee Fiedman

1980 *Log Structures: Preservation and Problem-Solving*. The American Association for State and Local History, Nashville, Tennessee.

Groben, W. Ellis

1938 *Acceptable Plans, Forest Service Administrative Buildings*. USDA Forest Service, Washington, D.C.

Grosvenor, John R.

1999 *A History of the Architecture of the USDA Forest Service*. USDA Forest Service, Pacific Southwest Region.

Heinselman, Miron

1996 *The Boundary Waters Wilderness Ecosystem*. The University of Minnesota Press, Minneapolis, Minnesota.

McAlester, Virginia and Lee McAlester

2003 *A Field Guide to American Houses*. Alfred A. Knopf, Inc., New York.

Merrill, Perry H.

1981 *Roosevelt's Forest Army: A History of the Civilian Conservation Corps*. Perry H. Merrill, Montpelier, Vermont.

National Park Service

1989a National Register NRHP Multiple Property Documentation Form: Minnesota State Park CCC/WPA/Rustic Style Historic Resources. Minnesota Historical Society, St. Paul, Minnesota.

1989b Federal Relief Construction in Minnesota, 1933-1941. Minnesota Historical Society, St. Paul, Minnesota.

National Center for Cultural Resources (NCCR)

2002 *Federal Historic Preservation Laws*. National Park Service, U.S. Department of the Interior, Washington, D.C.

Northern Research Station (NRS)

1999 Unpublished Deferred Maintenance Report on the Kawishiwi Field Laboratory. Spreadsheet on file, Northern Research Station, St. Paul, Minnesota.

Rudolf, Paul O.

1985 *History of the Lake States Forest Experiment Station*. Government Printing Office.

Russell, Marilyn Solberg

ca. 1980s *Recollections of Personalities and Events in the Early History*. From Development of the South Kawishiwi Summer Homesite Area.

Searle, R. Newell

1977 *Saving Quetico-Superior: A Land Set Apart*. Minnesota Historical Society Press.

Steen, Harold K.

1991 *The U.S. Forest Service: A History*. Reprinted. University of Washington Press. Originally published 1976.

1992 *The Origins of the National Forests*. Forest History Society, Durham, North Carolina.

Superior National Forest

1927 Improvement Project Records. On file at the Iron Range Research Center, Chisholm, Minnesota.

The Washington State Historic Preservation Program

1977 *Architectural Description Guide: Developed for Use in Preparing Nominations for State and National Registers of Historic Places*. Office of Archaeology and Historic Preservation, Olympia, Washington.

Weeks, Kay D. and Anne E. Grimmer

1995 *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. National Park Service, Washington, D.C.

White, J. Wesley

1967 *Historical Sketches of the Quetico-Superior*, Vol. III. Superior National Forest, U.S. Department of Agriculture.

1967-1974 *Historical Sketches of the Quetico-Superior*, Vols. I-XVI. Superior National Forest, U.S. Department of Agriculture.

1974a *Historical Sketches of the Quetico-Superior*, Vol. VII. Superior National Forest, U.S. Department of Agriculture.

1974b *Historical Sketches of the Quetico-Superior*, Vol. XII. Superior National Forest, U.S. Department of Agriculture.

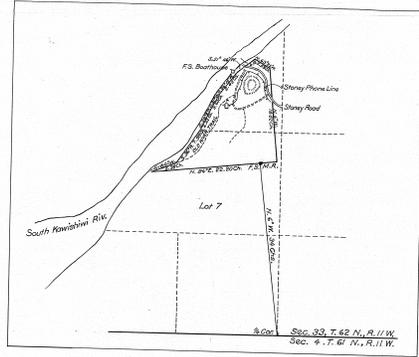
1974c *Historical Sketches of the Quetico-Superior*, Vol. XVI. Superior National Forest, U.S. Department of Agriculture.

Williams, Gerald W.

2000 *The USDA Forest Service – The First Century*. USDA Forest Service, Washington, D.C.

2006 Electronic correspondence from Gerald Williams, US Forest Service National Historian, to William Clayton, Superior National Forest Archaeologist, dated April 11, 2005.

## **APPENDIX A**



INSERT MAP  
Scale  
0 20 40 CH.

Scout House

R.G.



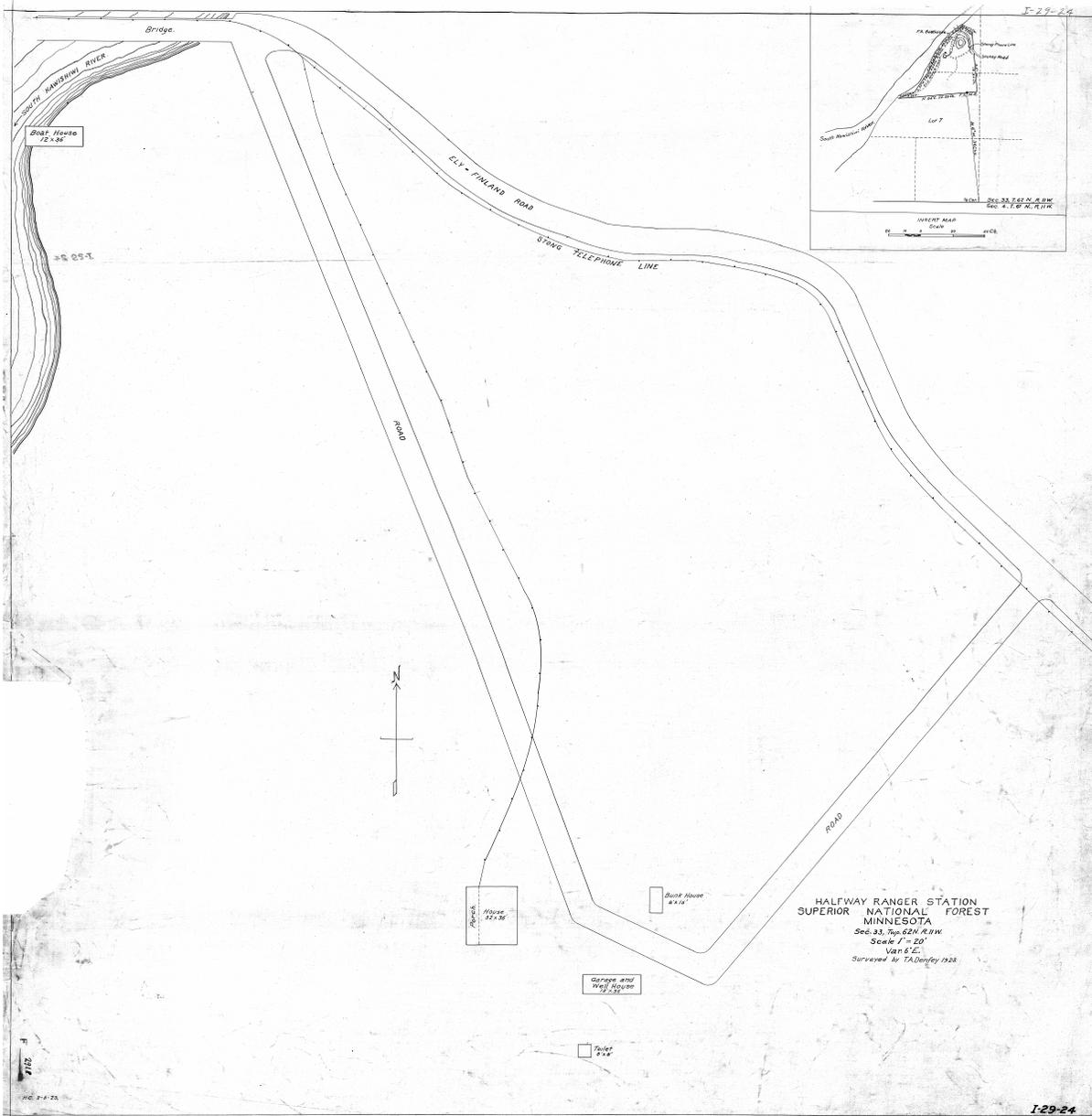
HALFWAY RANGER STATION  
SUPERIOR NATIONAL FOREST  
MINNESOTA  
Sec. 33, T. 62 N., R. 11 W., 4th P.M.

Scale  
0 20 40 FT.



□ Toilet

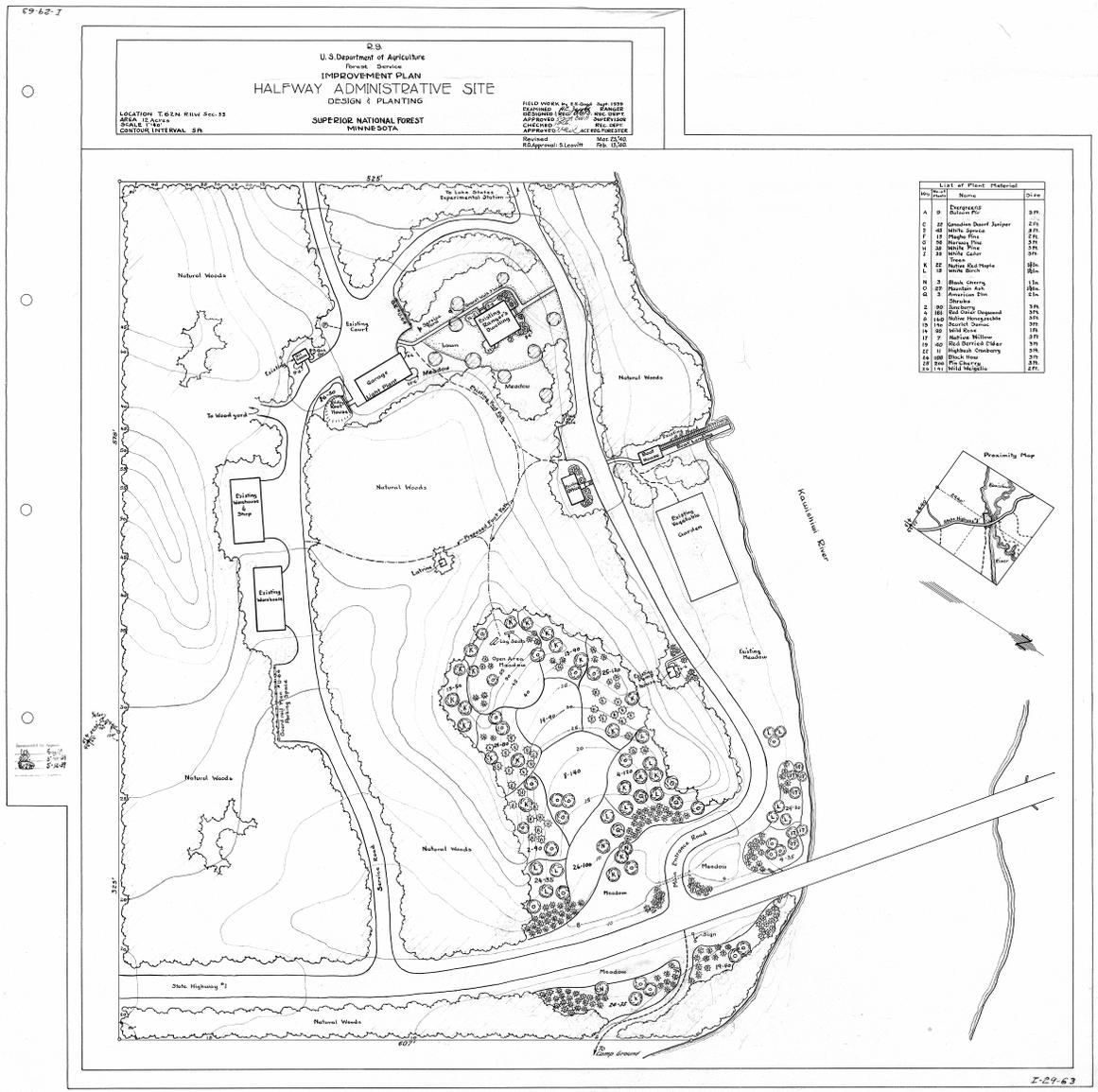
Original Halfway Ranger Station, possibly early 1923



Original Halfway Ranger Station 1923







U.S. Department of Agriculture  
Forest Service  
**IMPROVEMENT PLAN**  
**HALFWAY ADMINISTRATIVE SITE**  
DESIGN & PLANTING

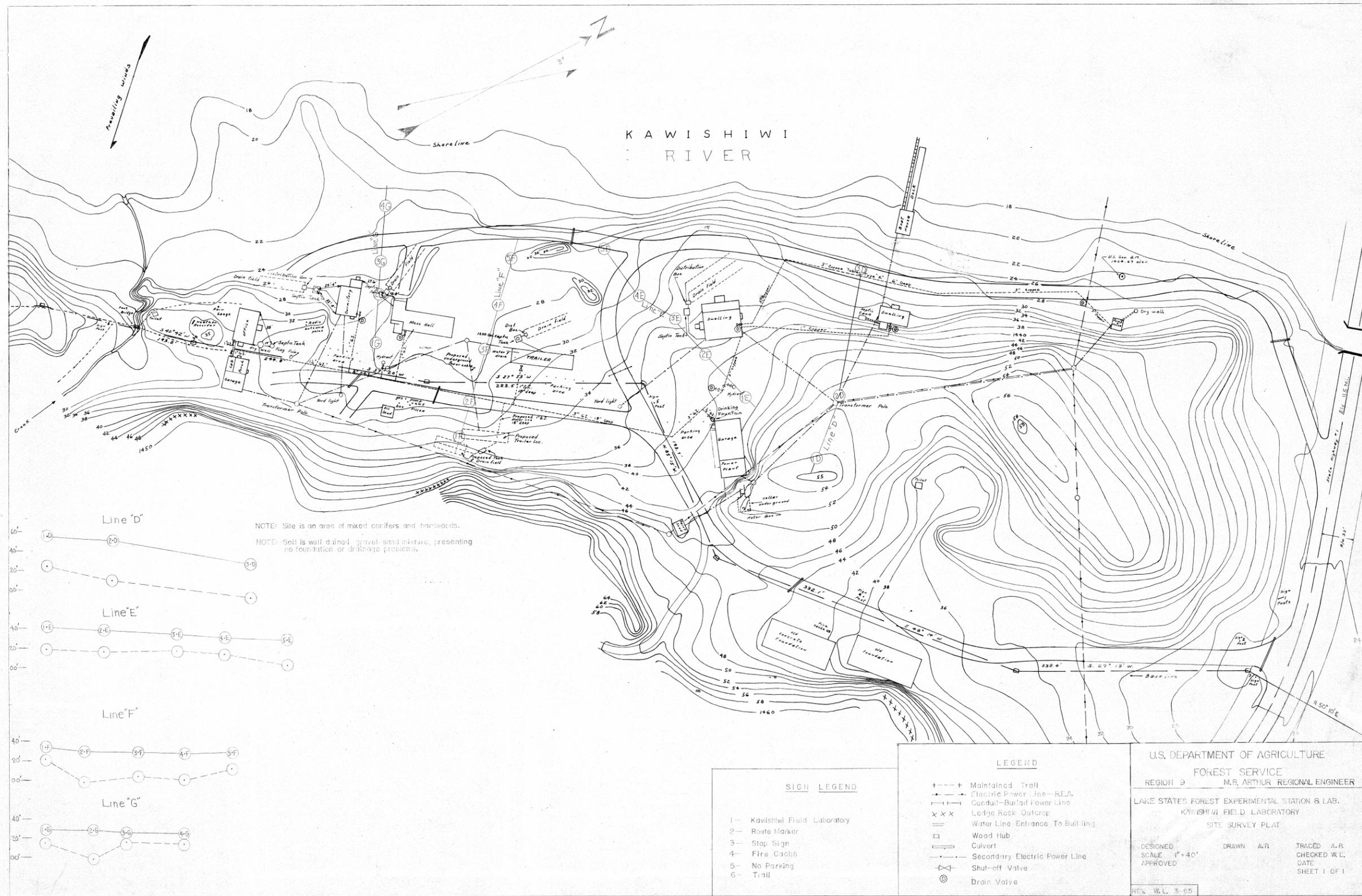
LOCATION: T-224, River Sec-23  
AREA: 12 Acres  
SCALE: 1"=40'  
CONTOUR INTERVAL: 20'

SUPERIOR NATIONAL FOREST  
MINNESOTA

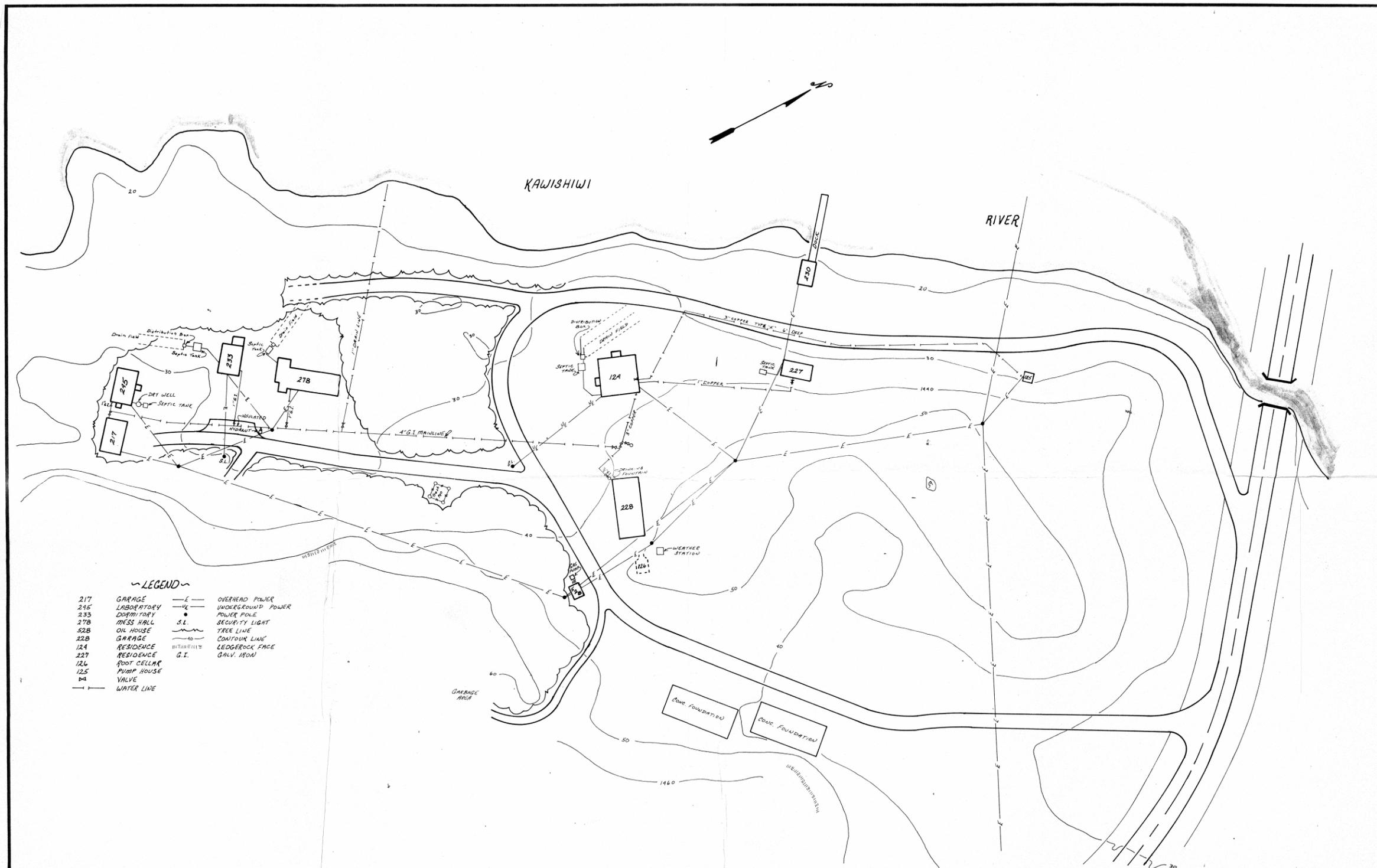
FIELD WORK BY: E. J. [illegible] Aug. 1939  
DESIGNED BY: E. J. [illegible] [illegible]  
APPROVED BY: [illegible] [illegible]  
CHECKED BY: [illegible] [illegible]  
APPROVED BY: [illegible] [illegible]  
REVISION: [illegible] [illegible]

Approved: [illegible] [illegible] [illegible]

No.	Plant	Name	Size
A	9	European Spruce	3 ft.
B	10	White Pine	3 ft.
C	11	Canadian Dwarf Juniper	2 ft.
D	12	White Spruce	2 ft.
E	13	White Pine	2 ft.
F	14	White Pine	2 ft.
G	15	White Pine	2 ft.
H	16	White Pine	2 ft.
I	17	White Pine	2 ft.
J	18	White Pine	2 ft.
K	19	White Pine	2 ft.
L	20	White Pine	2 ft.
M	21	White Pine	2 ft.
N	22	White Pine	2 ft.
O	23	White Pine	2 ft.
P	24	White Pine	2 ft.
Q	25	White Pine	2 ft.
R	26	White Pine	2 ft.
S	27	White Pine	2 ft.
T	28	White Pine	2 ft.
U	29	White Pine	2 ft.
V	30	White Pine	2 ft.
W	31	White Pine	2 ft.
X	32	White Pine	2 ft.
Y	33	White Pine	2 ft.
Z	34	White Pine	2 ft.
aa	35	White Pine	2 ft.
ab	36	White Pine	2 ft.
ac	37	White Pine	2 ft.
ad	38	White Pine	2 ft.
ae	39	White Pine	2 ft.
af	40	White Pine	2 ft.
ag	41	White Pine	2 ft.
ah	42	White Pine	2 ft.
ai	43	White Pine	2 ft.
aj	44	White Pine	2 ft.
ak	45	White Pine	2 ft.
al	46	White Pine	2 ft.
am	47	White Pine	2 ft.
an	48	White Pine	2 ft.
ao	49	White Pine	2 ft.
ap	50	White Pine	2 ft.
aq	51	White Pine	2 ft.
ar	52	White Pine	2 ft.
as	53	White Pine	2 ft.
at	54	White Pine	2 ft.
au	55	White Pine	2 ft.
av	56	White Pine	2 ft.
aw	57	White Pine	2 ft.
ax	58	White Pine	2 ft.
ay	59	White Pine	2 ft.
az	60	White Pine	2 ft.
ba	61	White Pine	2 ft.
bb	62	White Pine	2 ft.
bc	63	White Pine	2 ft.
bd	64	White Pine	2 ft.
be	65	White Pine	2 ft.
bf	66	White Pine	2 ft.
bg	67	White Pine	2 ft.
bh	68	White Pine	2 ft.
bi	69	White Pine	2 ft.
bj	70	White Pine	2 ft.
bk	71	White Pine	2 ft.
bl	72	White Pine	2 ft.
bm	73	White Pine	2 ft.
bn	74	White Pine	2 ft.
bo	75	White Pine	2 ft.
bp	76	White Pine	2 ft.
bq	77	White Pine	2 ft.
br	78	White Pine	2 ft.
bs	79	White Pine	2 ft.
bt	80	White Pine	2 ft.
bu	81	White Pine	2 ft.
bv	82	White Pine	2 ft.
bw	83	White Pine	2 ft.
bx	84	White Pine	2 ft.
by	85	White Pine	2 ft.
bz	86	White Pine	2 ft.
ca	87	White Pine	2 ft.
cb	88	White Pine	2 ft.
cc	89	White Pine	2 ft.
cd	90	White Pine	2 ft.
ce	91	White Pine	2 ft.
cf	92	White Pine	2 ft.
cg	93	White Pine	2 ft.
ch	94	White Pine	2 ft.
ci	95	White Pine	2 ft.
cj	96	White Pine	2 ft.
ck	97	White Pine	2 ft.
cl	98	White Pine	2 ft.
cm	99	White Pine	2 ft.
cn	100	White Pine	2 ft.
co	101	White Pine	2 ft.
cp	102	White Pine	2 ft.
cq	103	White Pine	2 ft.
cr	104	White Pine	2 ft.
cs	105	White Pine	2 ft.
ct	106	White Pine	2 ft.
cu	107	White Pine	2 ft.
cv	108	White Pine	2 ft.
cw	109	White Pine	2 ft.
cx	110	White Pine	2 ft.
cy	111	White Pine	2 ft.
cz	112	White Pine	2 ft.
da	113	White Pine	2 ft.
db	114	White Pine	2 ft.
dc	115	White Pine	2 ft.
dd	116	White Pine	2 ft.
de	117	White Pine	2 ft.
df	118	White Pine	2 ft.
dg	119	White Pine	2 ft.
dh	120	White Pine	2 ft.
di	121	White Pine	2 ft.
dj	122	White Pine	2 ft.
dk	123	White Pine	2 ft.
dl	124	White Pine	2 ft.
dm	125	White Pine	2 ft.
dn	126	White Pine	2 ft.
do	127	White Pine	2 ft.
dp	128	White Pine	2 ft.
dq	129	White Pine	2 ft.
dr	130	White Pine	2 ft.
ds	131	White Pine	2 ft.
dt	132	White Pine	2 ft.
du	133	White Pine	2 ft.
dv	134	White Pine	2 ft.
dw	135	White Pine	2 ft.
dx	136	White Pine	2 ft.
dy	137	White Pine	2 ft.
dz	138	White Pine	2 ft.
ea	139	White Pine	2 ft.
eb	140	White Pine	2 ft.
ec	141	White Pine	2 ft.
ed	142	White Pine	2 ft.
ee	143	White Pine	2 ft.
ef	144	White Pine	2 ft.
eg	145	White Pine	2 ft.
eh	146	White Pine	2 ft.
ei	147	White Pine	2 ft.
ej	148	White Pine	2 ft.
ek	149	White Pine	2 ft.
el	150	White Pine	2 ft.
em	151	White Pine	2 ft.
en	152	White Pine	2 ft.
eo	153	White Pine	2 ft.
ep	154	White Pine	2 ft.
eq	155	White Pine	2 ft.
er	156	White Pine	2 ft.
es	157	White Pine	2 ft.
et	158	White Pine	2 ft.
eu	159	White Pine	2 ft.
ev	160	White Pine	2 ft.
ew	161	White Pine	2 ft.
ex	162	White Pine	2 ft.
ey	163	White Pine	2 ft.
ez	164	White Pine	2 ft.
fa	165	White Pine	2 ft.
fb	166	White Pine	2 ft.
fc	167	White Pine	2 ft.
fd	168	White Pine	2 ft.
fe	169	White Pine	2 ft.
ff	170	White Pine	2 ft.
fg	171	White Pine	2 ft.
fh	172	White Pine	2 ft.
fi	173	White Pine	2 ft.
fj	174	White Pine	2 ft.
fk	175	White Pine	2 ft.
fl	176	White Pine	2 ft.
fm	177	White Pine	2 ft.
fn	178	White Pine	2 ft.
fo	179	White Pine	2 ft.
fp	180	White Pine	2 ft.
fq	181	White Pine	2 ft.
fr	182	White Pine	2 ft.
fs	183	White Pine	2 ft.
ft	184	White Pine	2 ft.
fu	185	White Pine	2 ft.
fv	186	White Pine	2 ft.
fw	187	White Pine	2 ft.
fx	188	White Pine	2 ft.
fy	189	White Pine	2 ft.
fz	190	White Pine	2 ft.
ga	191	White Pine	2 ft.
gb	192	White Pine	2 ft.
gc	193	White Pine	2 ft.
gd	194	White Pine	2 ft.
ge	195	White Pine	2 ft.
gf	196	White Pine	2 ft.
gg	197	White Pine	2 ft.
gh	198	White Pine	2 ft.
gi	199	White Pine	2 ft.
gj	200	White Pine	2 ft.
gk	201	White Pine	2 ft.
gl	202	White Pine	2 ft.
gm	203	White Pine	2 ft.
gn	204	White Pine	2 ft.
go	205	White Pine	2 ft.
gp	206	White Pine	2 ft.
gq	207	White Pine	2 ft.
gr	208	White Pine	2 ft.
gs	209	White Pine	2 ft.
gt	210	White Pine	2 ft.
gu	211	White Pine	2 ft.
gv	212	White Pine	2 ft.
gw	213	White Pine	2 ft.
gx	214	White Pine	2 ft.
gy	215	White Pine	2 ft.
gz	216	White Pine	2 ft.
ha	217	White Pine	2 ft.
hb	218	White Pine	2 ft.
hc	219	White Pine	2 ft.
hd	220	White Pine	2 ft.
he	221	White Pine	2 ft.
hf	222	White Pine	2 ft.
hg	223	White Pine	2 ft.
hh	224	White Pine	2 ft.
hi	225	White Pine	2 ft.
hj	226	White Pine	2 ft.
hk	227	White Pine	2 ft.
hl	228	White Pine	2 ft.
hm	229	White Pine	2 ft.
hn	230	White Pine	2 ft.
ho	231	White Pine	2 ft.
hp	232	White Pine	2 ft.
hq	233	White Pine	2 ft.
hr	234	White Pine	2 ft.
hs	235	White Pine	2 ft.
ht	236	White Pine	2 ft.
hu	237	White Pine	2 ft.
hv	238	White Pine	2 ft.
hw	239	White Pine	2 ft.
hx	240	White Pine	2 ft.
hy	241	White Pine	2 ft.
hz	242	White Pine	2 ft.
ia	243	White Pine	2 ft.
ib	244	White Pine	2 ft.
ic	245	White Pine	2 ft.
id	246	White Pine	2 ft.
ie	247	White Pine	2 ft.
if	248	White Pine	2 ft.
ig	249	White Pine	2 ft.
ih	250	White Pine	2 ft.
ii	251	White Pine	2 ft.
ij	252	White Pine	2 ft.
ik	253	White Pine	2 ft.
il	254	White Pine	2 ft.
im	255	White Pine	2 ft.
in	256	White Pine	2 ft.
io	257	White Pine	2 ft.
ip	258	White Pine	2 ft.
iq	259	White Pine	2 ft.
ir	260	White Pine	2 ft.
is	261	White Pine	2 ft.
it	262	White Pine	2 ft.
iu	263	White Pine	2 ft.
iv	264	White Pine	2 ft.
iw	265	White Pine	2 ft.
ix	266	White Pine	2 ft.
iy	267	White Pine	2 ft.
iz	268	White Pine	2 ft.
ja	269	White Pine	2 ft.
jb	270	White Pine	2 ft.
jc	271	White Pine	2 ft.
jd	272	White Pine	2 ft.
je	273	White Pine	2 ft.
jf	274	White Pine	2 ft.
jj	275	White Pine	2 ft.
kg	276	White Pine	2 ft.
kh	277	White Pine	2 ft.
ki	278	White Pine	2 ft.
kl	279	White Pine	2 ft.
km	280	White Pine	2 ft.
kn	281	White Pine	2 ft.
ko	282	White Pine	2 ft.
kp	283	White Pine	2 ft.
kq	284	White Pine	2 ft.
kr	285	White Pine	2 ft.
ks	286	White Pine	2 ft.
kt	287	White Pine	2 ft.
ku	288	White Pine	2 ft.
kv	289	White Pine	2 ft.
kw	290	White Pine	2 ft.
kx	291	White Pine	2 ft.
ky	292	White Pine	2 ft.
kz	293	White Pine	2 ft.
la	294	White Pine	2 ft.
lb	295	White Pine	2 ft.
lc	296	White Pine	2 ft.
ld	297	White Pine	2 ft.
le	298	White Pine	2 ft.
lf	299	White Pine	2 ft.
lg	300	White Pine	2 ft.
lh	301	White Pine	2 ft.
li	302	White Pine	2 ft.
lj	303	White Pine	2 ft.
lk	304	White Pine	2 ft.
ll	305	White Pine	2 ft.
lm	306	White Pine	2 ft.
ln	307	White Pine	2 ft.
lo	308	White Pine	2 ft.
lp	309	White Pine	2 ft.
lq	310	White Pine	2 ft.
lr	311	White Pine	2 ft.
ls	312	White Pine	2 ft.
lt	313	White Pine	2 ft.
lu	314	White Pine	2 ft.
lv	315	White Pine	2 ft.
lw	316	White Pine	2 ft.
lx	317	White Pine	2 ft.
ly	318	White Pine	2 ft.
lz	319	White Pine	2 ft.
ma	320	White Pine	2 ft.
mb	321	White Pine	2 ft.
mc	322	White Pine	2 ft.
md	323	White Pine	2 ft.
me	324	White Pine	2 ft.
mf	325	White Pine	2 ft.
mg	326	White Pine	2 ft.
mh	327	White Pine	2 ft.
mi	328	White Pine	2 ft.
mj	329	White Pine	2 ft.
mk	330	White Pine	2 ft.
ml	331	White Pine	2 ft.
mm	332	White Pine	2 ft.
mn	333	White Pine	2 ft.
mo	334	White Pine	2 ft.
mp	335	White Pine	2 ft.
mq	336	White Pine	2 ft.
mr	337	White Pine	2 ft.
ms	338	White Pine	2 ft.
mt	339	White Pine	2 ft.
mu	340	White Pine	2 ft.
mv	341	White Pine	2 ft.
mw	342	White Pine	2 ft.
mx	343	White Pine	2 ft.
my	344	White Pine	2 ft.
mz	345	White Pine	2 ft.
na	346	White Pine	2 ft.
nb	347	White Pine	2 ft.
nc	348	White Pine	2 ft.
nd	349	White Pine	2 ft.
ne	350	White Pine	2 ft.
nf	351	White Pine	2 ft.
ng	352	White Pine	2 ft.
nh	353	White Pine	2 ft.
ni	354	White Pine	2 ft.
nj	355	White Pine	2 ft.
nk	356	White Pine	2 ft.
nl	357	White Pine	2 ft.
nm	358	White Pine	2 ft.
nn	359	White Pine	2 ft.
no	360	White Pine	2 ft.
np	361	White Pine	2 ft.
nq	362	White Pine	2 ft.
nr	363	White Pine	2 ft.
ns	364	White Pine	2 ft.
nt	365	White Pine	2 ft.
nu	366	White Pine	2 ft.
nv	367	White Pine	2 ft.
nw	368	White Pine	2 ft.
nx	369	White Pine	2 ft.
ny	370	White Pine	2 ft.
nz			



Halfway Ranger Station Historic District 1965



- LEGEND**
- 217 GARAGE
  - 215 LABORATORY
  - 233 DORMITORY
  - 278 MESS HALL
  - 228 OIL HOUSE
  - 228 GARAGE
  - 124 RESIDENCE
  - 227 RESIDENCE
  - 126 FOOT CELLAR
  - 125 PUMP HOUSE
  - 24 VALVE
  - E— OVERHEAD POWER
  - VE— UNDERGROUND POWER
  - POWER POLE
  - S.L. SECURITY LIGHT
  - TREE LINE
  - CONTOUR LINE
  - LEDGEROCK FACE
  - G.I. GALV. IRON
  - WATER LINE

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE EASTERN REGION ENGINEERING		DESIGNED _____ DATE _____	RECOMMENDED: _____ DATE _____	REVISIONS			AS-BUILT	PROJECT	SHEET TITLE	SHEET
		DRAWN <i>GARY EKMAN</i> CHECKED _____	APPROVED: _____ _____	NO.    REVISION    BY    APPROVED    DATE	BY _____ CHECKED _____ DATE _____	KAWISHIWI FIELD LAB	SURVEY PLAT SCALE 1" = 40'	OF _____ FILE NO. _____ PROJECT NO. _____		

U.S. GOVERNMENT PRINTING OFFICE: 1985-553-182

Halfway Ranger Station Historic District 1983

## **APPENDIX B**



**Photo 1. View of the front door of the Ranger Dwelling. Note the hand-forged hinges and door-knob plate.**



Photo 2. View of the main hallway on the first level of the Ranger Dwelling. View of the kitchen door. Taken from the north.



Photo 3. View of the bathroom in the Ranger Dwelling. Note the finish materials used on the walls and the cabinet.



**Photo 4. View of the attic staircase from the first floor of the Ranger Dwelling.**



**Photo 5. View of the upstairs hallway in the Ranger Dwelling. Note the bedroom at the far end of the photo. Entrance to the dormer room is on the left and the attic storage space is behind the wall at right. Taken from the south.**



Photo 6. View of the wainscoting used to finish the ceilings of the Ranger Dwelling.



**Photo 7. View of the railing and upstairs hallway in the Ranger Dwelling. Taken from the top stair landing.**



**Photo 8. View of the dormer room of the Ranger Dwelling. Window opens to the west yard of the building. Taken from the upstairs hallway.**



**Photo 9. View of the north bedroom in the finished attic of the Ranger Dwelling. View is from the north and shows the bedroom entrance and upstairs hallway.**



Photo 10. View of one of the storage space doors in the attic of the Ranger Dwelling. Note the wainscoting and hardware.



Photo 11. View of the shelf detail in the downstairs hallway of the Ranger Dwelling. Taken from the northeast.



Photo 12. View of the mantel on the stone fireplace of the Ranger Dwelling.



Photo 13. View of the casement windows in the kitchen of the Ranger Dwelling.



Photo 14. View of the wainscoting finish on one of the downstairs bedrooms of the Ranger Dwelling.



Photo 15. View of the northwest corner of the kitchen in the Ranger Dwelling.



Photo 16. View of the south wall of the kitchen in the Ranger Dwelling.



Photo 17. Close up view of the west wall of the kitchen in the Ranger Dwelling. Note the ceiling finish consisting of exposed logs and wainscoting. Also note the unusual extended door hinges.



Photo 18. View of the fireplace and living room space of the Ranger Dwelling. View from the southeast.



Photo 19. Interior view of the front porch on the Ranger Dwelling. View from the south.



Photo 20. View of the screen door on the front entrance of the porch.



**Photo 21. View of the entrance to the root cellar. Taken from the west.**



Photo 22. Site view of the Warehouse and Oil House. Taken from the southwest.



**Photo 23. Site view showing the Insectory on the left, the Laboratory in the center and the LSFES Dwelling on the right. Taken from the north.**



**Photo 24. View showing the south gable wall and the east facade wall of the Ranger Dwelling. Taken from the southeast.**



**Photo 25. View of the south elevation of the Ranger Dwelling. Taken from the south.**



**Photo 26. Close-up view of the fireplace chimney on the north gable wall of the Ranger Dwelling. View from the north-northwest.**



Photo 27. View of the central garage bay in the Warehouse. Taken from the southeast.



Photo 28. View of the shop space on the east end of the Warehouse. Taken from the northeast.



**Photo 29. View of the west gable wall of the Warehouse. Note the construction of the eaves and the fractured fascia board. Also note the original double-sash slider windows. View from the southwest.**



Photo 30. Interior view of the east gable wall of the Boat House. Taken from the west.



**Photo 31. View of the northwest corner of the Oil House. Taken from the northwest.**



**Photo 32. View of the structural detail of the dormer roof on the Oil House. Taken from the west.**



Photo 33. Interior view of the Oil House.



**Photo 34. Exterior view of the south gable wall and the west facade entrance wall of the District Office Building. Taken from the southwest.**



**Photo 35. View of the stone steps in front of the District Office. View from the west-southwest.**



Photo 36. Interior view of the south wall of the District Office Building. This wall was probably an exterior wall before the bedroom addition was added.



**Photo 37. Close-up view of west façade wall of the District Office Building. Note wall break between original building on left and bedroom addition on the right.**



**Photo 38. Close-up of north gable wall of the District Office Building. Note dust left over as a result of powder-post beetle infestation.**



Photo 39. Window hardware used on the casement windows in the Ranger Dwelling.