Alaska Regional Office
National Park Service
U.S. Department of the Interior



Frye-Bruhn Cold Storage Building

Historic Structure Report | 2026

Prepared for: Klondike Gold Rush National Historical Park, Skagway, Alaska

Prepared by: National Park Service, Alaska Regional Office with assistance from FFA Architecture and Interiors, Inc. and architecture + history, llc under Task Order 140P2019F0263

Photographs:

All existing conditions photographs were taken by the project team in August 2020 unless noted otherwise.

Cover Image:

Frye-Bruhn Cold Storage Building (Historic American Buildings Survey AK-224-01), looking south, Rob Park, 2019.

FRYE-BRUHN COLD STORAGE BUILDING

HISTORIC STRUCTURE REPORT

Recommended by:

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The production of this HSR has included many researchers, writers and graphic designers. A Task Order through an Indefinite Delivery/Indefinite Quantity (IDIQ) contract was established with FFA Architecture + Interiors to complete a developed draft of the HSR in 2020. However, unresolved comments from park and regional office staff and a delayed review schedule due to the COVID-19 pandemic prevented the NPS from completing the report with FFA's involvement in a timely manner and the contract was deemed complete in 2022. The project was finalized in 2026 by Grant Crosby, Phebe Davis, and Annie Matsov (now with Olympic National Park).

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1. Executive Summary

INTRODUCTION

Completed under National Park Service Indefinite Delivery, Indefinite Quantity (IDIQ) Task Order Number 140P2019F0263, this Historic Structure Report (HSR) for the Frye-Bruhn Cold Storage Building was developed by a consultant team consisting of FFA Architecture and Interiors, Inc. and architecture + history, llc with input and guidance from National Park Service staff at Klondike Gold Rush National Historical Park and the Alaska Regional Office Cultural Resources Team. The Frye-Bruhn Cold Storage Building Historic Structure Report (HSR) was completed in concert with the Alaska Street Crib Historic Structure Report (HSR), Kitty Faith Crib Historic Structure (HSR), and the Goldberg Cigar Store and Confectionery Historic Structure Report (HSR) conducted by the project team in 2020.

PURPOSE

Historic Structure Reports (HSR) are the primary planning documents for historic resource treatment projects. Historic resources are buildings, structures, objects, sites, and historic districts that are eligible for listing or already listed on the National Register of Historic Places. *The Secretary of the Interior's Standards for the Treatment of Historic Properties* defines four treatments for historic resources: preservation, rehabilitation, restoration, and reconstruction. These treatments guide the recommendations put forward in an HSR. An HSR is an important guide that is intended to serve as a basis for future maintenance, repair, and any potential changes made to a historic property during preservation, rehabilitation, restoration, and reconstruction. The development of an HSR is the preferred first phase of any historic preservation effort, preceding design and implementation of the selected treatment and use for the property. HSRs document existing conditions, changes over time, and serve as a basis for the proposed physical treatment.

METHODOLOGY

The information included in this report stems from extensive research of primary and secondary source materials and comprehensive field observations of the buildings and site. The HSR follows the National Park Service's Technical Preservation Service's Preservation Brief 43: *The Preparation and Use of Historic Structure Reports* (2004) by Deborah Slaton. The HSR includes a developmental history of the site, descriptive information, identification of character-defining features, a conditions assessment for the buildings, an assessment of the overall integrity of the resources, and recommendations for future treatment and use.

PAST STUDIES

This HSR relied on materials located at the Frye Art Museum in Seattle, Washington and the Klondike Gold Rush National Historical Park (KLGO) archives, as well as previous research conducted by NPS staff. Grant Crosby and Bob Lyon (Term Historian in the Alaska Regional Office) completed the majority of the initial research and preliminary history in 2012; Term Historian Ben Stinnett edited existing drafts in 2014. Very limited additional historical research was undertaken to complete this HSR. The scope of work prepared for this task order limited the level of effort for additional historical research to complete this effort because a HABS history was prepared under a separate contract.

This HSR relies heavily on the following documents and publications:

- Taylor, Rachel Lanier. Historic American Buildings Survey, Outline History Report[Draft], HABS-AK-224, October 2020, Revised August 2022.
- Gurcke, Karl. Frye-Bruhn Cold Storage Building (1900/1902/2004): A Historic Photo Essay, 2020, unpublished draft.

The current project team thanks Karl Gurcke, retired KLGO Historian; Grant Crosby, Senior Historical Architect, National Park Service- Region 11; and Annie Matsov, Former Resources Division Manager, Klondike Gold Rush National Historical Park (2015-2024), for their assistance and involvement.

SUMMARY STATEMENT OF SIGNIFICANCE

The building contributes to the Skagway & White Pass District National Historic Landmark at Klondike Gold Rush National Historical Park. The district consists of well-preserved turn of the century frontier commercial buildings and outstanding examples of residential workers' housing from the same period. Some of the buildings have been moved within the district, including the Frye-Bruhn Cold Storage Building, but this does not diminish the contribution of these buildings to the historical context and significance of the historic district. This building was included in the district as resource #349, the Moe Warehouse #2, and described as: “One-story wood frame warehouse with attic, gable roof, double beveled shiplap and tongue and groove siding, double freight door.”[1] The building was moved to its current location in 2004.

The Frye-Bruhn Cold Storage Building is unique within the historic district. During the early gold rush years in Skagway, this building provided retail and wholesale meat to stampeders and commercial clients. It was owned by brothers Frank and Charles Frye and Charles Bruhn and was part of the Frye-Bruhn Meat Packing Company, of Seattle, Washington. Incorporated in 1891, the company rapidly expanded during the gold rush and soon had warehouses and retail stores in several locations in Alaska. The building was originally constructed close to the Skagway wharfs at the waterfront.

1 National Historic Landmark Form, Section 7, Page 16.

SUMMARY INTEGRITY ASSESSMENT

Research for the Historic American Buildings Survey (HABS) Outline History Report preceded the contract for this Historic Structure Report and all available documentation regarding the history of this building was provided to the HSR team to prepare this document. Unfortunately, primary and secondary sources associated with the history of the building are very limited, particularly photographs of the interior and to a certain extent, the exterior. As a result, it is difficult to ascertain which of the building's character-defining features date to the Period of Significance, limiting our ability to confirm the building retains its integrity.

Prior to accepting the Frye-Bruhn Cold Storage Building, Klondike Gold Rush National Historical Park and Alaska Regional Office Cultural Resources staff, consulted with the Alaska State Historic Preservation Office to determine whether the relocation and establishment of the non-historic context would constitute an Adverse Effect per the National Historic Preservation Act of 1966. Despite Skagway's long-standing history of moving buildings within the historic district during the National Historic Landmark's Period of Significance, the group concluded the proposed non-historic location, changed setting, feeling and association would constitute an adverse effect.

The following assessment of integrity acknowledges the adverse effect mentioned above and assumes the exterior of the building remains intact from the Period of Significance despite not having concrete evidence to suggest details, such as siding profile, fenestration, or interior configuration and equipment. We must also assume the interior remains unchanged from the Period of Significance until further evidence is provided.

Within the context of the Skagway and White Pass District National Historic Landmark, the Frye-Bruhn Cold Storage Building retains integrity of design, setting, materials, workmanship, feeling, and association. Many of the building's original materials remain intact but are in poor condition due to deferred maintenance and neglect as well as two separate building fires. It does not retain integrity of location as it has been moved.

SUMMARY CONDITION ASSESSMENT

The overall physical condition of the Frye-Bruhn Cold Storage Building is poor with various structural deficiencies observed, requiring extensive repair and structural improvements for rehabilitation. The building has sustained significant damage from two fires, including a fire in 1980 started by the electric meter on the exterior wall of the building. An earlier fire that occurred sometime around 1948 began in an adjacent building and damaged the exterior of The Frye-Bruhn Cold Storage Building.

Prior to the building's relocation by NPS in 2004, it was determined that wood joists were in direct contact with soil and as a result had significant decay and deterioration. Efforts to stabilize the building including adding sistered studs and support beams, as well as the replacement of some structural members, have proven successful, but the long-term structural integrity of the building should be prioritized in any treatment strategy.

The structural integrity of the building is compromised due to wood structural components that are severely deteriorated, damaged by fire and/or modified for stabilization including discontinuous load paths and inconsistent of framing

member continuity. The existing exterior walls and floor framing are in poor condition with missing material, wood decay, sistering of wood framing with compromised material, and fire damage. Ends of framing members at walls and the floor have severe decay and advanced fungal decay from prolonged moisture exposure and exterior structural wood material in many locations are charred from past fire damage.

Numerous condition issues of exterior walls were identified, including the decay of the 3/4" x 7 1/4" horizontal shiplap cladding, with the most significant material loss and damage occurring on the south and east elevations. Severe deterioration, weathering, checks, and splitting were detected on existing wood siding and sheathing boards throughout the exterior. Prolonged exposure of exterior wood surfaces without protective coatings, to cyclic wetting and drying, freeze-thaw, UV exposure, and wind have all contributed to the erosion and weathering of wood siding. Entire sections of wood siding are missing, and fire damage on the east and northeast upper corner of the building has charred the surface, resulting in a loss of material that extends into the interior. The extent of material loss, including siding and sheathing on the south elevation, is severe, exposing underlying structural framing components to the weather.

Though the original floor plan has been retained, the interior of the building is in poor condition with severe fire damage in the attic and lower walls, as well as missing and deteriorated wood framing members, ceiling finishes, and floor finishes. Despite severe fire damage and deterioration of materials, many interior character-defining features of the building, including the use of interior wood finishes, thick walls, and plan layout, remain intact and are in fair condition. Other interior features, including the mechanical refrigeration system, large insulated cold storage doors, and the overhead meat trolley system remain intact.

SUMMARY OF FUTURE NEEDS AND TREATMENT RECOMMENDATIONS

Considering the building's existing condition and original use as a meat cold storage building, it is recommended that future projects or upgrades proposed for the Frye-Bruhn Cold Storage Building primarily follow the Rehabilitation Treatment approach as defined by *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Rehabilitation will ultimately preserve the building and allow for the restoration of the building's exterior and rehabilitation of the interior. This treatment will address structural deficiencies required to preserve the building, while providing Klondike Gold Rush National Historical Park the opportunity to implement a change in use to suit the future needs of the park, as well as address and improve the building envelope, accessibility, mechanical plumbing, and electrical systems.

Rehabilitation as the recommended treatment approach will follow *The Secretary of the Interior's Standards* treatment guidelines for prioritizing repair over replacement while continuing to preserve historic features and materials that convey the building's historic character. Future treatment efforts will follow standards of repairs and/or replacement if necessary to be performed in kind, while retaining as much historic fabric as possible, and without alteration of character-defining features. Missing and deteriorated historic materials and character-defining features can be restored according to historic documentation, while also providing the opportunity to reconstruct the historic, non-extant false front addition on the west exterior wall.

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2. Administrative Data

INTRODUCTION

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK

Klondike Gold Rush National Historical Park was authorized by Congress in 1976 to preserve and interpret the history of the Klondike Gold Rush of 1897-1898. The Klondike Gold Rush great stampede caught the attention of the world, and transformed the demographics, culture and environment of Alaska and the Yukon. The event was not one single human drama, but hundreds of thousands of stories of the stampeders who made their way to the Klondike, leaving a trail of boom towns and history behind. The park consists of four units: a thirteen block historic business district in Skagway, Alaska; a corridor comprising the White Pass Trail from Skagway, Alaska to the Yukon; the Chilkoot Trail from Dyea, Alaska to the Yukon; and a Visitor Center at 319 Second Avenue South in Pioneer Square, Seattle, Washington.

The Frye-Bruhn Cold Storage Building contributes to the Skagway & White Pass District National Historic Landmark that represent the Klondike Gold Rush from 1897 to 1898. The site and building nomenclature below pertain to the Frye-Bruhn Cold Storage Building according to current NPS data management and evaluated inventory systems.

DATABASE DESCRIPTIONS

ALASKA HERITAGE RESOURCES SURVEY

The Alaska Heritage Resources Survey (AHRS) is a data repository with information on over 45,000 reported cultural resources (archaeological sites, buildings, structures, objects or locations, etc.), from prehistoric to modern, and some paleontological sites within the State of Alaska. This data repository is restricted by state law to prevent unauthorized use and to protect identified cultural resources from unwarranted destruction. The AHRS is maintained by the Alaska Department of Natural Resources, Office of History and Archaeology (OHA) staff and the electronic version of the AHRS is part of OHA's Integrated Business Suite (IBS).

FACILITY MANAGEMENT SOFTWARE SYSTEM

Facility Management Software System (FMSS) is a computerized and systematic process for guiding maintenance and operations of NPS assets (buildings, roads, trails and walks, maintained landscapes, outdoor sculpture) at the park level. FMSS generates annual inspection forms, work orders, preventive maintenance reports, and safety plans.

FMSS is part of the NPS Asset Management reform process to improve the management, tracking, data collection, and reporting of information on assets and programs. FMSS is used servicewide to establish consistency in identifying asset deficiencies across individual park units. The FMSS is currently used to manage over 400 park sites, including 60,000+ park locations and 500,000+ asset records.

STRUCTURE ID

The identifying structure number assigned by the park, originated from the "building card" system and can be informed by the current FMSS number.

ASSET PRIORITY INDEX

An asset evaluation process that quantifies the value of an asset in relation to the mission of the park. The criteria are weighted based on their importance to NPS core priorities: the NPS mission, park enabling legislation, and asset management goals such as those listed in Director's Order 80: *Real Property Asset Management*. The criteria are distinct to ensure that each aspect of the asset is measured independently. As a result, most assets will not rate high in every category. Only a few assets will have an Asset Piority Index (API) of 100. Assets with a higher API are considered to be high-priority assets. These assets will merit more resources than lower API assets. In other words, an asset with an API of 57 will receive more resources than an asset with an API of 20.

OPTIMIZER/OPTIMIZER BANDS

Optimizer bands (OB) are defined by the priority of assets that they contain and their criticality to park mission. The Optimizer allows a park to upgrade or downgrade their assets from highest priority (1) to lowest priority (5) based on how they take care of them. Optimizer Bands represent a level of maintenance support – usually a reflection of what is being done (i.e. money being spent vs. maintenance needs). The basic management philosophy behind using OBs to prioritize Operations & Maintenance (O&M) funding is simple: take care of the most important assets and prevent them from deteriorating.

CULTURAL RESOURCES INVENTORY SYSTEM

The Cultural Resources Inventory System (CRIS) is the National Park Service's inventory of cultural resources on its lands. Its records, maintained in part to comply with Section 110 of the National Historic Preservation Act, *NPS Management Policies* (2006), Director's Order 28: *Cultural Resource Management* and Director's Order 28A: *Archeology*, include archeological sites, cultural landscapes, historic structures, and ethnographic resources.

As of its launch in 2018, CRIS incorporates complete sets of data migrated from the List of Classified Structures (LCS), the Cultural Landscape Inventory (CLI), and the Archeological Sites Management Information System (ASMIS). It also includes a limited set of data elements migrated from the legacy Ethnographic Resources Inventory (ERI).

CULTURAL RESOURCES INVENTORY SYSTEM – HISTORIC STRUCTURES

The Cultural Resource Inventory System – Historic Structures (CRIS-HS) (formerly the List of Classified Structures [LCS]) is an evaluated inventory of all historic and prehistoric structures that have historical, architectural, or engineering significance within the National Park System in which the National Park Service has any enforceable legal interest. Structures on the CRIS-HS are those that individually meet the National Register criteria or those that are contributing elements of sites or districts that meet the criteria. In addition, structures that are managed as cultural resources because of law, policy, or decisions reached through the park planning process even though they do not meet the National Register criteria are also included on the CRIS-HS. Structures are constructed works that serve some form of human activity and are generally immovable. While the inventory has long utilized the term "structure", generally these features in relation to the National Register of Historic Places fall into the following property types: Building, Structure, or Object. The CRIS-HS identifying number (ID) is auto generated from the system.

CULTURAL RESOURCES INVENTORY SYSTEM – CULTURAL LANDSCAPES

The Cultural Resources Inventory System (CRIS-CL), is a comprehensive inventory of cultural landscapes in the national park system. It is the descendent of the PC-based Cultural Landscape Automated Inventory Management System (CLAIMS). Implemented in 1998, the CRIS-CL improved upon the earlier system while convening a group of CRIS-CL Coordinators in each region and requiring annually-updated five-year plans for each region. In 2005, the CRIS-CL was moved to a web-based platform, allowing increased access to the system and improved reporting. The CRIS-CL identifying number (ID) is auto generated from the system.

CULTURAL LANDSCAPE INVENTORY FEATURE IDENTIFICATION

A physical unit that is part of the existing character of a landscape can be managed as an individual element and is identified as contributing or noncontributing to the historic significance of the landscape. Examples include a woodlot, earthwork, hedge, lawn, specimen tree, allee, barn, agricultural field, and vista. In the Cultural Landscape Inventory (CLI), each landscape feature is identified in association with one of thirteen landscape characteristics. The CLI Feature identifying number (ID) is auto generated from the system.

NATIONAL HISTORIC LANDMARK STRUCTURE NUMBER

In the case of the Skagway and White Pass District National Historic Landmark (NHL) nomination revision in 1999, every contributing and non-contributing building or structure received an identifying structure number for the sole purpose of the nomination.

HISTORIC AMERICAN BUILDINGS SURVEY

The Historic American Buildings Survey (HABS) is the nation's first federal preservation program, begun in 1933 to document America's architectural heritage. Creation of the program was motivated primarily by the perceived need to mitigate the negative effects upon our history and culture of rapidly vanishing architectural resources. As a national survey, the HABS collection is intended to represent "a complete resume of the builder's art." Thus, the building selection ranges in type and style from the monumental and architect-designed to the utilitarian and vernacular, including a sampling of our nation's vast array of regionally and ethnically derived building traditions. HABS numbers are assigned and managed at the regional and national level.

NATIONAL REGISTER INFORMATION SYSTEM

The National Register Information System (NRIS) is a database of properties that have been listed on the United States National Register of Historic Places. The database includes more than 84,000 entries of historic sites that are currently listed on the National Register, that were previously listed and later removed, or that are pending listing. The database includes approximately 45 pieces of data for each listed property. NRIS IDs are automatically assigned the year the documentation was first signed by the Keeper.

The database includes more than 84,000 entries of historic sites that are currently listed on the National Register, that were previously listed and later removed, or that are pending listing. The database includes approximately 45 pieces of data for each listed property. NRIS IDs are automatically assigned the year the documentation was first signed by the Keeper of the National Register of Historic Places, an NPS official responsible for deciding on the eligibility of historic properties for inclusion on the National Register of Historic Places.

RELATED STUDIES

Other relevant documents that relate to this HSR include:

- Klondike Gold Rush National Historical Park National Register Nomination Form, prepared by Frank Norris and Bonnie Houston, 1991.
- Skagway and White Pass District National Historic Landmark Nomination Form, prepared by Frank Norris, Terrence Cole, and Bonnie Houston, 1999.
- Frye-Bruhn Cold Storage Building (1900/1902/2004): A Historic Photo Essay, prepared by Karl Gurcke, 2020, unpublished draft.
- Frye-Bruhn Cold Storage Building Historic American Buildings Survey (AK-224), Photographs prepared by Rob Park, 2019 and Drawings (AK-224) delineated by Tara Ikenouye and Michelle Chircop (2008, 2014).
- Historic American Buildings Survey, Outline History Report [Draft], HABS-AK-224, October 2020, revised August 2022, prepared by Rachel Lanier Taylor.
- Klondike Gold Rush National Historical Park, National Park Service, *Frye-Bruhn Cold Storage Building Historic Structure Report [DRAFT]*, last updated December 2014.

SITE AND BUILDING NOMENCLATURE

Preferred Structure Name	Frye-Bruhn Cold Storage Building
Other Names	Warehouse, Moe Warehouse #2 (NHL), Ice House, Frye-Bruhn Cold Storage
Structure State	Alaska
Legal Description	Skagway, Alaska, 99840
National Historic Landmark (NHL) Name	Skagway and White Pass District National Historic Landmark
Alaska Heritage Resources Survey (AHRS)	SKG-00368
Structure ID	25H
Facility Management Software System (FMSS)	94457
Asset Priority Index (API)	62
Optimizer/Optimizer Bands (OB)	3
Cultural Resources Inventory System – Historic Structures (CRIS-HS)	672083
Cultural Resources Inventory System – Cultural Landscapes (CRIS-CL)	N/A
Cultural Landscape Inventory Feature ID (CLI Feature ID)	N/A
National Historic Landmark (NHL) Structure #	349
Historic American Buildings Survey (HABS)	AK-224
NRIS # for Klondike Gold Rush National Historical Park	76002189
NRIS # for Skagway and White Pass District National Historic Landmark	66000943
National Register Status	Contributing to NHL & NR

- Preliminary Condition Assessment with Recommendations for Treatment- The Ice House [Frye-Bruhn Cold Storage], National Park Service, prepared by Grant Crosby, Alaska Support Office, 2003.

NATIONAL REGISTER STATUS

The Frye-Bruhn Cold Storage Building is a contributing resource to the Skagway and White Pass District National Historic Landmark established in 1962 (updated in 1999). The building also contributes to the Klondike Gold Rush National Historical Park Historic District, Skagway Historic District Unit. This historic district was established when the park was created on June 30, 1976 and included documenting and evaluating historic resources to update the nomination packet in 1991. The Frye Bruhn Cold Storage Building was moved once during the period of significance and again by the National Park Service in 2004.

Both historic districts are significant at the national level under Criterion A (NHL Criterion 1) for important events associated with Exploration/Settlement and Transportation with a district period of significance of 1897-1910.

SKAGWAY AND WHITE PASS DISTRICT NATIONAL HISTORIC LANDMARK

The Skagway and White Pass District National Historic Landmark was designated in 1962 with updated documentation completed and signed by the Keeper of the National Register on April 7, 1999. The district includes the original 1897 town site of Skagway, which is 23 blocks long and ranges from three to five blocks wide. It also includes much of the Skagway River Valley to the White Pass summit.

By 1898, the gold rush had transformed Skagway from a homestead property to a city of 10,000. But by 1910, the population had dimninished to 872. Within the town site, the historic district includes many outstanding examples of turn-of-the-century frontier, wood-frame commercial buildings and wood frame vernacular residential architecture, serving as the physical embodiment of the Gold Rush Era.

The Frye-Bruhn Cold Storage Building is contributing building #349 of the National Historic Landmark and is listed as the Moe Warehouse #2. The NHL nomination notes: “One-story wood frame warehouse with attic, gable roof, double beveled shiplap and tongue and groove siding, double freight door.”

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK

Klondike Gold Rush National Historical Park - Skagway Historic District Unit was established when the park was created on June 30, 1976 and preserves exceptionally intact landscapes, the town setting, and transportation routes that reflected the dramatic events of the 1897-1910 gold rush. The gold rush brought rapid development to both Skagway and Dyea, where businesses, tramways, and camps supported tens of thousands of stampeders. Today, the preserved structures and routes offer a vivid record of exploration, cultural exchange, and swift social chnage during this pivotal era. The Skagway Historic District Unit was updated and approved by the Keeper of the National Register of Historic Places on February 26, 1991.

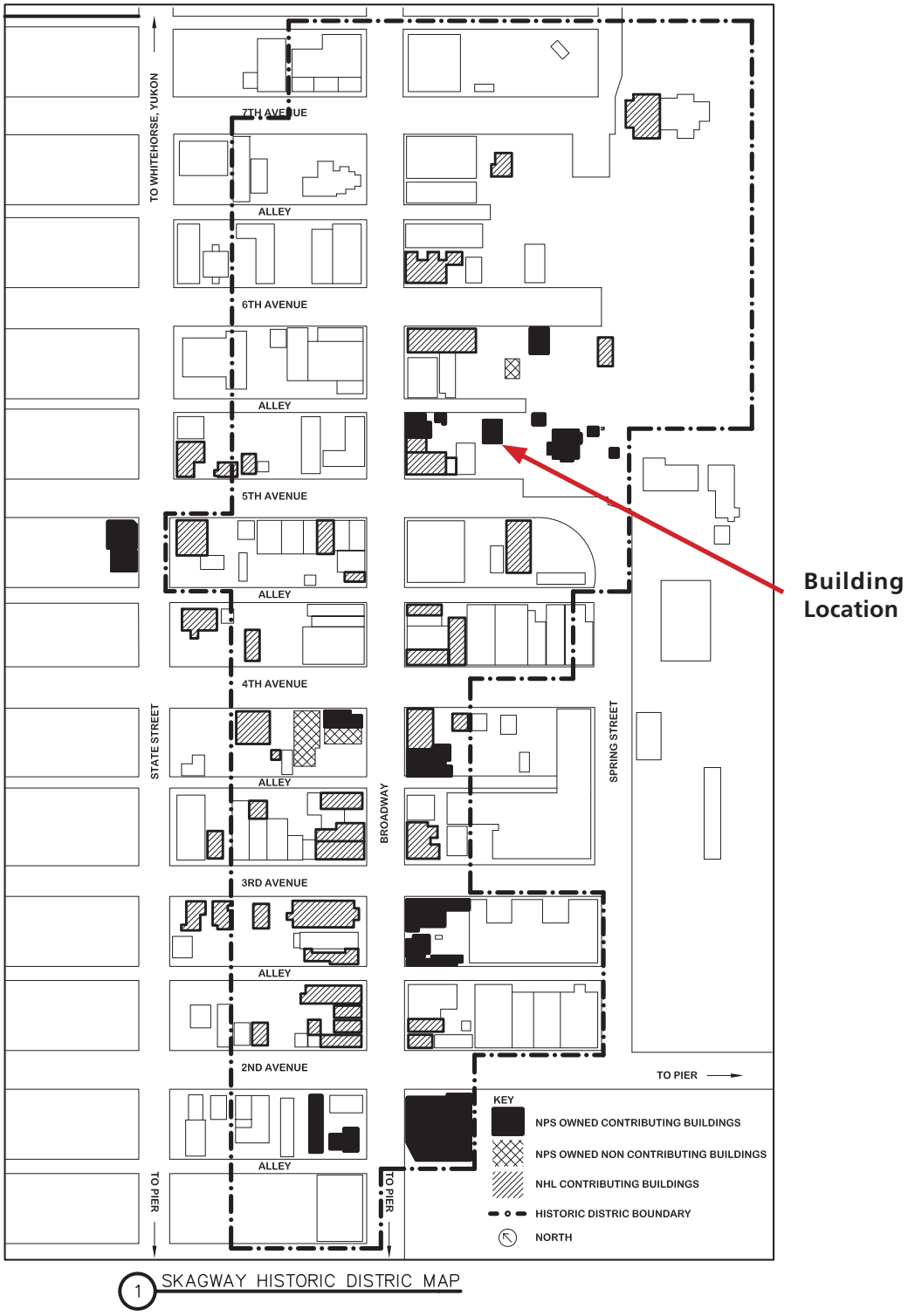


Figure 2.1: Project vicinity (NPS, Alaska Regional Office, drawn by Grant Crosby).

PERIOD OF SIGNIFICANCE

The period of significance for the both the Skagway and White Pass District National Historic Landmark and the Skagway Historic District Unit is 1897-1910. The period of significance for the Frye-Bruhn Cold Storage Building, illustrating its role during the Gold Rush era, is 1901 - 1919, from the initial date of the building's construction in 1901 and concluding in 1919, when the Frye-Bruhn Company sold the building to Anothony Dortero.

DIRECTIONAL INFORMATION

The Frye-Bruhn Cold Storage Building is oriented north-south according to the Skagway city street grid for the purposes of this report. This HSR refers to the front elevation facing the alley between 5th and 6th Avenues as north.

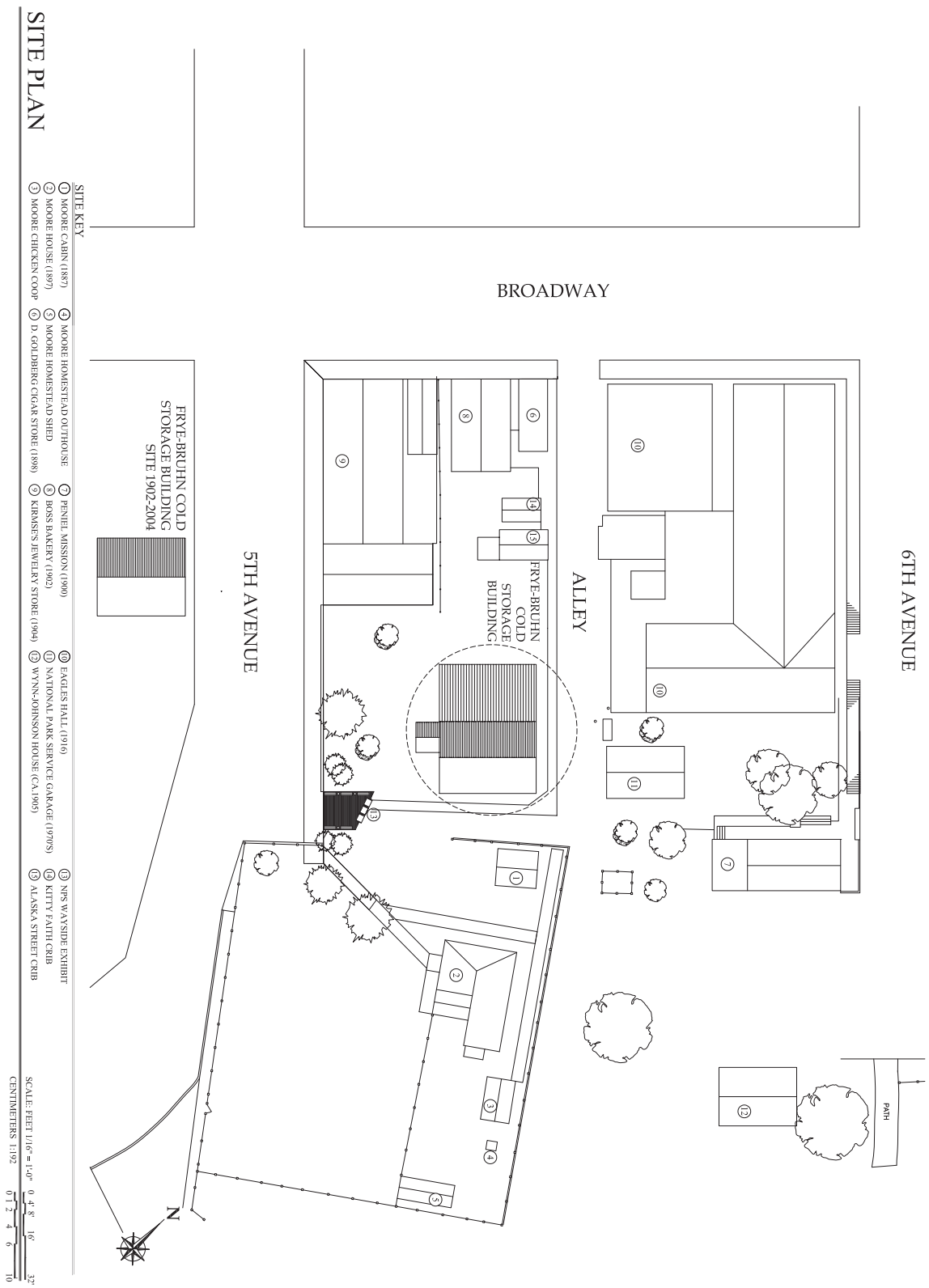


Figure 2.2: Site plan of Frye-Bruhn Cold Storage Building. Historic American Buildings Survey AK-224. Delineated by Tara Ikenouye and Michelle Chircop, 2008, 2012, sheet 2 of 16 (Library of Congress).

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3. Statement of Significance

Historian Alison K. Hoagland in her book *Buildings of Alaska* notes: "Skagway, the site of the Klondike Gold Rush National Historical Park, retains the finest collection of false fronted commercial buildings in the state."[1]

The Frye-Bruhn Cold Storage Building contributes to the Skagway & White Pass District National Historic Landmark at Klondike Gold Rush National Historical Park. The district consists of well-preserved turn of the century frontier commercial buildings and outstanding examples of residential workers' housing from the same period. Some of the buildings have been moved within the district, including the Frye-Bruhn Cold Storage Building, but this does not diminish the contribution of these buildings to the historical context and significance of the historic district. The building was included in the district as resource #349, the Moe Warehouse #2, and described as: "One-story wood frame warehouse with attic, gable roof, double beveled shiplap and tongue and groove siding, double freight door."[2] The building was moved to its current location in 2004.

The Frye-Bruhn Cold Storage Building is unique within the Skagway historic district. It was owned by brothers Frank and Charles Frye and Charles Bruhn and was part of the Frye-Bruhn Meat Packing Company, of Seattle, Washington. Incorporated in 1891, the company rapidly expanded during the gold rush and soon had warehouses and retail stores in several locations in Alaska. The building was originally constructed 1901 close to the Skagway wharfs at the waterfront.

In November 1902 it was moved from the north side of 2nd Avenue to the south side of 5th Avenue to be nearer the company's commercial store. It is not known how long the refrigeration units in the warehouse were operable.

Further, the Frye-Bruhn Cold Storage Building appears to be the last of this building type in Skagway, Alaska and one of a few remaining in the State of Alaska. The refrigeration equipment in the building includes the original refrigeration coils used to keep the meat cool and the overhead track used to move products around. The simple, rectangular footprint and wood framing reflect the vernacular architecture of Skagway's gold rush era. Its 12-inch thick sawdust-insulated walls, insulated doors, and intact refrigeration equipment convey the building's original use as a cold storage warehouse during the early-twentieth century.

1 Alison K. Hoagland, *Buildings of Alaska*, (New York: Oxford University Press, 1993) 158.

2 National Historic Landmark Form, Section 7, Page 16.

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4. Developmental History

HISTORICAL BACKGROUND AND CONTEXT

SKAGWAY AND THE KLONDIKE GOLD RUSH

The town of Skagway, located at the northernmost portion of the Lynn Canal in the southeastern panhandle of Alaska, was developed at a "feverish pitch" following news that gold had been discovered inland along a tributary of the Yukon River in August 1896 (Figure 4.1).[1] Skagway, which during its early days was known as Skagus, Skaguay, or Mooresville after an early settler, Captain William Moore, was a small outpost prior to news of the Yukon gold strike.[2] Thousands of gold seekers rushed to Skagway to gear up for a long and arduous 600 mile trek over the White Pass Trail to the Yukon River and the Yukon gold fields (Figure 4.2). Skagway, a deep saltwater port located south of the gold fields, became the point of embarkation for one of the most popular routes to the Klondike, over the treacherous White Pass. Those wishing to profit by selling supplies to the stampeders also rushed to Skagway to set up commercial enterprises catering to the needs of the gold seekers. Their hastily constructed businesses quickly lined the town's streets and alleys. In October 1897, the *Skagway News* reported, "last August there were but two frame buildings—they might very properly be termed 'shacks'—on the present town site. Today there are several hundred, some of them three stories in height, while new ones are springing up every day"[3] (Figure 4.3).

MERCHANT OPPORTUNITIES

The influx of so many gold seekers necessitated the support of merchant trade, businesses, banks, and professionals (lawyers, dentist and doctors). Additionally, food, or the lack of it, preoccupied everyone who came to Skagway in this frenzied period. Food especially preoccupied the miners. According to historian Kathryn Taylor Morse, they were "forever hungry," and always writing "about food, craving it, buying it, cooking it, and eating it."[4] One Klondike stampeder, James Cooper, comically wrote out his group's proposed Thanksgiving "Bill-A-Fare" in his diary in 1897. As proposed, the menu included,

1 Robert L. S. Spude, *Skagway, District of Alaska—1884-1912: Building the Gateway to the Klondike, Historical and Preservation Data on the Skagway Historic District Compiled for Klondike Gold Rush National Historical Park and the People of Skagway*, Occasional Paper No. 36 (Fairbanks, AK: Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska, 1983). Additionally, much of the historical background information in this HSR is based on a Draft Historic American Buildings Survey (HABS) Report by Rachel Lanier Taylor dated August 2, 2020 and provided to the HSR team for use. Limited additional research and verification was conducted.

2 Howard Clifford, *The Skagway Story*, 1.

3 *Skaguay News*, October 15, 1897, 1. This description of Skagway appeared in the first published edition of the *Skaguay News*.

4 Kathryn Taylor Morse, T*he Nature of Gold: An Environmental History of the Klondike Gold Rush* (Seattle: University of Washington Press, 2003), 138.



Figure 4.1: Marsh & Grant Co. Map of Alaska, Yukon Territory and British Columbia showing connections of the White Pass and Yukon route. ([S.l, 1904] Map. https://www.loc.gov/item/99446185/).



Figure 4.2: White Pass Trail March 1899. (Eric A. Hegg Photograph Collection. PH Coll 274, Order Number HEG372, Hegg 124).



Figure 4.3: View of Skagway January 1898. (Eric A. Hegg Photograph Collection. PH Coll 274, Order Number HEG099, Hegg 97).

> Fish-goose stew a-la-Bonanza…sour dough bread and weary Skagway butter. Potatoes, solid, a-la evaporated….Boiled Cabbage a-la-tough, Apple-pie (if you can eat it), Mush Straight, Vegetable soup a-la-can, Citric acid on the side, Dawson Floats, lemon flavor, Klondyke Strawberries [beans] and Coleman's mustard, Stewed Peaches, Boiled Apricots, Liver and Bacon (minus liver), Eldorado Flapjacks and maple syrup (if Ochs [a fellow miner] brings it).[5]

All this, Cooper noted, "may be modified or extended depending somewhat on our ability to rustle more tomato cans to complete our silver service." Unfortunately, "owing to a scarcity of grub," Cooper's Thanksgiving meal did not go as planned, and he and his companions found it "impossible to keep from being sober."[6]

Though written with humor, Cooper's "Bill-A-Fare" reveals much about the availability and types of food stampeders consumed. To feed themselves, miners drew on the local environment, consuming fish and moose. However, as historian Morse argues, and Cooper reveals, they also drew on "a vast integrated economy that harvested, preserved, stored, and then transported the energy of sunnier southern ecosystems to their far north dinner tables."[7] The Frye-Bruhn Meat Packing Company was part of this integrated economy. The company was among the outfitters that set up in Alaska to supply both preserved and fresh foods to satisfy the demands of miners' stomachs and profit in the process. The growing enterprise required a cold storage building and they built this needed amenity for their business by October 1901 when the building is visible in a photograph documenting a high tide in Skagway (Figure 4.4). The March 1901 edition of *Ice and Refrigeration*, a trade journal, noted:

> Skagway, Alaska: The Frye-Bruhn Co., of Seattle, Wash., will establish a cold storage plant at this point, and also one at St. Michaels and on at Port Clarence (Teller City) in the spring.[8]

ESTABLISHMENT OF THE FRYE-BRUHN COMPANY

In 1891, meatpacker, Charles Frye, his brother, Frank Frye, and a friend, Charles Bruhn, incorporated the Frye-Bruhn Company[9] in Seattle, Washington (Figure 4.5). Hoping to capitalize on the Klondike Gold Rush, the Frye-Bruhn Company set up its first retail outlet in Skagway, Alaska in 1897.[10] The company packaged and sold its own brand of bacon, ham, and lard to Klondike stampeders, supplying them with a portion of what historian Paula Mitchell Marks outlines as their staple

5 Diary of James S. Cooper and Associates, Nov. 22, 1897, Diaries File, File Collection, Dawson City Museum and Historical Society, Dawson City, Yukon Territory cited in Morse, 139.

6 *Ibid, 140*.

7 Morse, 139.

8 "New Plants and Improvements, Alaska, Skagway." *Ice and Refrigeration,* Vol 20, No. 3 (March 1901): 135.

9 The necessity of cold storage in Alaska, where winter temperatures could purportedly reach 68 degrees below zero Fahrenheit, may seem perplexing. An article in *Ice and Refrigeration* captured this, writing, "Carrying mechanical refrigeration into the Arctic regions seems very much like carrying coals to Newcastle…" (Newcastle provided Seattle with coal.) Yet, the article noted, maximum temperatures in the summers of the early-twentieth century could reach eighty degrees Fahrenheit, necessitating mechanical refrigeration. See "Cold Storage at Nome, Alaska," 260.

10 Frye Art Museum, Frye-Bruhn and Alaska, museum exhibition, June 12-September 6, 2010, https://fryemuseum.org/exhibition/3668/.



Figure 4.4: View of Skagway at high tide October 28, 1901. Building is located to the right of the lumber piles. (William H. Case & Horace H. Draper (729), Photographers, University of Alaska Fairbanks, J. B. Moore Collection 76-35-43).



Figure 4.5: Portrait of Charles H. Frye, 1913, Henry Raschen, oil on canvas. (Frye Art Museum Archives, Seattle, Founding Collection, 1952.129).

diet: "'the three B's': bread, beans (or 'Klondike strawberries'), and bacon."[11] In 1898 alone, the company constructed four new smokehouses specifically to supply the Klondike trade. Having won a contract with the U.S. Government to provide seventy-five thousand pounds of bacon for its relief effort to the mines in Alaska, new smokehouses were necessary.[12]

The Klondike Gold Rush transformed the Frye-Bruhn Company, growing the annual payroll from $6,000 to over $1 million.[13] By 1901, the company was purportedly making over $2 million a year in profits.[14] In addition to Skagway, the company set up stores in Haines, Juneau, Valdez, Seward, and Nome, as well as a cattle ranch in Katmai.[15] The Frye-Bruhn Company also operated cattle and sheep ranches on Kodiak and nearby islands to provide a closer source of fresh meat. The main ranch on Kodiak was abandoned after being covered with volcanic ash from the 1912 Katmai eruption; however, Charles Frye continued to run cattle on the island into the 1930s.[16]

As the company expanded, so too did its offerings. Stampeders demanded more than bacon and the Frye-Bruhn Company responded. Gold miners brought culturally influenced, late-nineteenth-century food preferences with them to the Yukon. "[T]hey ate bacon, but aspired to beef and potatoes." Consumers, at the time, viewed salt pork "as an inferior, lower-class, unhealthy food," however, beef on the other hand, was celebrated as a healthy, "high-status alternative."[17] Some miners even believed fresh meat cured scurvy, creating an even higher demand for these products.[18] Advances in transportation, especially the arrival of the White Pass & Yukon Route railroad, and in refrigeration, including refrigerated ships and steamers, as well as cold storage buildings, allowed companies to provide fresh or refrigerated meat to the growing population of Skagway and the Yukon.

In 1899, the Frye-Bruhn Company supplied stampeders with two hundred tons of fresh meat, including ten thousand turkeys, ten thousand chickens, sixty tons of beef, and forty tons of mutton.[19] The Frye-Bruhn Company contracted with the Alaska Meat Company to transport the supply north from Seattle. In addition to supplying the transport company, Frye-Bruhn Company sold its products directly to stampeders in Alaska. As a result, the company invested in buildings in Skagway to further serve its growing clientele, including a cold storage building and a retail location. The retail location was established by December 1897 when an advertisement noted its location on 5th Avenue near Broadway. They had taken over at least a portion of the structure that was formerly the Seattle Hotel to sell their meats (Figure 4.6).[20] By February 16, 1900, the *Daily Alaskan* ran a short

11 Paula Mitchell Marks, *Precious Dust: The Saga of Western Gold Rushes* (Lincoln: University of Nebraska Press, 1998), 175.

12 Morse, 238.

13 Cassandra Tate, "Frye Art Museum (Seattle)," HistoryLink.org, March 3, 2002, https://www.historylink.org/File/3711.

14 "Cold Storage at Nome, Alaska," *Ice and Refrigeration,* Vol 20, no. 6 (June 1901): 261.

15 Cooper, 7.

16 Baranov Museum, Kodiak, Alaska, Charles Frye correspondence files.

17 Morse, 153. On food patterns during the Gold Rush see in Morse, Chapter 6: The Nature and Culture of Food.

18 *Ibid*, 153.

19 *Trade Register* (Seattle), May 20, 1899, 29 cited in Morse, 154.

20 Robert L. Spude, *Skagway, District of Alaska, 1884-1912. Building the Gateway to*



Figure 4.6: The Frye-Bruhn Company Skagway Market advertisement. (*Daily Alaskan.* February 16, 1900).

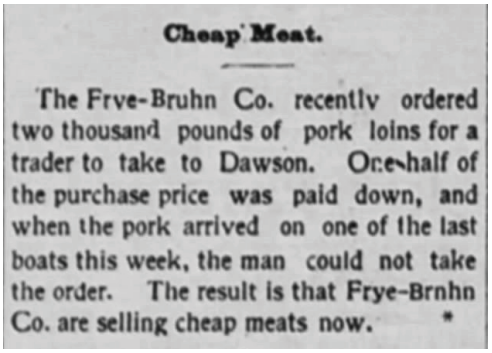


Figure 4.7: Announcement of Cheap Meats. (*Daily Alaskan*, February 16, 1900).



Figure 4.8: The Frye-Bruhn Company advertisement from the 1899 Business Directory. (*Directory and Guide [to] Skagway, Metropolis of Alaska and Gate to the Golden North* (Clinton 1899:96).

announcement regarding a big shipment of meats, which stated: "the result is that the Frye-Bruhn Co. are selling cheap meats now" (Figure 4.7).[21]

Selling fresh or refrigerated meat directly to miners required additional Skagway infrastructure. In addition to its retail space, the Frye-Bruhn Company required cold storage space. As such, they constructed the Frye-Bruhn Cold Storage Building.

An 1899 published business directory for Skagway described the Frye-Bruhn [Packing][22] Company (Figure 4.8):

> Frye-Bruhn Packing Co. An important industry in any city is that which deals with the providing of fresh meats for the market and it is an industry in which every home is interested. The Frye-Bruhn Packing Co., with headquarters in Seattle, have a branch house in Skagway, and the importance of such an institution in this city need not be extolled here. The firm have [sic] been engaged in the business for years and understand the manner of preparing and handling meats to best meet the wants of their patrons. They have been the leading dealers in meats on the Sound for years and their packing house is a model of its kind. The house is located at 309 Fifth Avenue, where they do an extensive wholesale and retail business. Their slaughter house is on the outskirts of the city. [23]

COLD STORAGE BUILDINGS AND TECHNOLOGY

Commercial refrigeration was introduced in the United States in 1856. However, the ice industry had become well-established and its relative simplicity compared to commercial refrigeration kept that form of keeping food cool dominant until the 1890s. At that time, contaminants in ice from polluted rivers and lakes forced breweries and meat packers to further consider commercial refrigeration. These early commercial refrigeration units, such as the one probably used at the Frye-Bruhn refrigerated warehouse in Skagway, used either gaseous ammonia, methyl chloride, or sulfur dioxide as refrigerants. Leakages often had fatal results for those nearby when they occurred. It was not until the 1920s that chlorofluorocarbons for cooling were developed by Frigidaire.[24]

Extant equipment suggests that the Frye-Bruhn Cold Storage Building was constructed with a design similar to the company's cold storage plant in Nome, Alaska (Figure 4.9). Engineer Sidney M. Affleck erected the plant in Nome

the Klondike, Occasional Paper No. 36 (Fairbanks: University of Alaska, Cooperative Park Studies Unit, 1983), 148.

21 "Cheap Meats." *Daily Alaskan*, February 16, 1900: 3.

22 Primary sources (advertisements, historic photographs, business directories) appear to interchange the business names "Frye-Bruhn Company" and the "Frye-Bruhn Packing Company." This document uses the Frye-Bruhn Company as the business name, unless directly quoting a source that uses a variation.

23 The 1899 Directory and Guide [to] Skagway, Metropolis of Alaska and Gate to the Golden North Including the Famous Klondike, Atlin and Porcupine Gold Fields, etc. (Clinton 1899:102).

24 James W. Elkins, "Chlorofluorocarbons (CfCs)," in *The Chapman & Hall Encyclopedia of Environmental Science*, edited by David E. Alexander and Rhodes W. Fairbridge (Boston, MA: Kluwer Academic, 1999) available at https://gml.noaa.gov/hats/publictn/elkins/cfcs.html#:~:text=CFCs%20were%20first%20synthesized%20in,CFCs%20on%20December%2031%2C%201928.

between September 1-12, 1900.[25] Ammonia served as the refrigerant for the gasoline-powered, eight-ton refrigerating machine in Nome.[26] Two refrigerated rooms in the Nome plant were piped at the rate of one lineal foot of 1-inch direct expansion pipe for each three cubic feet of space.[27] The Nome plant was larger than the one in Skagway, which likely held a smaller refrigerating machine. It is unclear whether Affleck assisted with the Frye-Bruhn Company's construction of the cold storage building in Skagway; however, extant piping and the building architecture suggest a similarity between the two cold storage buildings (Figure 4.10).

OWNERS

Charles and Frank Frye were raised in Iowa by German-immigrant parents and moved to Seattle in 1888. Charles was a patron of the arts, a hobby which the profits of the Frye-Bruhn Company allowed him to pursue. Charles and his wife, Emma, became avid art-collectors; they favored late-nineteenth and early-twentieth-century German art and by the time of his death they had amassed a collection of 232 paintings. The Frye home had an exhibition space built expressly for this purpose and in this space the couple hosted concerts and events. The Fryes had no children and they stipulated in their wills the founding of the Frye Art Museum in Seattle, which would house their collection and be free of admission. The Museum continues to be at the forefront of Seattle's art community and has further expanded over the years. The Museum also holds a number of photographs of Skagway and the Frye-Bruhn buildings in Alaska (Figure 4.11).

A childhood friend of Charles and Frank Frye, Charles Bruhn was also born in Iowa of German immigrant parents. Bruhn moved to Seattle at the same time as the Frye brothers. Together they founded the Frye-Bruhn Company in 1891. A few years before Bruhn's death in 1938, Charles Frye bought Bruhn's share of the business and it became Frye & Company.

25 "Cold Storage at Nome, Alaska," *Ice and Refrigeration,* Vol 20, no. 6 (June 1901): 261.

26 By the 1890s, commercial refrigeration like the systems found at the Frye-Bruhn Company's cold store plants in Nome and Skagway had largely replaced the ice industry. Polluted waters and issues with contamination led breweries and meatpackers to move away from ice. Ammonia, methyl chloride, and sulfur dioxide were used as refrigerants. Leaks proved deadly. Chlorofluorocarbons, developed by Frigidaire, replaced these dangerous gasses in the 1920s.

27 "Cold Storage at Nome, Alaska," 261.



Figure 4.9: Exterior Nome Plant. (*Ice and Refrigeration*. Volume 20; Jan-June 1901).



Figure 4.10: Interior Nome Plant. (*Ice and Refrigeration*. Volume 20; Jan-June 1901).

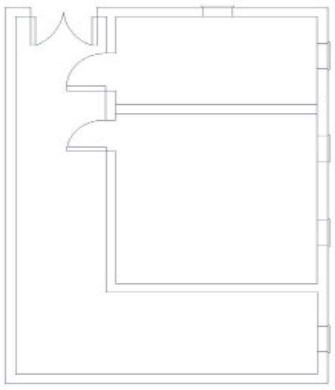


Figure 4.11: Frye-Bruhn Company retail shop at 302 5th Avenue, circa 1910. (Frye Art Museum Archives, Seattle).

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5. Physical Description

Note: This description uses directional information for the current location of the building. The building plan at left below is oriented with north up per the street grid in Skagway. True north is denoted on the plan shown on page 33.



SITE

The National Park Service moved the Frye-Bruhn Cold Storage Building a short distance on May 29, 2004, to prevent its demolition. The building was relocated from Block 25, Lot 4 and 5 on the south side of 5th Avenue, near Broadway, to NPS property on the north side of 5th Avenue on Block 24, Lot 9. The building faces north, fronting a gravel alley running east-west parallel to 5th and 6th Avenues. The building sits to the east of two historic wood frame cribs (also relocated) and to the west of the historic Moore Homestead Historic Site (in its original location), each of these sites is managed by NPS. There is a wood plank boardwalk running east-west along the alley in front of the building. A small area of lawn separates the plank walkway from the building. The remainder of the parcel is also covered in lawn and there are several mature trees (Figure 5.1). The building maintains the same primary orientation in its current location, aligning with the Skagway street grid, as it did in its location facing 5th Avenue.

BUILDING EXTERIOR

The Frye-Bruhn Cold Storage Building is a one-story, wood-frame structure. The front of the building faces north (Figure 5.2). The building has a rectangular footprint measuring approximately 30'-0" x 40'-0". The interior and exterior walls are sheathed in unpainted, shiplap siding, except the west elevation which has an additional layer of drop siding on top of the shiplap. The gable roof has a 6:12 slope and is oriented north-south along the building's longer axis.

The interior of the building has an “L” shaped hallway, running along the west and south walls, with the hallway terminating in the southeast corner. The other two spaces in the building are refrigerated storage rooms, located along the northern two-thirds of the east wall (Figure 5.3). The interior walls of the central cold storage room have a 12" cavity filled with sawdust to insulate the structure.

The simple, rectangular footprint and wood framing reflect the vernacular architecture of Skagway’s Klondike Gold Rush era, and the use of sawdust to insulate its walls was typical of turn-of-the-twentieth-century cold storage buildings.



Figure 5.1: Looking southeast at the north and west elevations of the Frye-Bruhn Cold Storage Building, the Moore Homestead fence and buildings visible behind.



Figure 5.2: Looking southwest at the north and east elevations.

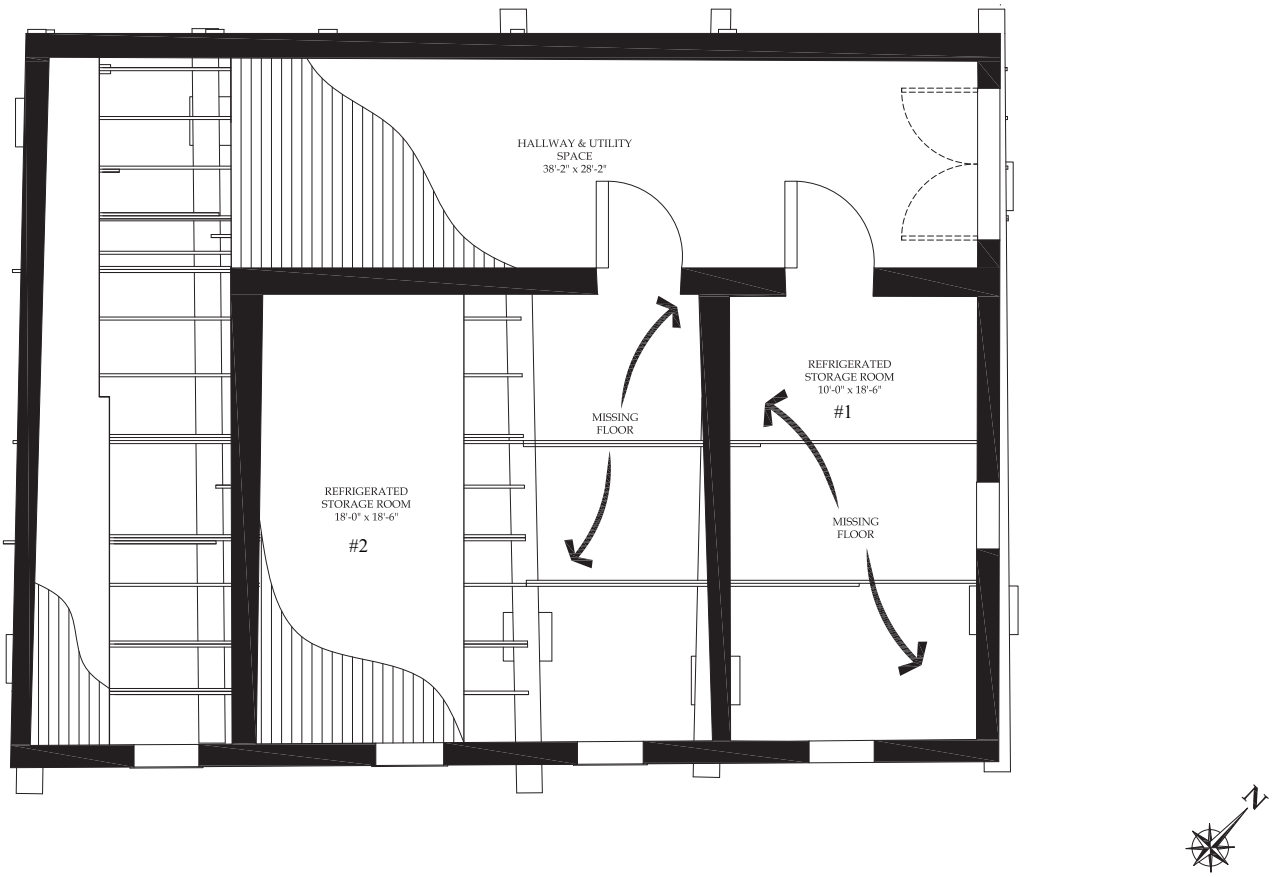


Figure 5.3: Floorplan of the Frye-Bruhn Cold Storage Building. Source: Historic American Buildings Survey AK-224. Delineated by Haruna Madono, 2008, detail from sheet 13 of 16.



Figure 5.4: Foundation with beams and cribbing.



Figure 5.6: Southeast corner of the building in 2003 illustrating duff and soil in contact with the foundation. (NPS).



Figure 5.5: Temporary cribbing extends beyond face of the plywood foundation at the south elevation.

FOUNDATION

The NPS moved the Frye-Bruhn Cold Storage Building to its current location where it remains today in 2004, bearing on 12" x 12" wood beams and wood cribbing, which elevates the building's finish floor approximately 4'-0" above grade (Figure 5.4). The temporary foundation of cribbing is sheathed in plywood, except for two locations where the cribbing extends beyond the face of the plywood (Figure 5.5).

Prior to its move in 2004, inspection of only one area of the building's foundation noted heavily deteriorated 1 3/4" x 11 1/2" joists, situated directly on grade (Figure 5.6). The joists supported flooring material of 1 3/4" x 5" tongue and groove boards which ran perpendicular to the roof ridge.[1]

Historically, the building was elevated approximately 3'-0" or 4'-0" above grade with a boardwalk running at the front to provide access to the building's main freight entry doors. This would have allowed delivery carts, or later trucks with raised beds, to align with a raised boardwalk or loading dock to deliver and transport meat to and from the building (Figure 5.7).



Figure 5.7: Historic photograph circa 1910 of the building in its second Skagway location with an elevated foundation and boardwalk to accommodate deliveries and transfer meat from the building to the retail store. Note the false front addition at right that is no longer extant. (Frye Art Museum, Seattle).

1 Grant Crosby, *Preliminary Condition Assessment with Recommendations for Treatment: The Ice House [Frye-Bruhn Cold Storage]*, Skagway, Alaska. Anchorage, AK: National Park Service, 2003, 3.



Figure 5.8: View of building's simple gable roof form looking southwest.



Figure 5.9: Open eaves with rafter ends exposed and the slight overhang at the west rake.



Figure 5.10: Detail of the horizontal shiplap siding at the southeast corner of the building.



Figure 5.11: Vertical bracing at west elevation.

ROOF

The Frye-Bruhn Cold Storage Building has a 6:12 gable roof that is oriented along the long axis of the building and is clad in 1/2" corrugated metal (Figure 5.8). NPS replaced the roof structure and metal roofing material in 2010. The roof and attic below suffered damage from a past fire and the vast majority of the rafters, skip sheathing, and truss members were charred. The new roof structure was designed to reflect its historic configuration where visible at the exterior. Prior to stabilization in 2010, the roof was supported with 1 1/2" x 5 1/2" rafters at 24" on center in a King truss configuration. The rafters bore on a 1 1/2" x 5 1/2" top plate. The skip sheathing consisted of 3/4" boards, 3" to 5" wide, spaced roughly 16" on center.[2] The building's eaves and rake extend 1'-6" beyond the walls and are open with rafter tails exposed at the east and west elevations (Figure 5.9).

STRUCTURAL SYSTEM AND FRAMING

The Frye-Bruhn Cold Storage Building is a wood frame building. It currently rests on five 12" x 12" beams, installed as temporary supports and oriented east-west. These beams sit on top of contemporary wood cribbing installed by NPS as part of stabilization and mothballing efforts after the building was moved.

The nature of cold storage required thick exterior and interior walls to ensure proper insulation and temperature control. Perimeter walls consist of 1 1/2" x 9 1/2" studs clad on the exterior by two layers of 3/4" x 7 1/4" horizontal shiplap siding with building paper in-between (Figure 5.10). Historic photographs confirm that an additional layer of 5 1/2" drop siding on the west elevation was installed prior to 1967, likely to cover two doors and a window abandoned upon removal of a false front addition on the building's west side that is visible in a circa 1910 historic photograph (Figure 5.7). Perimeter wall studs are clad on the interior as well, creating a 9 1/2" wall cavity that was filled with sawdust for insulation. Four vertical walers are added to the west exterior wall to stabilize the building (Figure 5.11).

The ghosting of a gable roof addition is visible along the western half of the south wall, and there are both plywood and corrugated metal roof panels where siding has fallen away. Diagonal, temporary wood bracing helps support the south elevation (Figure 5.12). Temporary bracing is also found on the interior of the north refrigerated storage room.

WINDOWS AND ATTIC VENTS

There are seven visible window openings and two attic vents on the building. There is one window on the north elevation, four on the east elevation, one on the south elevation, and one on the west elevation that is not visible from the exterior because of the drop siding installed over the opening. Historic photographs indicate the windows were two light, fixed wood sash windows. The lights were divided vertically by a thin wood muntin. They had a simple, 3/4" x 4 1/2" wood frame (Figure 5.7).

At the north elevation, there is a single window opening on the east side and an attic vent centered at the gable end (Figure 5.13). Only the head trim of north elevation window frame remains. Ghosting of the rest of the frame is visible around the edges of the plywood. The 2003 assessment revealed a second sash,

2 *Ibid*, 6.



Figure 5.12: South elevation ghosting of gable roof addition above metal panels (red arrow).



Figure 5.13: North elevation doorway, window, and attic vent opening.

acting as a storm window, in the window opening that was also a fixed 2-lite configuration. This doubled sash configuration provided an air gap to improve insulation of the building envelope.[3]

The siding on the east elevation is charred from fire damage (Figures 5.14-5.16). Four windows of the same design as the north elevation are unevenly spaced on the east elevation and covered with plywood. Some of the east elevation windows retain their wood sashes but the window glass has been lost in all locations (Figure 5.15). The simple 3/4" x 4 1/2" wood trim remains on all the east elevation windows (Figure 5.16).

The south elevation has a centered attic gable vent matching the north elevation. However, it is currently covered with plywood (Figure 5.17). The south elevation is in poor condition and was altered by a non-extant addition at its western half; remnants of a single window is located at the eastern half of this elevation and likely aligned with the window at the east side of the north elevation. It is covered with plywood and corrugated metal (Figure 5.18).

There are no windows visible on the west elevation (Figure 5.19). However, a framed window is visible at the interior of the west elevation (Figure 5.20). Drop siding currently covers this window. This window likely predated the false front (no longer extant), constructed around the time the structure was moved to 5th Avenue in 1902 (Figure 5.7).

DOORS AND DOORWAYS

There are currently two exterior door entries on the Frye-Bruhn Cold Storage Building; however, doors no longer hang in these locations. At the north elevation there was historically a double freight door (Figure 5.7). The two-leaf, insulated, double freight doors are stored within the building (Figure 5.21). Plywood currently serves as a temporary door. The circa 1910 photograph provides the only evidence of how the trolley entered the building and the remaining trim and associated boards above the door likely contributed to the system although it is not clear how. Wiring and a light socket now extend from the upper board (Figure 5.22).

In 2023, metal conservator Nicole Peters from the Harpers Ferry Center, an NPS hub for conservation specialists, completed a condition assessment and treatment plan for the building's overhead trolley, system refrigeration coils, and the two exterior freight doors as well as the two interior cold storage doors.



Figure 5.14: East elevation window opening and fire scaring.



Figure 5.15: East elevation window frame with missing lites.



Figure 5.16: Typical, simple wood frame around the four windows at east elevation.

3 *Ibid*, 7.



Figure 5.17: South elevation attic vent location (above) under plywood.



Figure 5.18: Historic photograph of the rear elevation of the building. Detail of View of Skagway from Moore's Wharf, early June 1902. (Collier, Arthur James (1902). Skagway, Alaska [Photograph]. United States Geological Survey).

Peters describes the front doors:

> "The door[s] [are] fabricated from joined interior wood beams incased by horizontal [3/4"] x 3 1/4" wide tongue and groove laid planks on the door interior, and vertical [3/4"] x 3 1/4" tongue and groove planks on the door exterior. The gasket system around the perimeter of the door consists of woven canvas stuffed with a horsehair and excelsior mixture. Excelsior, also referred to as 'wood wool', is a product made of fine wood slivers cut from logs. It was commonly used as a padding and stuffing material throughout the 1800s and into the early- 1900s.
>
> The canvas is tacked onto the structure of the door with flat head nails. There are three ferrous metal butterfly hinges installed at the top, middle, and bottom of the interior face of the door, causing the door to swing inwards. The exterior face of the door contains a forged iron handle installed with through-bolts and the receiving end of the deadbolt system consisting of an attached cut metal pipe just below the handle. Approximate dimensions of the overall door are: 35" x 85" x 5.5"."[4]

At the south elevation, two rough openings that may have served as doors from the gable roof addition are visible (Figure 5.23). The openings are tall and narrow and may have provided access to the addition that was previously attached to the building's south elevation. The western opening is covered in plywood and the eastern opening has been boarded up from the interior. If doors once hung in these openings, they have not been found.

Two additional doorways, later filled in, are located on the west elevation. According to historic photographs, the doors likely provided access to an early-twentieth century false front addition that was connected to the Frye-Bruhn Cold Storage Building when it sat on Block 25, Lot 4. Historic photographs indicate the false front addition had been constructed by 1908, though it is no longer extant (Figure 5.7). A lack of photographic evidence makes it difficult to determine when these doors were installed and covered.

4 *Nicole Peters, Condition Assessment & Treatment Plan for the Refrigeration Coils, Meat Trolley, and Cold Storage Doos Inside the Frye-Bruhn Cold Storage Building* . Anchorage, AK: National Park Service, 2023.



Figure 5.19: West elevation showing no window or door openings from the exterior.



Figure 5.20: View of window opening on west wall seen from building interior.



Figure 5.21: Evidence of door opening on the building's west elevation that likely accessed the shed roof addition visible in the circa 1910 photograph.



Figure 5.22: Detail of north entry door opening showing the various sizes of trim.



Figure 5.24: Detail of round receivers at northeast corner of the building.



Figure 5.23: Detail of the south elevation where gable-roofed addition was located and two possible door openings.

EXTERIOR HARDWARE

There is limited extant hardware on the Frye-Bruhn Cold Storage Building. The north elevation freight doors have metal hinges and sliding bolt latches. Five circular, metal receivers are located on the east trim board of the structure's north elevation, but their purpose is unknown (Figure 5.24). The historic function of the circular, metal caps is not known. Though difficult to discern, two small circles appear on the east trim board in a photograph of the building from the 1910s (Figure 5.7). It is difficult to discern if these circles are the same as the extant metal caps. They appear unrelated to the trolley system. One theory suggests the caps held reflectors to help drivers see the corner of the building when making deliveries.

Three porcelain insulators are found above the freight door on the north elevation. Wire hangs from one. At least one of these appears in a photograph of the cold storage building from the 1910s. Their purpose is unclear but it seems possible that they were insulator knobs related to the structure's electrical system.

BUILDING INTERIOR

The Frye-Bruhn Cold Storage Building is a single-story structure with an attic accessed by a built-in ladder. It consists of three primary spaces: two enclosed refrigerated storage rooms along the east portion of the building and an "L" shaped hallway running along the west and south walls.

FLOORING

A layer of 1 3/4" x 5" tongue and groove flooring is oriented east-west and attached directly to 1" x 5 3/4" planks of Douglas fir subfloor decking also oriented east-west (Figure 5.25). These two layers are supported by 1 3/4" x 11 1/2" joists, spaced approximately 24" on center. The space between the joists was filled with sawdust insulation (Figure 5.27) held in place with 3/4" x 7 1/4" shiplap boards nailed to the bottom of the floor joists. Only a few of these nailed boards are extant, the remainder deteriorated at the previous location or were removed during the relocation effort. Portions of the floor are missing in both refridgerated storage rooms, as well as in a portion of the "L" hallway (Figure 5.28).

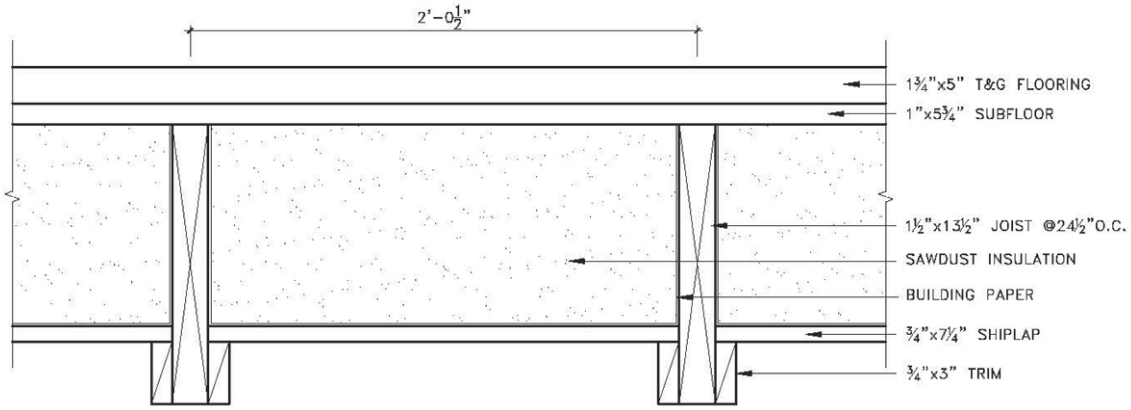


Figure 5.25: Section detail of floor insulation.

WALLS AND CEILINGS

Wall framing consists of 1 1/2" x 9 1/2" wood studs spaced 24" on center with 3/4" x 7 1/4" shiplap sheathing on both sides (Figure 5.29). The interior cavity was filled with sawdust to provide insulation. Some sections, as illustrated in the Historic American Buildings Survey drawings of the Frye-Bruhn Cold Storage Building, consist of only a single layer of shiplap siding.

Interior partition walls, like exterior walls, consist of two double layers of siding with a space in between filled with sawdust for insulation. Studs measuring 1 3/4" x 9 1/2" are faced with 3/4" x 7 1/4" horizontal shiplap sheathing on either side, creating the large void to house insulating sawdust. Some sections where the shiplap sheathing has fallen away reveal a layer of tar paper between layers of sheathing.

In some spaces, the finished ceiling is missing and the attic cavity and underside of the roof is visible (Figure 5.30). Historically, sawdust filled the cavities between the ceiling joists. The ceiling joists, where they remain, are 1 3/4" x 11 1/2" boards, 24" on center, running perpendicular to the ridge of the roof. Boards measuring 1" x 3 1/2" were installed flush with the bottom of the ceiling joists to serve as a ledger for 3/4" x 7 1/4" shiplap boards, cut to fit into the 21 1/2" space between joists, providing a cavity for sawdust. Vertical boards hang from the ceiling joists in the larger refrigerated storage room. Likely, they suspended a section of the meat trolley system no longer extant.

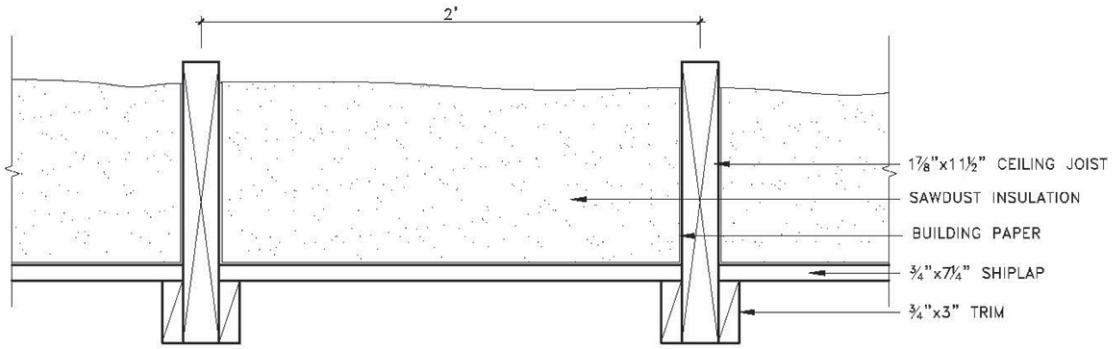


Figure 5.26: Section detail of attic insulation.

DOORWAYS AND DOORS

The double-leaf doorway on the north wall of the Frye-Bruhn Cold Storage Building serves as the primary entrance to the structure. The doors have been removed and are stored inside the structure (Figure 5.22).

Two narrow openings, now infilled with boards along the south wall possibly reveal how two historic additions to the structure were accessed (Figure 5.31). The doorways are tall and narrow and approximately 1'-6" apart. Or the openings served as a pass-through for the refrigeration equipment from the addition visible in the 1901 photographs (Figure 5.18). While the structure was likely built for cold storage, the mechanical system may have changed when the building was moved in 1902 and the south addition was removed.



Figure 5.27: Detail of remnant flooring.



Figure 5.30: Missing flooring.



Figure 5.28: Floor decking and joists below tongue and groove flooring.



Figure 5.31: Remnants of tar paper.



Figure 5.29: Sawdust insulation.



Figure 5.32: Missing finish ceiling with underside of roof visible.



Figure 5.33: Refrigeration pipes in the central room which were conserved in 2023. (NPS 2026)



Figure 5.34: East interior elevation of the central room illustrating the dropped ceiling and boarded up windows.

Two doorways are locatedon the west wall, which likely provided access to the false-fronted, shed-roofed addition, attached to the Frye-Bruhn Cold Storage Building for an undetermined period when the structure sat on Block 25, Lot 4. Their frames have been removed and the doors are no longer extant. The doorway to the south shows significant charring from a fire. Both openings are boarded up from the exterior with horizontal shiplap boards as well as drop siding. At some point before the building's move in 2004, black plastic was installed along the interior west wall, covering both doorways and the window between. Thin wood battens held in place and shelving was installed over the plastic. Plastic and shelves were removed by NPS in 2014.

The structure has two interior door openings that lead from the "L" hallway into the refrigerated storage rooms. The doors are housed in the structure and destinguishable from the front doors by their larger iron door hinges. The doors are extensively documented in the HABS drawings (Appendix B) and 2023 conservation report by Nicole Peters (Appendix E).

The doorways have simple, butted wood frames, consistent with other openings throughout the structure (Figure 5.32). The door into the larger (southern) refrigerated storage room incorporates the horizontal metal track that was used to haul carcassas. The track was designed to run through the header of the door uninterrupted (Figure 5.33). In situ evidence indicates the door may have been moved (approximately 2 feet to the north) or resized at some point, possibly to accomodate the meat track and trolley system.[5]

The north door measures 3'-5 1/2" x 6'-10" and the south door measures 3'-5 1/2" x 7'-0". The southern door's slightly larger size may be due to the meat track and trolley system.

WINDOWS

All window openings are currently boarded up(Figures 5.34 and 5.35). The window openings have simple, flat, butted 3/4" x 4 1/2" trim packages and deep sills set into the thick walls of the structure. It appears that some of the openings housed two sashes, providing extra insulation with an air spaces. Where extant, the wood sashes are fixed 2-lites with a vertical muntin. All glass is either broken or missing from the sashes.



Figure 5.35: Detail of conserved piping in southeast corner of the center room (NPS 2026).



Figure 5.36: View to east interior elevation of the building's southern room at the bottom of the "L" (NPS 2026).

5 *Frye-Bruhn Cold Storage building Historic Structure Report*, last updated December 2014, 16.



Figure 5.37: Doorway at south elevation.



Figure 5.38: Doorway into central refrigerated storage room.



Figure 5.39: Overhead track used to haul meat from the north double doors into the central refrigerated storage room.

ATTIC LADDER

The Frye-Bruhn Cold Storage Building's attic is accessed by a fixed, wood slat ladder attached to the north end of the interior wall, just north of the doorway into the refrigerated storage room (Figure 5.36). The ladder measures just under 2'-0" wide, has nine flat-stock rungs unevenly spaced (approximately 12-14"). Not all the rungs are level.

TROLLEY SYSTEM

The building has an extant overhead trolley system that was once used to move meat from the exterior freight landing on the north side of the building, through the front (north) double doors, and into the central refrigerated storage rooms. The circa 1910 historic photograph (Figure 5.7) shows the metal trolley track and its exterior superstructure. On the interior of the structure, the system ran along the middle of the hallway, suspended from the ceiling joists, turning ninety degrees to the east to pass through the center of the door header of the doorway leading to the second, and larger, refrigerated storage room (Figure 5.39).

The support for the track, located near the ceiling in the hallway, was suspended from the ceiling joists by a threaded bolt passing through shiplap ceiling boards. It was held in place by a short section of dimensional lumber resting perpendicular to the ceiling joists. When the roof was replaced in 2010, the attic track supports were turned ninety degrees to allow the placement of the pre-manufactured trusses. The track supports are now situated parallel to the ceiling joists. Shiplap ceiling boards, rather than the structural ceiling joists, now support the track.[6]

REFRIGERATION EQUIPMENT

The building's refrigeration system consists of a series of pipes, valves, tanks, and coils that span along the southeast wall of the "L" and into the south refrigerated storage room. Along the east wall, at the terminus of the "L" hallway, valved pipe dividers and a cylindrical tank sit just above the floor height and connect to the coils in the refrigerated storage room through the south wall. The refrigeration coil system in the building is extant along the north, east, and south walls of the refrigerated storage room at the center of the east wall. The coils are attached to the walls by "bent nail 'brackets' installed around each coil line" and attached to vertical support posts that run floor to ceiling along the walls.[7] For a full system description, the 2023 condition assesment, and treatment recommendations, see Peters' report (Appendix E).

In the 2023 Condition Assessment, Nicole Peters further described the coil system,

> "Each coil line is connected to the next by a threaded coupler installed on alternating rows on both the far left and far right sides of the system. There are two main bolted pipe connector valves: one at the central bottom coil line and one at the top upper left coil line. The lower left corner contains two connection and splitting hardware, facilitating coil transition into adjacent rooms. There is a central aluminum 4-bladed fan mounted to custom blocking in the upper center wall space. The fan system extends through the wall to the room just southwest [south], but no mechanism is present on the other side of the wall other than the fan rod."[8]

6 *Frye-Bruhn Cold Storage Building Historic Structure Report*, last updated December 2014, 20.

7 Peters, *Condition Assessment,* 4.

8 *Ibid*, 4.



Figure 5.40: Wood window sash extant behind interior infill.



Figure 5.41: Detail of window frame and sill.



Figure 5.42: Ladder to attic space affixed to interior wall.



Figure 5.43: Wrought iron or steel door hinge.



Figure 5.44: Door handle of exterior door.

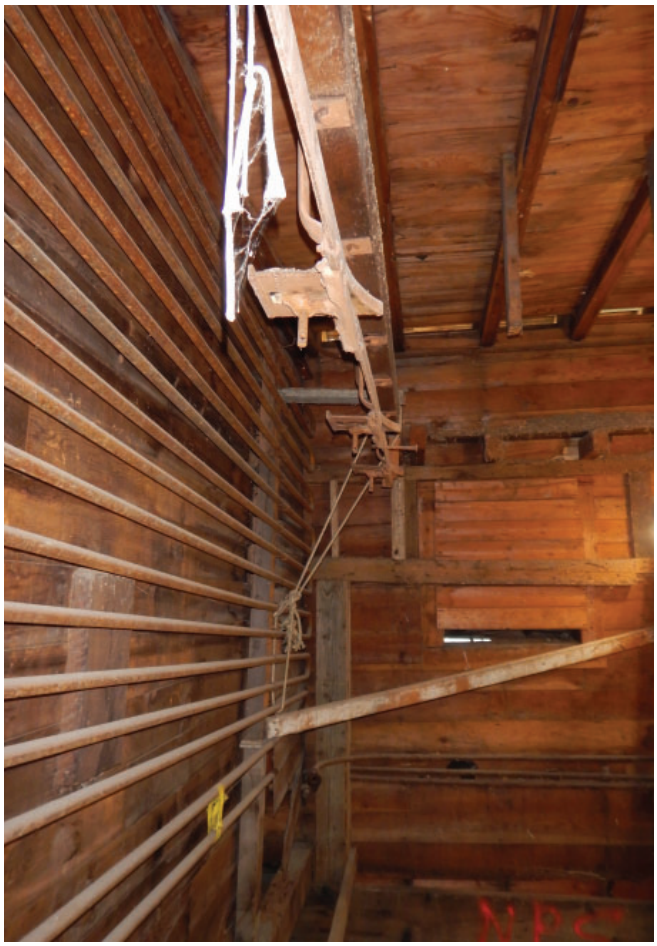


Figure 5.45: North wall with refrigeration pipes and overhead track in the central refrigerated storage room.



Figure 5.46: Detail of refrigeration piping in central refrigerated storage room.



Figure 5.47: Valved pipe dividers in the southeast corner of the structure along the east wall.



Figure 5.48: Extant fan on south wall of central refrigerated storage room.

On the east wall, a single coil line runs just below the ceiling and three coils run along the bottom of the wall with the last one traveling through the wall to the north and terminates in "partial pipe connector valves and pipe splitter hardware."[9]

The wall coil system along the north wall is no longer structurally stable. The east vertical post, to which the system is attached, is damaged and misaligned, pulling and bending the coils. "The bottom two coil lines are being held in place with rope strung around upper lines on the left-hand [west] side, and there is a rope support tethering 5 lines of coil at the right-hand [east] side of the system. There are three partial coil segments hooked over the coil lines at the lower left [west] region; these pieces are not physically attached. Several lines appear to be missing toward the bottom of the system."[10]

9 *Ibid*, 8.

10 *Ibid*, 12.

6. Chronology of Development and Use

CHRONOLOGY

Records indicate that the Frye-Bruhn Cold Storage Building was likely constructed in Skagway around 1901. The earliest photographs of the building seem to date to the summer of 1901 (Figure 6.1). More definitively dated photographs depict the structure in October 1901 (Figures 6.2 and 6.3). An advertisement for "Refrigerated and Government Inspected" goods at the Frye-Bruhn Skagway Market, the retail arm of their business, ran in the *Daily Alaskan* on May 16, 1900.[1] This advertisement, however, does not necessarily confirm that it was the Frye-Bruhn Cold Storage Building providing refrigeration for the company at this time. The advertisement might have referred to meat transported in refrigerated compartments on ships departing from Seattle and then stored in other cold storage spaces, which were not necessarily refrigerated. Nonetheless, the early photographs show the building close to the wharf on the waterfront along Second Avenue, near its intersection with Spring Street. This location was west of Moore's sawmill, the likely supplier of the much-needed sawdust used to insulate the building's wall, ceiling, and floor cavities, helping to regulate the interior temperature (Figure 6.3).

Additional evidence dating the Frye-Bruhn Cold Storage Building to 1901 is found in a trade journal, *Ice and Refrigeration*. The journal listed the Frye-Bruhn Cold Storage Building among "projected ice factories and refrigerating plants" in its March 1901 edition, noting the Frye-Bruhn Company would "establish a cold storage plant at this point," in Skagway.[2] A June 1901 article of *Ice and Refrigeration* notes that the success of the Frye-Bruhn Company's cold storage plant in Nome, Alaska led it "to decide to erect three more cold storage plants this year…" including one at Skagway.[3] Historical photographs paired with these journal articles strongly suggest the structure was built in 1901. Barring additional records, the full early history of this building may never be completely known.

A June 1902 photograph shows the rear (south) elevation of the building, still in its original location, with a window and a small gable roof addition (Figure 6.4). The window sashes on the Frye-Bruhn Cold Storage Building were doubled, providing a thermal air space, which increased insulation.[4] As one article in *Ice and Refrigeration* noted, "a body of air in rest [is] known to be the best insulating medium."[5] This suggests the importance of the insulating air space between doubled window sashes on the Frye-Bruhn Company's structure.

1 *Daily Alaskan*, May 16, 1900.

2 "New Plants and Improvements," *Ice and Refrigeration,* Vol 20, No. 3 (March 1901), 135.

3 "Cold Storage at Nome, Alaska," *Ice and Refrigeration,* Vol 20, No. 6 (June 1901), 260-262.

4 Grant Crosby. *Preliminary Condition Assessment, Ice House [Frye-Bruhn Cold Storage], Skagway, Alaska*. Anchorage, AK: National Park Service, 2003, 7.

5 E. Brueckner, "The Refrigeration of Dwellings: Relative Cost and Value Considered—Scientific Principles on which to Calculate Amount of Refrigeration Required—Direct and Indirect Systems," translated from the Zeitschrift Fuer Die Gesammte Kaelte-Industrie, *Ice and Refrigeration* 18 (March 1900), 212.



Figure 6.1: "Skagway, Alaska." Looking north, circa summer, 1901-1902. Photographer: William H. Case & Horace H. Draper (Case & Draper) (660). This overview photograph of the Skagway waterfront was taken from the eastern mountainside with the view north across town. The original location of the Frye-Bruhn Cold Storage Building is visible in this photograph (marked by red arrow). (Courtesy National Park Service, Klondike Gold Rush National Historical Park, KLGO 55901).



Figure 6.2: "Skagway - High water - 1901." View of Skagway looking west at high tide, October 28, 1901. This overview photograph of Skagway was taken on the eastern hillside at the same day as Figure 6.3, but from a different angle. It shows the Frye-Bruhn Cold Storage Building in its original location near the wharf (marked by red arrow). Note the small gable-roofed addition to the south side of the building. (Courtesy National Park Service, Klondike Gold Rush National Historical Park, KLGO 56038).

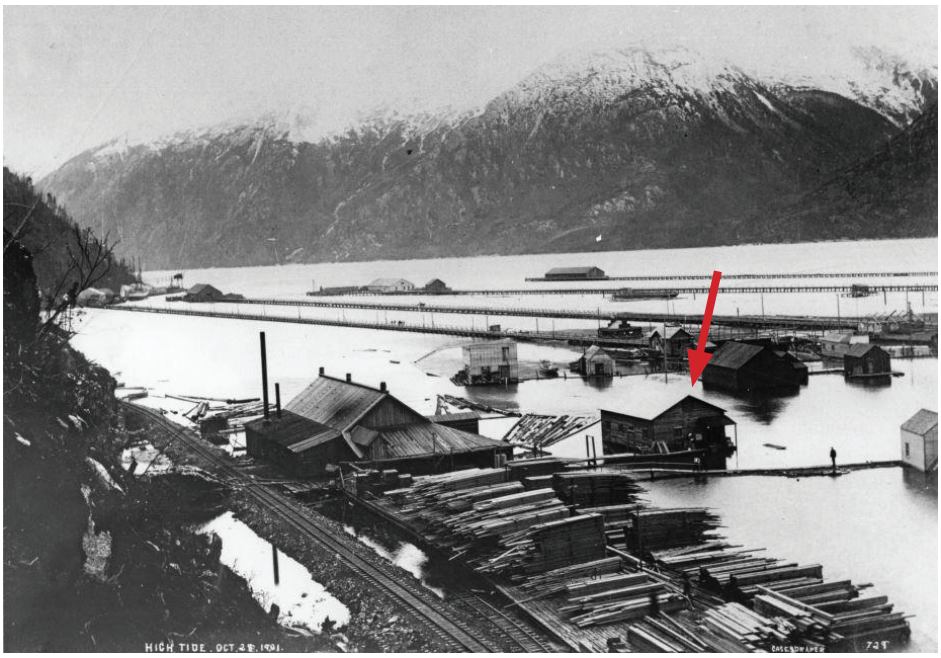


Figure 6.3: View of Skagway looking south toward the wharfs at high tide, October 28, 1901. This overview photograph of the Skagway waterfront was taken from the eastern mountainside with the view toward the harbor and its wharfs. This picture shows much of the lower (southern) end of Skagway flooded by a high tide event. The Frye-Bruhn Cold Storage Building is shown (marked by red arrow) in its original location west of the Moore's sawmill. (Courtesy National Park Service, Klondike Gold Rush National Historical Park, KLGO 59621).



Figure 6.4: June 1902. This photograph of Skagway was taken from the Moore's Wharf, looking north and shows the original location of the Frye-Bruhn Cold Storage Building (marked by red arrow). Photo by USGS scientist Arthur James Collier. (Collier, Arthur James (1902). Skagway, Alaska [Photograph]. United States Geological Survey).

Perhaps the structure was originally built as a cold storage plant and the windows provided light and a way to view and check equipment without opening doors and releasing cold air. Historically, cold rooms were "provided with electric illumination and windows for inspection to enable the engineer to observe the freezing and thawing of pipes without entering the rooms."[6] There were, however, differing opinions regarding windows on cold storage plants at the turn of the century.

While many cold storage buildings from the late-1890s and early-1900s had windows, an 1899 article suggests from *Ice and Refrigeration* suggests, "Rather than consider what might be a good way of placing windows in a cold storage building, their use should be discouraged." The article continues:

> Even with four or five separate glass [sic], divided by air spaces, and with all joints set in white lead, the loss of refrigeration is large. It is also very difficult to fit insulation around the window frame so as to make a good job; and even if a passable job were practicable, the expense of putting in windows is sufficient to condemn their use. The increased fire exposure is of some consequence, too, and with the low cost of electric light, windows should not be thought of for cold storage work.[7]

Though there were debates about their utility, the appearance of windows on the structure in early photographs does not necessarily suggest that the Frye-Bruhn Cold Storage Building was built for a purpose other than cold storage, the 9 1/2" stud wall cavity filled with sawdust as an insulating property, reveal the building was likely used for cold storage. The double paned windows further indicates the importance insulation played a key role in the building's construction. One caveat may be that other cold storage buildings had additional layers of windows—tripled, quadrupled, or even quintupled.[8] Overall, however, it is more likely that the structure was purpose-built in 1901 as cold storage rather than earlier for a different purpose.

1902 RELOCATION OF COLD STORAGE BUILDING

As the gold rush waned, Skagway transitioned into an established railroad town. Families replaced stampeders and the Frye-Bruhn Company continued to provide meat to residents. Advertisements in the *Daily Alaskan* marketed the company's "Refrigerated and Government Inspected" Skagway Market.[9]

In November 1902, the company moved the Frye-Bruhn Cold Storage Building from its original location on the north side of Second Avenue to the south side of Fifth Avenue, between Broadway and Spring, to Block 25, Lot 4. The company had purchased the northern half of the west half of the lot on October 18, 1902 from the Roukendorfs.[10]

The following month, the *Daily Alaskan* announced, "Frye-Bruhn Company has decided to remove its cold storeage [sic] plant from the present location

6 M. Dietrich, Chief City Engineer, "Munich Municipal Slaughter House: Refrigerating Plant in the Municipal Slaughter House at Munich, Vavaria—Construction and Equipment—Cost, Charges, Etc.—Illustrations," Translated from the Zeitschrift Fuer Die Gesam mte Kaelte-Industrie, *Ice and Refrigeration* 18 (April 1900), 327.

7 Madison Cooper, "Eggs in Cold Storage," *Ice and Refrigeration,* Vol. 16 (March 1899), 202.

8 *Ibid*, 206.

9 *Daily Alaskan*, January 3, 1901.

10 Skagway Deed Records, Skagway Deed Book 5, Pages 382-383, AKDNR.

near the old sawmill site to Fifth Avenue opposite the New Home restaurant."[11] Klondike Gold Rush National Historical Park Historian, Karl Gurcke, surmises the move was from "an area of town that was susceptible to flooding and to get the building closer to the company's retail store, also located on the south side of Fifth Avenue but between Broadway and State Streets."[12]

REAR GABLE-ROOFED ADDITION

It is unclear whether the gable roofed rear addition was visible in the June 1902 photograph (Figure 6.4) or if it moved with the structure in November 1902. The next available photograph dated June 1903 (Figure 6.5) shows the rear of the building and what appears like a door and wall patch where the rear addition once connected to the main structure.

WEST FALSE FRONT ADDITION

Around the time of the move to 5th Avenue, a shed-roofed addition with a false front facing the street was built along the west elevation and aligned with the north elevation. It is possible to see the west false front addition in a June 1903 photograph (Figure 6.5) that shows the rear of the building and the lines of the false front addition's shed roof and a window in the false front's south wall. The addition rested on the east half of Block 25, Lot 5. Two doorways may have been added to the west elevation of the Frye-Bruhn Cold Storage Building to provide interior access to this addition. The building continued to provide refrigeration for the Frye-Bruhn Company in its new location, but it is unclear for how long it served this purpose. (Figure 6.6).

1914 SANBORN MAP

By 1914, it appears the Frye-Bruhn Cold Storage Building no longer served as cold storage. The 1914 Sanborn Fire Insurance Company Map of Skagway reveals that the Frye-Bruhn Company had installed an ice machine with electric motor in its Meat Market retail store on Fifth Avenue (Figure 6.7). No machinery is drawn in the Frye-Bruhn Cold Storage Building, which the map labels "Wareho," or warehouse (Figure 6.8). The map suggests the building was converted to simple, unrefrigerated storage. Gurcke surmises the ice machine with electric motor in the Frye- Bruhn retail store provided all the cold storage the company required at that time.

Also of note in the 1914 Sanborn Map is the "X" drawn throughout the neighboring building to the east. The 1914 map has no key to indicate what the "X" means but the 1948 Sanborn map indicates an "X" through a building notes "ruins of fire". Fire scarring on the Frye-Bruhn Cold Storage Building's east walls could be linked to the fire of this neighboring structure. The date of the fire is unknown.

SALE SEPTEMBER 1919

11 "Will Move Building," *Daily Alaskan*, November 9, 1902, 3.

12 Gurcke, 3.



Figure 6.5: June 1903. This detail of a photograph of Skagway was taken from the eastern hillside and shows the intersection of 5th Avenue and Broadway, looking north. The Frye-Bruhn Cold Storage Building (marked by red arrow) is showed in its second location. It is located on the south side of 5th Avenue, just east of the intersection with Broadway, across the Avenue from the New Home Restaurant and St. Mark's Church and just west of the large warehouse with the dark roof near the bottom of the picture. Photographer: Sydney Paige USGS. (Paige, Sydney (1903). Skagway, Alaska Page 21 [Photograph]. United States Geological Survey).



Figure 6.6: Photograph circa 1910s shows the Frye-Bruhn Cold Storage Building at its second location on the south side of 5th Avenue between Broadway and Spring Street. Note the addition to the east (image right) with a false front that is no longer extant and the building features including two lite window sashes, gable end vent, freight doors, and the elevated boardwalk or loading dock. (Frye Art Museum Archives, Seattle).

In September 1919, Anthony Dortero purchased the cold storage building and its lot from the Frye-Bruhn Company.[13] Dortero arrived in Skagway from Astoria, Oregon during the gold rush in 1897, the same year the Frye-Bruhn Company opened its doors for retail in the town. When he first arrived, Dortero peddled fruit in a basket, working until three or four o-clock in the morning. As the *Daily Alaskan* reported, "All places were open night and day in those [gold rush] days, there being two variety shows, 36 saloons, tents all over the streets, and about 25,000 people in town."[14] Dortero's business grew and by 1915 he owned a fruit and tobacco business of his own.[15] By 1917, he and his son, Vincent, ran a haberdashery as well.[16] It is unclear how Dortero used the Frye-Bruhn Cold Storage Building when he purchased it in 1919, but the lack of observed interior alterations and the remaining refrigeration equipment suggests the building continued to serve as a warehouse or storage space. Even if the refrigerating machine was no longer running by the time Dortero purchased the building, an insulated space may have proved useful for his fruit business.

1929 AERIAL OF SKAGWAY ALASKA

A 1929 aerial photograph of Skagway shows the former Frye-Bruhn Cold Storage Building on the south side of 5th Avenue with its west addition and no rear addition (Figures 6.9 and 6.10).

1948 SANBORN

There is fire scaring on the east elevation of the Frye-Bruhn Cold Storage Building. The 1948 Sanborn Fire Insurance Map indicates the building to the east of former cold storage building with an "X" across it and "ruins of fire" also notated (Figure 6.11).[17] Sanborn Map keys indicate an "X" marked on a building means it was used as a stable. The date of the fire indicated on the Sanborn Map is not known.

1953 - 1964

The structure remained in the Dortero Family until 1953. At that time, Louis Rapuzzi and Clara Rapuzzi purchased the Frye-Bruhn Cold Storage Building.[18] The Rapuzzis, along with Lawrence and Adell McGuane, sold the structure to Malcom A. Moe in August 1964.[19] The structure was likely used as storage during this time.

13 Skagway Deed Book 10, Pages 254-255, AKDNR.

14 "Thumb Nail Sketches of Skagway's Business Men," *Daily Alaskan*, January 1, 1918.

15 "Skagway's Business Men;" *Alaska-Yukon Gazetteer and Business Directory*, R. L. Polk & Company, Seattle, WA, 1915-1916, 488.

16 *Ibid*, 565.

17 Sanborn Fire Insurance Map Company, Skagway, Alaskan Territory, Fire Insurance Map, Map corrected from data furnished by Pacific Fire Rating Bureau (New York: Sanborn Map Company, 1948).

18 Skagway Deed Book 14, Pages 53-55, AKDNR.

19 Only the Rapuzzis are listed as grantees on deeds from 1953. However, the McGuanes are listed as grantors on the deed transferring ownership to Malcom A. Moe. The Cultural Resource Study conducted for the building's relocation, states the Rapuzzis and McGuanes paid taxes on the structure from 1955 to 1965. Skagway Deed Records, Book 14, Pages 53-55, AKDNR; Skagway Deed Records, Book 15, 346, AKDNR; Cooper, 11.



Figure 6.7: Detail of the September 1914 Sanborn Map showing the Frye-Bruhn Meat Retail Market building labeled "Meat," situated west of Broadway on the south side of 5th Avenue (marked by red arrow). Note that the building is labeled "ice machine elec. motor." This was in close proximity to the Frye-Bruhn Cold Storage Building which was situated in the next block of 5th Avenue to the east. (Sanborn Fire Insurance Map of Skagway, Alaska, Sheet 4, September 1914, Library of Congress, Washington, D.C.).

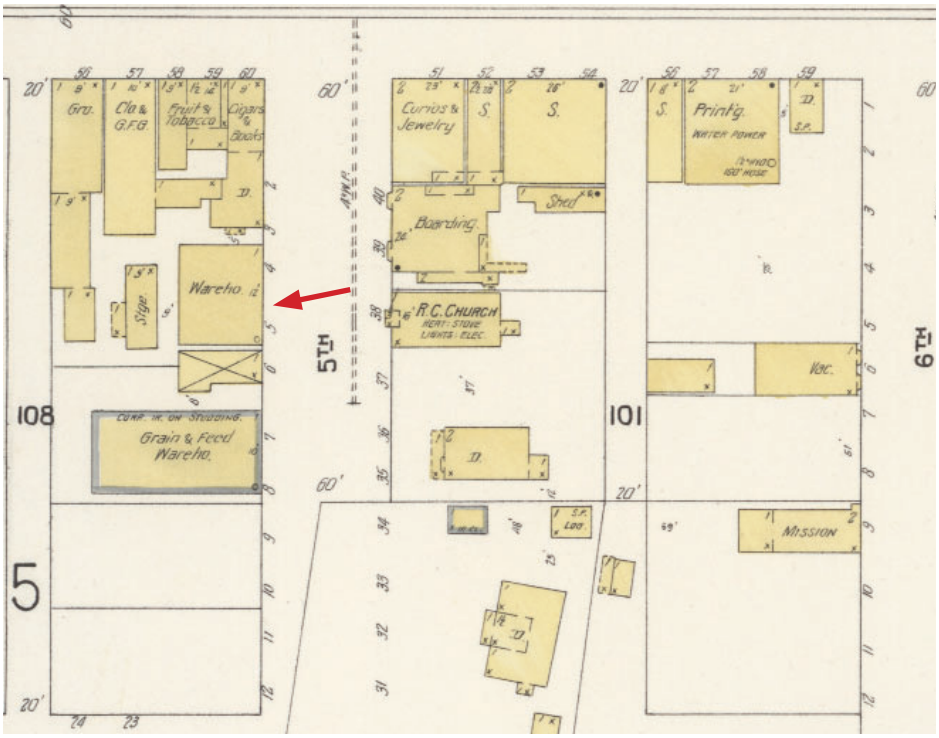


Figure 6.8: Detail of the September 1914 Sanborn Map with a red arrow pointing to the Frye-Bruhn Cold Storage Building on the south side of 5th Avenue. Note that the false front addition to the west is included in the footprint of the structure and that the building is marked as a warehouse. (Sanborn Fire Insurance Map of Skagway, Alaska, Sheet 5, September 1914, Library of Congress, Washington, D.C.).

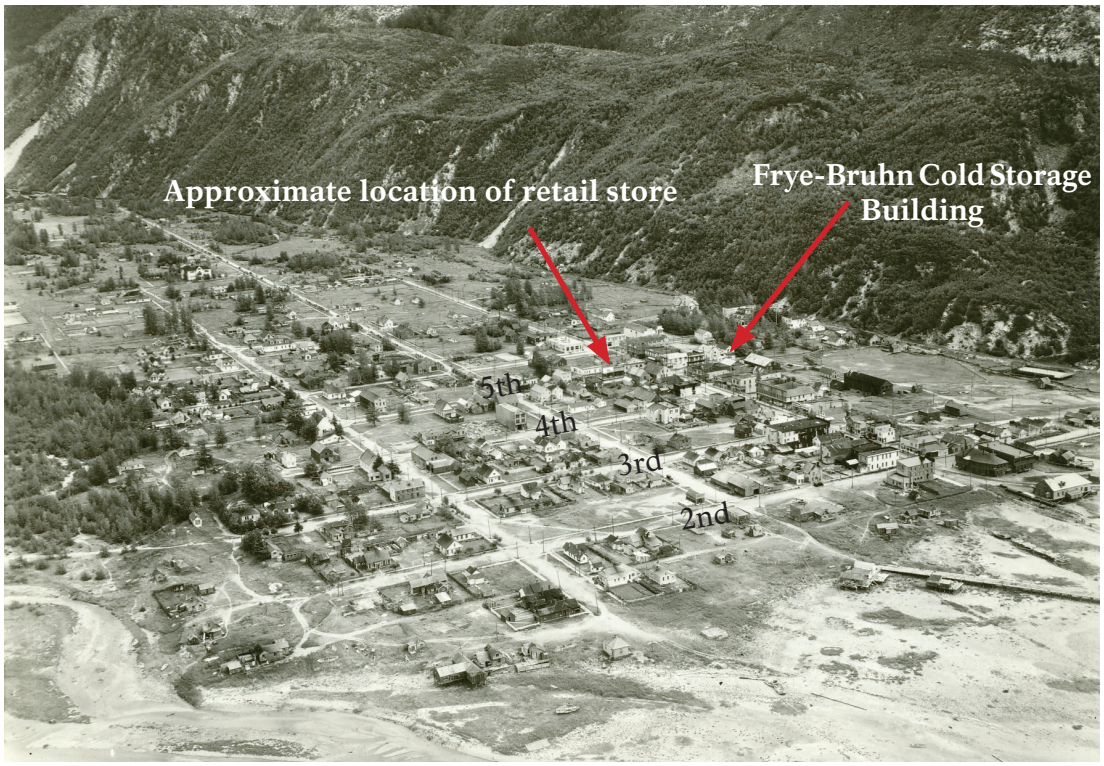


Figure 6.9: A 1929 aerial photograph of Skagway with labels and arrows added by authors. (Aerial Photograph [Photograph]. United States Forest Service FS Z38b).

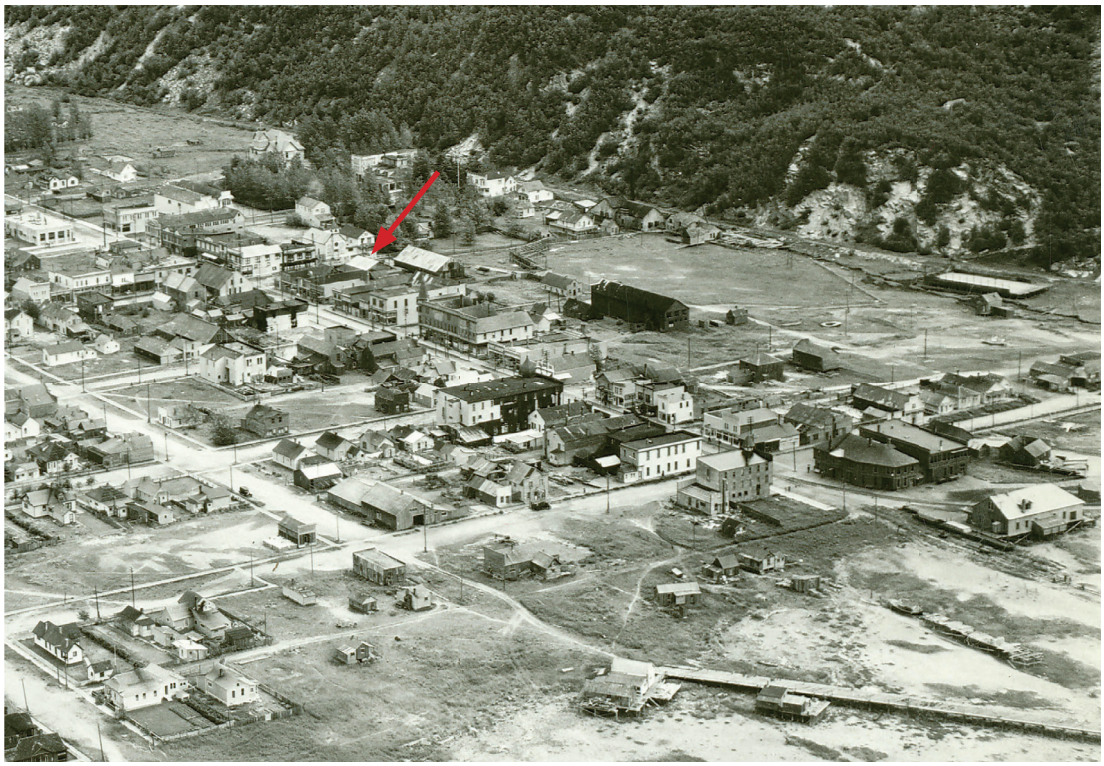


Figure 6.10: Detail of 1929 aerial photograph of Skagway with red arrow indicating the Frye-Bruhn Cold Storage Building (Aerial Photograph (Detail) [Photograph]. United States Forest Service FS Z38b).

1964 - 2004

Malcolm A. Moe and his estate owned the building from 1964 to 2004. A 1967 photograph shows the structure without the false front addition to the west (Figure 6.12). It is unclear when the false front was removed. A photograph from August 1979 shows the north façade with freight doors, attic vent, double window sash, trim around the openings, and a metal roof (Figure 6.13).

2004 SALE

Malcom A. Moe's estate sold the building to Chaak, LLC, owned by Andrew Knorr, in 2004.[20] Knorr donated the building, but not the lot, to Klondike Gold Rush National Historical Park shortly after with the understanding that the National Park Service would relocate the building.

2004 RELOCATION

In one long day, on May 29, 2004, NPS contracted with Hamilton Construction to move the building onto NPS property on the north side of 5th Avenue (Block 24, Lot 9) to protect it from demolition (Figures 6.14-6.17). The Municipality of Skagway donated $10,000 toward the cost of the building relocation.

2006 VALUE ANALYSIS STUDY

Klondike Gold Rush National Historical Park, with subject matter experts from the NPS Regional Office in Anchorage, conducted two Value Analysis (VA) studies in 2006 and 2009 to explore rehabilitation and siting options for the Frye-Bruhn Cold Storage Building. The first VA was conducted on July 11-12, 2006 and considered four site alternatives including 1) the Peniel Mission garage site, 2) the temporary location at the time of the VA but turning it 180 degrees to face 5th Avenue, 3) the former location of the Goldberg Cigar Store facing 5th Avenue, and 4) a vacant lot west of the Pantheon Saloon where the NPS dormitory now stands. The Peniel Mission site was eliminated from consideration early in the study due to the lack of historic context and potential impact on the Moore Cabin and House. The remaining three sites were evaluated through the Choosing by Advantages (CBA) process and the site west of the Pantheon Saloon was selected as having the greatest value to the National Park Service and the project stakeholders.[21]

The four advantages of the Pantheon site included:

- Most positive effect on the historic context and landscape
- Good potential for visitor and education opportunities
- Mostly positive effect on adjacent properties
- Reasonable ease of implementation

20 Skagway Deed Records, Record Number 000095, 2004, Plat Search, Recorder's Office, Alaska Department of Natural Resources, http://dnr.alaska.gov/ssd/recoff/search/docdisplay?District=111&SelectedDoc=20040000950.

21 Bradley A. Richie, Value Study Facilitator, Value Analysis Study: Ice House [Frye-Bruhn Cold Storage] Location (Skagway, AK: Klondike Gold Rush National Historical Park, National Park Service, 2006), 3.



Figure 6.11: Detail of the October 1948 Sanborn Map showing the Frye-Bruhn Cold Storage Building (marked by red arrow) and the stable adjacent that had been damaged by fire. (Sanborn Fire Insurance Map of Skagway, Alaska, Sheet 5, October 1948, Library of Congress, Washington, D.C.).



Figure 6.12: Fifth Avenue from Broadway, looking east, Summer 1967. This photograph shows 5th Avenue east of Broadway with the Frye-Bruhn Cold Storage Building behind the walking men (marked by red arrow) south of 5th on Block 25. (Courtesy of National Park Service, Klondike Gold Rush National Historical Park).



Figure 6.13: View of the building looking south, August 1979. Note the windows, freight door and attic vent, and metal roof. (Courtesy of National Park Service, Klondike Gold Rush National Historical Park).



Figure 6.14: The building on November 3, 2003, taken by NPS as a part of a condition assessment by Historical Architect Grant Crosby from the Alaska Regional Office.



Figure 6.15: The Frye-Bruhn Cold Storage Building placed on jacks to prepare for relocation in 2004.

2009 VALUE ANALYSIS STUDY

A second VA was conducted in March of 2009 although the final report was not found while preparing this HSR. The available information indicates the second VA was prompted by new leadership at the park and included the same three sites from the 2006 study. Similar to the 2006 VA, the lot west of the Pantheon Saloon was selected as the most appropriate location for the Frye-Bruhn Cold Storage Building. Three site plans from this VA are included in Appendix J.

Also in 2009, the park hired Cultural Resource Specialist, Doreen Cooper, to research the history of the locations cited in the Value Analysis. Her report, Cultural Resource Study: Relocation of Frye-Bruhn Company Refrigerated Warehouse Building was submtted on March 2, 2009. The full report is included in Appendix I.

2019 HISTORIC STRUCTURE REPORT

On September 19, 2019, the National Park Service contracted with FFA Architecture & Interiors through an Indefinite Delivery, Indefinite Quantity (IDIQ) contract to prepare Historic Structure Reports for four buildings in Klondike Gold Rush National Historical Park, one of which was the Frye-Bruhn Cold Storage Building. The HSR was partially completed on June 2, 2023 and at that time, the Frye-Bruhn Cold Storage Building remained in the same location since 2004 when it was donated to the National Park Service. Subsequent studies have considered a variety of uses but the lot west of the Pantheon Saloon now supports the NPS dormitory. The most current plan is to site the building nearly in its existing location to front the alley aligning with the Alaska Street and Kitty Faith Cribs. The proposed use for the existing building is to support the Chilkoot Trail Center and the one-story false front building will be reconstructed to provide office and storage space for the park's Visitor and Resource Protection division.

2008-2012

Preliminary reserach related to the history of the Frye-Bruhn Cold Storage Building was initiated by Bob Lyon during his 4-year a term Historian position with the Cultural Resources Team in Alaska Regional Office. The Historic American Buildings Survey (HABS) documentation was completed by University of Oregon Historic Presrvation and Architecture students Tara Ikenouye, Michelle Chircop, and Haruna Madono. HABS AK-224 (Appendix B).

On May 14, 2008, NPS signed a Requisition (DI-1) with Bettisworth North Architects under Contract 991704A035 to complete several structural engineering projects in Klondike Gold Rush National Historical Park. Developing structural design drawings for the Frye-Bruhn Cold Storage Building, including a new foundation, was included in the scope. Structural Engineer, Troy Feller, P.E. with BBFM Engineers stamped the design drawings on July 28, 2009.[22]

22 These drawings are located in the park's curatorial archive and digitally on the "S" Drive in the Buildings and Locations folder.



Figure 6.16: Building placed on rollers for relocation in 2004. Note the Goldberg Cigar Store and Confectionery had to be removed temporarily from its location to provide access for the Frye-Bruhn relocation. The Goldberg was returned to its location following the project but was relocated to Broadway Street in 2014. (Courtesy of National Park Service, Klondike Gold Rush National Historical Park).



Figure 6.17: The building after its move to its current location facing the alley between 5th and 6th Avenues in Skagway, adjacent to the Moore Homestead site. June 20, 2004. Photographer, David H. Curl, NPS-KLGO. (Courtesy National Park Service, Klondike Gold Rush National Historical Park).

2010 STABILIZATION PROJECT

In 2010, NPS stabilized the roof on the building which was designed using a prefabricated truss configuration matching the form of what existed but was compromised due to a fire in the building's history. The design incorporated plywood to provide a shear diaphragm in the roof but restored the appearance of skip sheathing at the eaves and rake. This project also included adding structural supports inside the building and vertical supports at the west elevation (Figure 6.18).

2019

On June 17, 2019, the National Park Service signed an Indefinite Quanity/Indefinite Delivery (IDIQ) with RIM Architects, LLC to develop schematic landscape designs for the building. Landscape Architect, Chris Mertl with Coruvs Design Landscape Architecture, produced a schematic site plan with input from KLGO Resources Manager, Annie Matsov, KLGO Chief Ranger, Karl Sommerhauser, and Alaska Regional Office (ARO) Historical Architect, Grant Crosby. The final drawing was completed on February 19, 2020 (Appendix H).

2022

In 2022, Rachel Lanier Taylor started researching for the HABS history of the Frye-Bruhn Cold Storage Building. At the time of completing this document, the HABS history is still in draft format. HABS AK-224.

Architectural Design drawings were initiated several times during the decade of 2010 to 2020 by Alaska Regional Office Historical Architect, Grant Crosby, but changes in staffing and evolving priorites prevented them from being finalized. In 2022, with programming assistance from KLGO Resources Manager, Annie Matsov, and KLGO Chief Ranger, Kark Sommerhause, the design was advanced again with the incorporation of the shed roof addition on the west elevation. The building would serve as the Chilkoot Trail Center and administrative offices for the Visitor and Resource Protection team.

2023

On September 25, 2023, the National Park Service signed an Indefinite Quanity/ Indefinite Delivery (IDIQ) contract[23] with Stantec Consulting Services Inc. to update the 2009 structural design drawings produced by Troy Feller. The revisions were necessary to incorporate the shed roof addtion planned for the west elevation of the building which was not included in the design in 2009. Stantec's consulting engineer, Jeffrey S. Schalk, P.E., with JVA Consulting Engineers stamped the drawings on December 6, 2024.[24]

2024

Architectural Design drawings were initiated again in July 2024 with assistance

23 Stantec Consulting Services Inc. IDIQ contract number 140P2022D0018 and Task Order number 0040639988.

24 These drawings are located in the park's curatorial archive and digitally on the "S" Drive in the Buildings and Locations folder.

from Great Basin Institute (GBI) cooperator, Phebe Davis, who worked with Alaska Regional Office Sr. Historical Architect, Grant Crosby. Phebe Davis also worked with former KLGO employee, Annie Matsov, and Grant Crosby to prepare the final draft of this Historic Structure Report as well as three other HSRs for the park. The architectural design drawings are at the 85% level of completion at the time of this writing.



Figure 6.18: The building in August 2019. Photograph shows the current north and west elevations of the Frye-Bruhn Cold Storage Building and was taken from the alleyway between 5th and 6th Avenues, east of Broadway. (Library of Congress, Historic American Buildings Survey HABS AK 224-03).

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7. Character-Defining Features

SITE

This building has been moved within Skagway; therefore, there are limited site character-defining features.

- Flat parcel
- Front elevation sited to face street (alley)

EXTERIOR

- Rectangular building form and medium pitched roof
- One-story building with attic under gable
- Rectangular plan
- Raised foundation with ramp or loading dock access on north side (was always somewhat raised, but not as tall as it is now with the cribbing under for support); wood floor joist (deteriorated)
- Front facing gable roof with a 6:12 slope
- Roof rafter tails visible at east and west roof overhang
- Gable ends with 11" overhang and simple wood fascia boards, whereas the east gable has no trim at line of gable
- Attic louvers at north and south gable ends with flat stock trim and six angled wood slats
- Metal roofing over skip sheathing
- 9 1/2" thick exterior walls with sawdust insulation
- Rough sawn wood shiplap exterior sheathing measuring 3/4" x 7 1/4"
- Unfinished outer layer of Douglas fir horizontal shiplap wood siding measuring 3/4" x 5 1/2" (Profile 105 - Western Wood Standard Patterns) with a 4 3/4" exposure on lower courses and V-rustic 3/4" x 5 1/2" (Profile 137- Western Wood Standard Patterns) on the west elevation

- Two layers of unfinished Douglas fir horizontal shiplap siding measuring 3/8" x 7 1/4" on north, south, east elevations
- Unpainted, 3/4" x 4 1/2" vertical wood trim at corners
- Double freight doors opening at west end of front (north) façade
- Single window opening at east side of north wall with header that aligns with freight doors and flatstock trim
- Four identical window openings on the east wall, with headers aligned horizontally and flatstock trim
- Single window opening at east side of south wall with header and flatstock trim
- All window openings have paired wood sashes with vertical muntin

INTERIOR

- Room configuration with L-shaped hallway running along the west and south walls and two cold storage rooms at the northeast portion of the building
- 9 1/2 interior wall cavities insulated with sawdust
- 3/4" x 7 1/4" horizontal interior shiplap wall cladding
- Canted jambs and 1'-2" x 4" industrial iron strap hinges that held doors
- 1 3/4" x 5" rough sawn Douglas fir tongue-and-groove flooring, laid perpendicular to ridge
- Vertical nominal 2x4 wood supports suspended from the ceiling joists in the larger refrigerated storage room that likely supported the metal trolley track system
- A single doorway into each refrigeration room from the west hallway
- Thickly-insulated cold storage refrigeration room doors with metal handles and iron hinges
- Extant refrigeration coils and associated mechanics in the central cold storage room
- Fan at south wall of central cold storage room
- Extant refrigeration pump and valves in the southwest corner of the structure with lines connecting into the central refrigerated storage room
- Extant refrigerant mechanical systems, including steel piping, fittings, and valves located on north and south walls of central refrigerated storage room



Figure 7.1: Simple building form, rectangular in plan.



Figure 7.2: Unpainted exterior horizontal shiplap siding and ghosting of vertical corner boards.



Figure 7.3: Four identical window openings on the east wall, showing flatstock trim and aligned with headers and sills.

- Wood slat attic ladder along east wall of hallway just inside main freight door entry

- Overhead metal trolley system running from the exterior to the hall and into the two interior cold storage rooms.

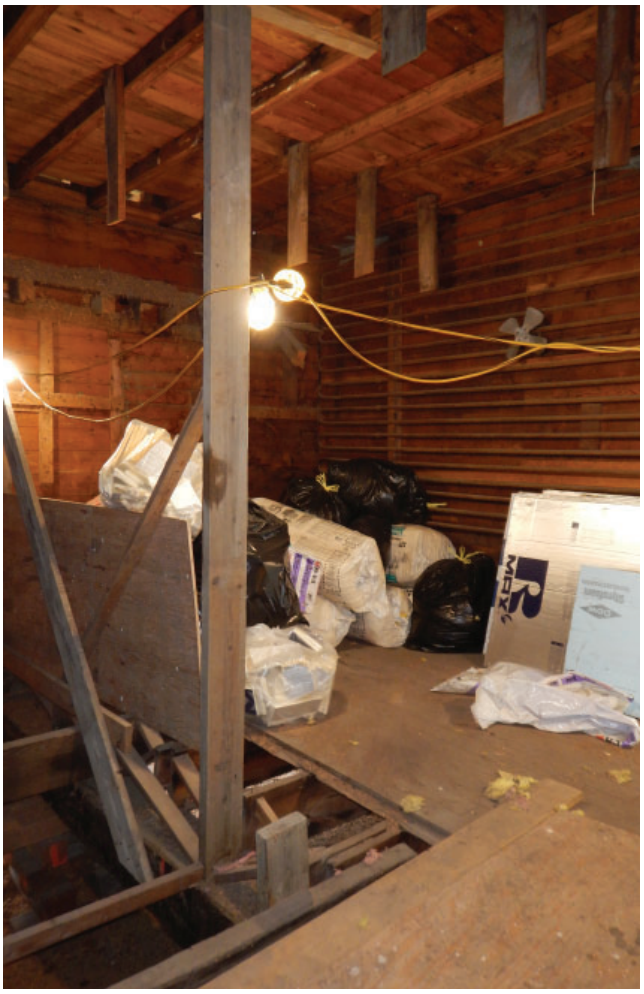


Figure 7.4: Central refrigerated storage room showing vertical boards hung from ceiling joists that supported the meat trolley.



Figure 7.5: Douglas fir tongue-and-groove flooring.



Figure 7.6: Refrigeration coils running along north wall of central refrigerated storage room.



Figure 7.7: Overhead meat trolley system that runs through interior door opening of central refrigerated storage room.

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8. Condition Assessment

INTRODUCTION AND METHODOLOGY

SURVEY METHODOLOGY

In 2003, NPS Senior Historical Architect, Grant Crosby[1], visually assessed the physical condition of the Frye-Bruhn Cold Storage Building and wrote a preliminary condition assessment. His efforts were documented in the *Preliminary Condition Assessment, Ice House [Frye-Bruhn Cold Storage], Skagway, Alaska*. The Frye-Bruhn Cold Storage Building was visually surveyed again during a site visit conducted on August 10, 2020 by FFA Architecture and Interiors staff in conjunction with architecture + history, llc. The survey methodology for the structure involved visual observations conducted at the ground level of building exteriors. Interior spaces were also inspected during the August 2020 site visit. Investigative techniques were conducted using non-destructive methods and tools. Historic research and resource inspections informed the descriptions and conditions assessments presented below.

CONDITION DEFINITIONS

The condition of the building elements that were evaluated are categorized in a good, fair, poor rating systems, defined as:

Good – The building or structure element or feature appears to be functionally and structurally sound and exhibits only minor wear and tear or minor deterioration of surfaces. Repair or rehabilitation is not required; however, routine maintenance will ensure continued good condition.

Fair – The building or structure element, feature, or components of the feature show signs of aging, deterioration, and possible future failure. While the element or feature is still structurally adequate, corrective maintenance and repair is required within a moderate period of time (approximately 3-5 years).

Poor – The building or structure element shows extensive deterioration, is missing, or shows signs of imminent failure if corrective action is not immediately taken. Major corrective repair or replacement is required. Applicable laws, codes, regulations, and other requirements must be considered before any rehabilitation work can begin. The work must be in conformance with applicable federal regulations and codes, including executive Orders, National Park Service Management Policies, and Director's Orders. Local building codes are often applied during NPS rehabilitation projects to respond to geographic, climatic, and site-specific jurisdictional criteria relevant to a project's location.

1 In 2003, KLGO Resources Manager, Theresa Thibault, requested technical assistance from the Alaska Regional Office's National Register Program team Historical Architect, Grant Crosby, to assess what was then referred to as the "Ice House." Following his site visit in December 2003, Crosby prepared his report titled *Preliminary Condition Assessment with Recommendations for Treatment: The Ice House*.

BUILDING ACCESSIBILITY

The Frye-Bruhn Cold Storage Building is east of Broadway Street, between 5th and 6th Avenues with its north (front) elevation facing the alley. Since NPS moved the structure to its current site in 2004, the building has been boarded up and not used or occupied. It lacks an entrance that connects the north entrance to the wood plank boardwalk that runs across the building's lot (Figure 8.1). The building is currently elevated with approximately 3'-0" to 4'-0" of height difference from grade to the finished floor. There is no accessible entry into the structure. Access to the building is currently provided via a removable ladder.

EXTERIOR CONDITIONS

STRUCTURAL SYSTEMS

The Frye-Bruhn Cold Storage Building is currently supported by five 12" x 12" wood beams oriented east-west which bear on wood cribbing installed when the building was relocated to its current location in 2004 (Figure 8.2). The existing foundation system stabilized the building after its relocation and was intended to be a temporary solution until the rehabilitation project was initiated. Plywood wraps around the building's foundation to provide some level of weather protection and security, though cribbing and floor framing are partially exposed on all elevations.

Wall framing consists of 1 1/2" x 9 1/2" wood studs spaced 24" on center. Exterior wall studs are clad on the interior resulting in a 9 1/2" stud cavity that originally was filled with sawdust to provide insulation (Figure 8.3).

Floor framing consists of 1 3/4" x 13 1/2" wood joists spaced approximately 24" on center. Space between joists is enclosed beneath with shiplap decking, measuring 3/4" x 7 1/4" and running perpendicular to the joists. The shiplap decking rests on 1" x 3 1/2" ledger boards attached flush with the bottoms of the floor joists. The voids between the joists and shiplap decking were originally filled with sawdust for insulation.

The layers of flooring include 1 3/4" x 5" Douglas fir shiplap subsheathing, running east-west, topped with 1 3/4" x 5" tongue-and-groove flooring also running east-west.

Intact ceiling joists measure 1 3/4" x 11 1/2" spaced 24" on center and are oriented perpendicular to the roof's ridge. In addition to the structural ceiling joists, 1" x 3 1/2" wood boards are sistered to the remaining ceiling joists to provide a ledger for 3/4" x 7 1/4" shiplap attic boards which supported sawdust insulation. The roof truss members were replaced by NPS in 2010 (Figure 8.4). The wood truss system incorporates 1 3/4" x 5 1/2" top and bottom chords and 1 1/2" x 3 1/2" web material spaced at 24" on center. Roof trusses span the entire structure east-west and are supported by 1 1/2" x 9 1/2" top plates anchored to the top of wall framing. Roof sheathing concealed in the attic is 3/4"plywood with in kind replacement of 3/4" x 3 1/2" skip sheathing, approximately 16" on center, is exposed at the east and west roof rakes. The roof is covered with 1/2" corrugated metal roofing.



Figure 8.1: The building's primary entrance is on the north elevation but is not connected to the nearby boardwalk.



Figure 8.2: Temporary cribbing supporting wood beams.



Figure 8.3: Exposed floor cavity between joists with extant sawdust insulation seen from building interior.



Figure 8.4: New roof trusses installed by NPS in 2010.



Figure 8.5: Severe decay on stud ends.



Figure 8.6: Sistering of existing floor joists to provide stabilization during the 2004 move.

Condition

The overall condition of building elements of the Frye-Bruhn Cold Storage Building is poor. The structural integrity of the building is compromised due to severe deterioration of wood components (from prolonged contact with the ground in its former location across from 5th Avenue) and damage from the 2004 building relocation. The load paths are discontinuous and floor and wall framing is fragmented. Exterior walls without cladding are exposing wall and floor framing to solar radiation and moisture. In some locations, the exterior siding is charred from past fire damage (Figure 8.5).

Floor joists are sagging between floor beams with evidence of wood rot and warping that is most pronounced at the south elevation. In some places, floor joists have been sistered in-kind for structural support and intact floor framing members are charred (Figure 8.5). Floor joists have visible decay and deterioration due to direct soil contact and prolonged moisture exposure prior to and after relocation. All floor joists and flooring are missing from the north refrigerated storage room are partially missing from the central refrigerated storage room (Figure 8.6). Floor joists and temporary cribbing are visible where floor boards are missing in the L-shaped hallway, increasing the potential for animal intrusion into the building.

The wall studs appear to be in fair condition above the finished floor but are severely decayed and deteriorated below the finish floor where they were exposed to soil (Figure 8.8). Wall stud ends at the east and west exterior walls are suspended from temporary rim joists without direct support from below. Existing wall studs on the north and south elevation have been sistered with new and salvaged wood material in locations where the extant wall studs are deteriorated; the sistering provides a load bearing connection directly back to the floor beams.

Roof framing was replaced in 2010 and is in good condition. Efforts to stabilize the building, including the addition of the sistered studs and floor joists, have been proven successful but the long-term structural integrity of the building should be prioritized in any treatment strategy.



Figure 8.7: Charred floor joists (foreground) and deteriorated floor joists (behind).



Figure 8.8: A wall stud end with significant deterioration seen below the finished floor. Note it does not bear on the floor beam for structural support.

ROOF

The roof, including the truss system installed by the NPS in 2010, is currently covered with corrugated metal (Figure 8.9). The gable roof has a slope of 6:12. The ridge of the roof is capped with corrugated metal sheets. North and south gable ends have minimal roof overhang and sections of missing barge boards at the roof edge. The corrugated metal roof is supported by 3/4" plywood where concealed in the attic. The 2010 structure design intentionally restored the 3/4" skip sheathing where exposed at the exterior of the roof. The skip sheathing extends 6" past the exterior walls at the north and south end (Figure 8.10). East and west eaves have exposed rafter tails with plumb-cut ends (Figure 8.11). There are no penetrations, flashings, gutters, or downspouts on the building.

Condition

Overall, the roof is in good condition without any visible surface damage, water intrusion, or leaking. There are no gutters or downspouts on the building, which may contribute to excessive rain splashback onto lower areas of exterior walls (when not on cribbing). Eaves, including rafter tails and skip sheathing, were difficult to visually assess due to the height of the building.

EXTERIOR WALLS

Wood-framed exterior walls are clad in untreated Douglas fir horizontal shiplap siding (Figures 8.12 and 8.13) Exterior siding on the north, east, and south elevations measures 3/8" x 7 1/4"(Profile 105- Western Wood Standard Patterns, Appendix G). The west elevation has an additional layer of exterior cladding on top of the exterior siding seen on the other exterior walls. The outer layer of siding on the west wall is horizontal Douglas fir lap siding that measures 3/4" x 5 1/2" material (Profile 105- Western Wood Standard Patterns, Appendix G) with a 4 3/4" exposure on lower courses and a V-rustic 3/4"x 5 1/2" material (Profile 137- Western Wood Standard Patterns, Appendix G) on the upper courses (Figure 8.12). A layer of fibrous building paper is extant between the two layers of siding on the west elevation.

The exterior siding extends from above the wood floor beams to the top plate on the east and west elevations and from above the floor beams to the underside of the roof sheathing on the north and south elevations. The lowest siding boards are either missing or severely deteriorated (Figures 8.13-8.16). Corner boards are intact on the north (front) elevation, with five randomly spaced 2" diameter pipe railing receivers on the northeast board. The purpose of the receivers is unknown. (Figure 8.10). All exterior wood cladding and trim is unpainted, lacking a protective finish. Large attic vents are located at the gable ends and are covered with corrugated sheet metal. Several porcelain insulator knobs are intact above a former entry door on the south elevation.

Condition

Exterior walls are in poor condition with the most significant material loss and damage occurring on the south and east elevations (Figure 8.14). Numerous issues were identified, including the deterioration and weathering of exterior siding due to moisture and photodegradation from ultraviolet (UV) exposure. Cyclic wetting and drying, freeze-thaw, UV exposure, and wind have all contributed to the wood siding damage. Checks and splits from prolonged moisture infiltration are consistent throughout the exterior siding and sheathing boards.

Entire sections of wood siding are missing and fire damage on the east and



Figure 8.9: Corrugated metal roof installed by the NPS in 2010.



Figure 8.10: Skip sheathing seen under the eave at the north elevation. Also shown are pipe railing receivers on the corner trim. Their use is unknown.



Figure 8.11: Exterior siding charred by a fire (date unknown) and exposed, plumb cut rafter tails at the east roof edge.



Figure 8.12: Shiplap wood siding on the west elevation.



Figure 8.15: Severe fire damage on east elevation of building.



Figure 8.13: Horizontal shiplap siding and wood trim on the north and east elevations.



Figure 8.16: Exposed structural framing and sistered wall studs on south elevation.



Figure 8.14: Significant material loss of siding and sheathing on south elevation.



Figure 8.17: Primary entrance on the north elevation. Double freight doors are housed inside the structure.

northeast upper corner of the building has charred the surface, resulting in a loss of materials that extends into the interior (Figure 8.15) Deterioration, splitting, and surface gouges were detected on wood siding boards throughout the exterior. Lower boards, once in direct contact with soil, have visible rot and decay. The extent of material loss, including siding and sheathing on the south elevation, is severe, exposing underlying structural framing components (Figure 8.16). Openings on the south elevation have been covered with plywood or corrugated metal that is significantly rusted.

Protruding nails from cyclic wetting and drying are seen consistently throughout the exterior cladding; fasteners are rusted due to corrosion. The building paper between exterior siding and subsheathing is exposed to the elements in certain locations, causing the thin paper to disintegrate. There is no evidence left to indicate that the shiplap siding on the north, east, and south walls was painted. The exterior siding on the west elevation has evidence of white paint that is significantly weathered and faded. Since this side of the building once had a false front addition, it is likely that these boards may have been salvaged from another building. Prolonged exposure of exterior wood surfaces without protective coatings has resulted in deterioration that ranges from moderate to severe. Plywood boards currently fastened to cribbing to protect the foundation on the east side are wet and do not provide adequate protection from snow and rain.



Figure 8.18: Extant exterior door showing metal handle, excelcior insulation, and canvas wrap.

DOORS

The double, wood freight doors that were originally located on the north elevation and provided entry into the building have been removed from the frame and are currently stored in the building's interior (Figure 8.17). Each door leaf measures 2'-11" wide by 7'-1" high and is constructed of 2x4 lumber clad with 3/4" x 3 1/4" vertical tongue-and-groove Douglas fir on the exterior face and matching boards laid horizontal on the interior face. Doors are lined with canvas fabric that is wrapped around door edges and nailed into wood cladding (Figure 8.18). The attached fabric provided a seal between the door edge and frame to maintain cold temperatures in the interior of the building. Organic material (excelcior) that provided insulation between the door frame lumber and its cladding is visible in gaps at the door edge. Intact hardware consists of a metal pull handle and brackets on each door leaf that were hung from large, industrial strap hinges bolted to the door, and a hasp hatch lock. The extant metal sliding bar which originally locked and secured the doors was not assessed.



Figure 8.19: Interior view of door opening and framing at south exterior wall.



Figure 8.20: The interior of the east leaf of the exterior freight doors, showing the butterfly metal hinges and weathered horizontal tongue-and-groove planks.



Figure 8.21: The exterior vertical tongue-and-groove boards of an exterior door showing extant rusted hardware.

Exterior trim consists of flatstock casing at header and jambs. Trim above the door head is much wider than trim at the jambs and the length of the board extends beyond the jamb trim width. The door trim does not properly join at corners and does not appear to be original. Electrical wiring and a light socket are visible from a hole in the north wall exterior siding directly above the door. Lumber attached to the exterior wall below the hole and the extant wiring potentially served as a mounting board for track and trolley components seen in historic photographs (Figure 6.6). A wood threshold is located at the door opening.

On the south wall, two side-by-side rough door openings measuring approximately 2'-2" x 6'-11" likely provided interior access to a gable roofed addition seen on the earliest photographs of the structure (Figures 6.1-6.4). Doors to these entrances are no longer extant; however, the narrow openings and framing remain intact. The opening near the southeast corner of the building is currently covered with plywood (Figure 8.19).

Condition

An in-depth condition assessment of the two freight doors from the north entrance and the interior doors into the refrigerated storage rooms can be found in the 2023 "*Condition Assessment & Treatment Plan for the Refrigeration Coils, Meat Trolley, and Cold Storage Doors inside the Frye-Bruhn Cold Storage Building*" by Nicole Peters, Conservator, from the NPS Harpers Ferry Center (Appendix E). In general, the doors were collectively evaluated to be in poor condition with, "splits in wood structure, pest damage, unstable and missing textile components, exposed and shedding interior material, corrosion on metal components, and compacted soiling, dust, and debris accumulation."[2] The entry threshold is worn and gouged with a split running midway down the length of the wood board.

WINDOWS

Existing window openings are covered with plywood on the exterior, though historic photographs indicate the building's historic windows consisted of wood-framed openings with stile-and-rail fixed wood sashes with two lites separated by a vertical muntin (Figures 8.22 and 8.23). The building has a total of six window openings on the exterior: one on the north and south elevations and four on the east elevation. A single window opening on the west elevation is covered by exterior drop siding that was added later and is only

2 Peters, 29.



Figure 8.22: Existing window openings on the east wall covered in plywood on the exterior.



Figure 8.24: Detail of the bottom rail of a window sash.



Figure 8.23: Typical wood sash with a vertical muntin.



Figure 8.25: Past moisture staining on interior window frame and trim.

visible in the interior. The north window sash and trim casing was removed prior to the building's relocation in 2004. The window openings have flat trim casing at the head, jambs, and sill that measure 3/4" x 5 3/8" Horizontal tongue-and-groove wood boards cover window sashes in the interior. It's believed that the window openings had double sashes to add insulation value to the refrigerated structure.

Condition

Wood sashes, sills, and trim are in fair to poor condition. Board coverings have protected the wood windows (exterior plywood, installed by NPS in 2004; interior horizontal boards, installation date unknown but prior to 2004), though the condition of all sashes was not determined and it is unknown if all wood glazing components are intact (Figure 8.24). In general, sashes are intact with missing glazing and wood muntins, fire damage, and staining from former moisture damage. Intact window casings are weathered with moderate to severe fire damage, depending on location. Wood boards covering sashes in the interior were reused from another site and were likely stained prior to installation, minor staining on the window frame and trim likely occurred when glazing was missing from the windows (Figure 8.25).

INTERIOR CONDITIONS

The Frye-Bruhn Cold Storage Building is a one-story, utilitarian building with three interior rooms and an attic, accessed by an interior ladder. The rectangular floor plan consists of an L-shaped hallway that runs along the west wall and then the south, terminating in the southeast corner (Figure 8.26). To the east of the hallway are doors leading into refrigerated storage rooms, including a smaller room to the north (10'-0" wide by 18'-6" long) and a larger room (18'-0 wide by 18'-6" long) in the center of the east side of the building (Figures 8.27 and 8.28).

Condition

Though the original floor plan layout has been retained, the interior of the building is in poor condition with severe fire damage, as well as missing and deteriorated wood framing members, ceiling finishes, and floor finishes (Figure 8.29). Despite severe fire damage and deterioration of materials, many interior character-defining features of the building, including the use of interior wood finishes, thick walls, and plan layout, remain intact and are in fair condition. Other interior features, including the mechanical refrigeration system, large insulated cold storage doors, and the overhead trolley system remain with significant portions intact (Figure 8.30).

WALLS

Interior walls are 11 1/4" thich constructed of 9 1/2" wood studs with 3/4" lap sheathing on either side and filled with sawdust in the stud cavity to act as an insulation material (Figure 8.31). There is no wood base trim but door and window openings are trimmed with 3/4" flatstock. Refrigerant mechanical systems, including steel piping, fittings, and valves are located on both the south and north walls of the central refrigerated storage room and the south terminus of the L-shaped hallway (Figure 8.32).

Vertical wood ceiling supports of nominal 2x4 lumber are attached to ceiling joists in the central refrigerated storage room and historically accommodated the suspended meat trolley system.

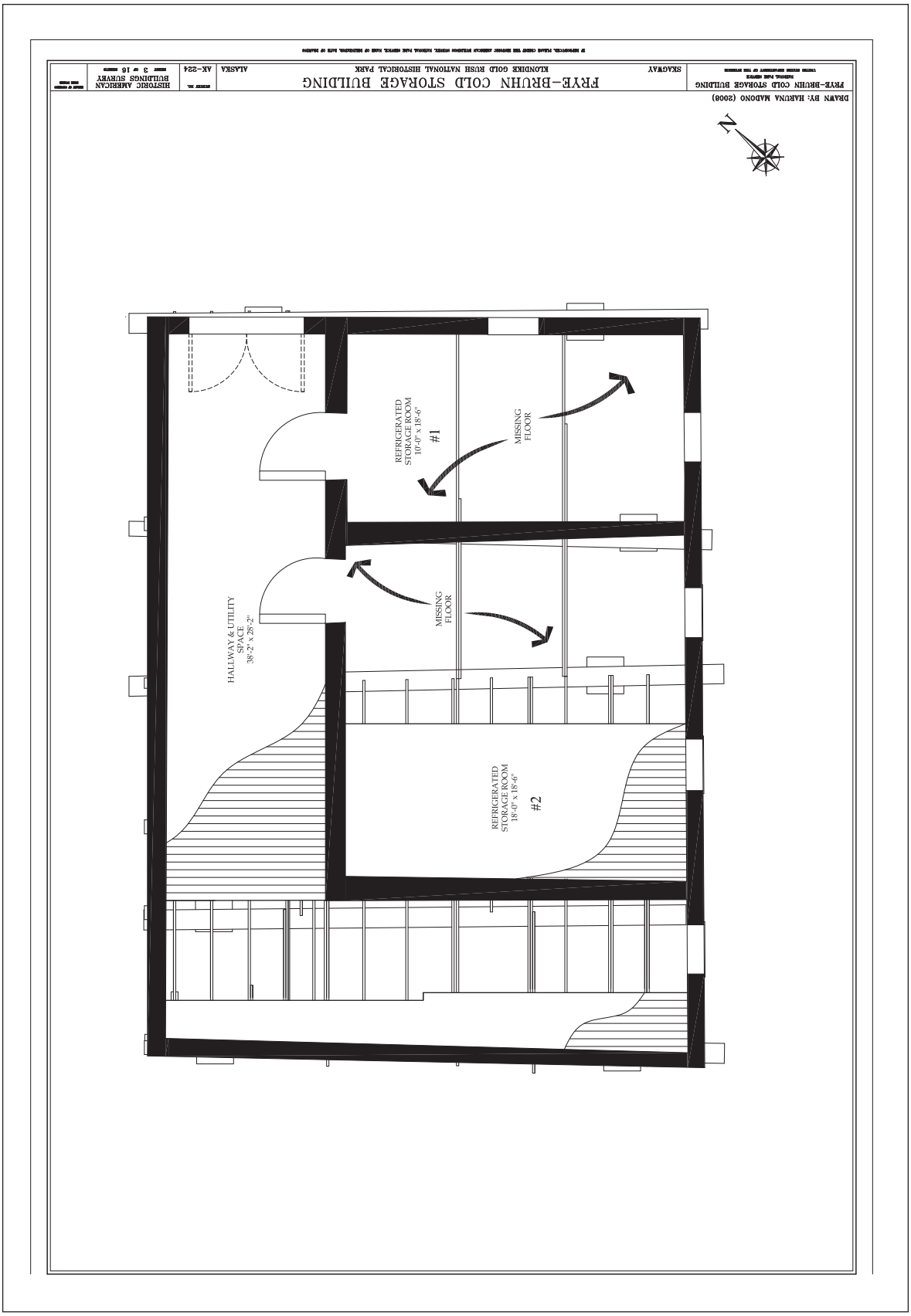


Figure 8.26: Floorplan of Frye-Bruhn Cold Storage Building. Historic American Buildings Survey AK-224. Delineated by Haruna Madono, 2008. Sheet 3 of 16 (Library of Congress).



Figure 8.27: L-shaped hallway, looking north toward primary entrance. Note door openings to cold storage rooms on right.



Figure 8.29: An exterior electrical meter base was observed in this location and may have contributed to the fire in the 1980s..



Figure 8.28: Central refrigerated storage room. Note the 2x4s suspended from the ceiling which may have supported the trolley.



Figure 8.30: Intact trolley track system and refrigeration coils along north wall of the central refrigerated storage room.

Condition

The interior walls range from poor to fair condition depending on their location and extent of fire damage. Interior sheathing has significant past staining from moisture exposure potentially from condensation or ice accumulation that is consistent throughout the interior, with high concentrations behind refrigeration equipment, such as piping and valves along the south wall and in the cold storage rooms (Figure 8.33). Past moisture stains on interior sheathing appear to be limited to the surface.

The interior wall between the two cold storage rooms is in poor condition with structural issues in the floor assembly below and missing sections of the wall system. Walls in the L-shaped hallway and at the southwest corner of the building have severe fire damage with significant material loss and charring that spans the height of the wall (Figure 8.34).

Consistent with exterior cladding, the bottom interior sheathing boards are severely deteriorated or are missing, exposing the wall studs and other structural members on the building. Sawdust insulation is visible in wall cavities and where large amounts have fallen out onto horizontal wall ledges and floor surfaces.

CEILING

Intact ceiling joists span east to west (perpendicular to the ridge) and measure 1 7/8" x 11 1/2" with an approximate spacing of 24" on center (Figure 8.35). 1" x 3 1/2" wood boards were sistered onto the sides of ceiling joists to provide support for 3/4" x 7 1/4" shiplapboards to contain sawdust insulation in the ceiling. Overhead metal components of the meat trolley track are attached to an overhead beam that is suspended from ceiling joists between the north entrance and central refrigerated storage room (Figure 8.36).

Condition

The original ceiling of the structure, which was attached to the underside of the ceiling joists, is no longer extant and was presumably damaged in the fires and later removed. Some ceiling shiplap boards are missing over the north refrigerated storage room (Figure 8.37). Extant attic ceiling are in fair to poor condition with significant smoke staining and fire damage.



Figure 8.31: Missing interior wall sheathing has exposed the wall stud cavity and sawdust insulation.



Figure 8.32: Entrance and north wall of the central refrigerated storage room with refrigeration coils and overhead meat trolley track.



Figure 8.33: Interior wall at end of L-shaped hallway with staining behind the tank, valved pipes, and connections.



Figure 8.34: Severe damage in the southwest corner of the hallway.



Figure 8.35: Intact ceiling joists spanning east to west with shiplap set between joists to contain sawdust insulation.



Figure 8.36: Meat trolley track attached to overhead beam and running through door header of central refrigerated storage room.

FLOORS

Finish flooring consists of 1 1/2" x 5 1/2" tongue-and-groove Douglas fir floorboards oriented east-west with 1 3/4" x 11" Douglas fir subfloor running in the same direction (Figure 8.38).

Condition

The building's flooring system is in poor condition. In the east half of the building, the finish flooring and sheathing boards are partially missing in the L-shaped hallway and central refrigeration room; the flooring is missing entirely from the north refrigerated storage room (Figures 8.39 and 8.40). Extant flooring material is worn, damaged, and covered with dirt and sawdust debris.

INTERIOR DOORS

Extant interior doors include two pairs of industrial sized insulated doors that initially provided access to both refrigerated storage rooms (Figure 8.41). The doors were removed from their original openings prior to the building's relocation and are currently stored inside (Figure 8.42). The northernmost door, that provided access to the north refrigerated storage room, measures 3'-5 1/2" wide by 6'-10" high. The door to the central refrigerated storage room measures 3'-5 1/2" wide by 7' tall. The width of the door was modified at some point as a seam. The wood doors are clad in 3/4" x 3 1/4" vertical tongue-and-groove Douglas fir on the exterior face and horizontal on the interior face.

The doors are lined with canvas fabric that is wrapped around door edges and nailed to wood cladding to provide a seal between the frame and door for maintaining cold temperatures in the refrigeration rooms. The doors were filled with excelcior to provide insulation. Intact hardware consists of a metal pull handle and brackets on each door leaf. Large strap hinges are bolted to the door. The extant hinges at door jambs measure 1'-2" wide by 4" tall (Figure 8.44).

Interior door casing is intact and consists of flat, wide casing at the header and jambs. A section of the header trim and wall was removed above central refrigerated storage room door to accommodate the meat trolley track (Figure 8.41).

Condition

The interior doors are in fair condition with intact and stable internal structure and exterior boards. The canvas is severely frayed, soiled, and ripped at



Figure 8.37: Missing ceiling boards.



Figure 8.39: Missing floorboards and sheathing along the north and wast wall of the central refrigerated storage room.



Figure 8.38: 3/4" x 3 1/4" tongue-and-groove Douglas fir floor boards.



Figure 8.40: Missing floorboards and sheathing in the north refrigerated storage room.

corners, exposing the excelsior insulation (Figure 8.44). Door hinges and the pull handle are intact with surfaces rusting. The doors are dirty with layers of dust and grime. In addition, the box wood header over the central refrigerated door has been cut completely through from the trolley track potentially compromising the structural integrity of the door frame and upper wall.



Figure 8.41: Doorway between hall and central refrigerated storage room.



Figure 8.43: Bolted door hinge on interior door.



Figure 8.42: Current location of interior doors.



Figure 8.44: Damaged door corner exposing excelsior filling.

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9. Integrity Assessment

The National Register of Historic Places criteria established seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. In order for a property to retain historic integrity, a majority of the seven aspects must be maintained. Assessing the overall integrity of a property assists in measuring the ability of the property to convey its historical significance. Assessing a building's integrity entails understanding the physical features and how they convey significance. The retention of specific elements of historic integrity to the defined period of significance is important when assessing integrity.

Research for a Historic American Buildings Survey (HABS) report and a Draft HSR (2012) preceded the contract for this HSR. All available documentation regarding the history of the building was provided to the HSR team by NPS to prepare this document. Unfortunately, primary and secondary sources associated with the history of the building are limited, particularly photographs of the interior and to a certain extent, the exterior. As a result, it is difficult to ascertain which of the building's character-defining features, especially on the interior, date to the identified period of significance, somewhat limiting the team's ability to fully assess the integrity.

Within the context of the Skagway and White Pass District National Historic Landmark (NHL), the Frye-Bruhn Cold Storage Building retains integrity of design, setting, materials, workmanship, feeling, and association. It does not retain integrity of location as it has been moved multiple times from its original location. The building has never been evaluated individually, but rather as a contributing element of the NHL.

LOCATION

The Frye-Bruhn Cold Storage Building does not retain integrity of location because it has been moved from its original location. It was first moved from near the Skagway wharfs to the east end of 5th Avenue. It remained on 5th Avenue for just over 100 years before it was moved a short distance to its current location across the street. However, it remains within the commercial district of the Skagway and White Pass District National Historic Landmark and is near other district contributors, including other buildings that have been moved within the district boundary.

DESIGN

The building retains integrity of design, as it retains its interior floor plan and most of its exterior openings, its roof shape and form, and enough of its interior refrigeration equipment to convey the design related to its use. It continues to convey its historic character as the only building of this type, cold storage use, within the context of the Skagway and White Pass District National Historic Landmark.

SETTING

The building retains integrity of setting. The commercial district within the Skagway and White Pass District National Historic Landmark encompasses an area of multiple blocks along and on either side of Broadway Street in Skagway, with some buildings in the district now owned by NPS. Both the built environment setting and the natural setting with the surrounding mountains are intact to the period of significance. Three major alterations to the setting, including the construction of the Skagway Airport to the east of the district, and significant modifications to the harbor to the south of the district, and intermittent, large scale commercial infill in the town.

MATERIALS

The building has had some replacement or loss of historic materials. The building has significant fire damage and much of its east elevation has been burn The roof structure and roofing materials have been replaced. However, overall the building retains enough historic materials to convey its significance.

WORKMANSHIP

The workmanship of the building reflects its utilitarian character. The workmanship is commensurate with the period given its remote location and unique mechanical cooling system. Some parts of the refrigeration equipment have been lost but overall the building and its systems exhibit the workmanship from its period of significance.

FEELING

The building maintains a strong feeling of a vernacular, wood-frame, utilitarian building constructed in an Alaska frontier, Klondike Gold Rush, boom town at the turn of the twentieth century.

ASSOCIATION

The building retains integrity of association with strong historical links to other buildings and resources within the Skagway and White Pass District National Historic Landmark boundary, especially the Frye-Bruhn Retail Store which remains in its original location across Broadway on 5th Avenue, and also within the NHL distric boundary.

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10. Future Use & Treatment Recommendations

INTRODUCTION

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines four primary treatment approaches: Preservation, Rehabilitation, Restoration, and Reconstruction. Each treatment approach has its own standards and general recommendations according to the property's significance, existing physical condition, and documentation.

Considering the building's existing condition and original use as a cold storage facility, it is recommended that future changes and proposed uses for the Frye-Bruhn Cold Storage Building primarily follow the Rehabilitation Treatment as defined by *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Rehabilitation as a treatment approach will ultimately preserve the building and allow for the restoration of the building's exterior and rehabilitation the interior. A rehabilitation treatment of the building will address structural deficiencies required to preserve the building, while providing Klondike Gold Rush National Historical Park the opportunity to implement a change in use to suit the future needs of the park. The Rehabilitation Treatment will also permit the park to improve the building's exterior envelope, make seismic upgrades, and improve accessibility, mechanical, and electrical systems.

Rehabilitation as the recommended treatment approach will follow *The Secretary of the Interior's Standards* treatment guidelines for prioritizing repair over replacement while continuing to preserve historic features and materials that convey the building's historic character. Rehabilitation will provide the opportunity to restore missing and deteriorated historic materials and character-defining features according to historic documentation, while also providing the opportunity to reconstruct the addition on the east side of the building in the likeness of the historic false front.

Future projects and treatment of the Frye-Bruhn Cold Storage Building must comply with Federal standards and will require consultation with the Alaska State Historic Preservation Office. Furthermore, all treatment, including repairs should be properly documented.

REQUIREMENTS FOR TREATMENT AND USE

Use of the building will require a rehabilitation project conducted in compliance with current building codes. Accessibility improvements must comply with current Architectural Barriers Act (ABA) Standards. Sustainability and energy efficiency improvements required by code shall be reviewed prior to implementation for feasibility in tandem with *The Secretary of the Interior's Standards for Rehabilitation* and *Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings*.

The Frye-Bruhn Cold Storage Building is currently programmed to serve as the Trail Center and National Park Service Visitor and Resource Protection (VRP) office, requiring rehabilitation of the exterior and interior to provide public use and office space for NPS staff.[1] The building's extant interior will be rehabilitated to provide required permit services for the Chilkoot Trail, including bear training, interpretive exhibits, and office space for Rangers while preserving as many of the interior finishes and Character Defining Features as possible. Mechanical and electrical upgrades will be installed as minimally invasive manner as possible. The reconstruction of the one-story shed roof addition to the east will provide for contemporary office use while referencing the historic finishes of the original structure. The successful rehabilitation of the Frye-Bruhn Cold Storage Building will require careful planning and collaboration to preserve intact historic materials and Character Defining Features while providing for a contemporary use.

TREATMENT RECOMMENDATIONS

GENERAL SITE AND BUILDING

- Following required Section 106 compliance review processes, assemble an interdisciplinary team to reaffirm the current rehabilitation design alternatives for the building and site.

- Properly mothball the building until rehabilitation commences, sealing and closing large gaps in the building's flooring to deter pests and prevent further moisture exposure and deterioration.

- Conduct a code review to determine occupancy, fire/life safety, structural, accessibility, and energy performance requirements for the building's proposed use.

- Conduct a topographic survey to document as-built conditions. Survey information will provide the basis for addressing accessibility, drainage, parking, pedestrian and vehicular circulation. Conduct a vehicular circulation and parking analysis to identify safety issues and need for signage improvements and additional parking. Ensure parking does not obstruct the front elevation or visually detract from the historic character of the building.

- Park staff and visitor use of the Frye-Bruhn Cold Storage Building will require life safety design and review for seismic, structural, and accessibility

1 The current program was defined in 2023 under the leadership of Superintendent, Angela Wetz; Chief of Resources, Annie Matsov; Chief Ranger, Karl Sommerhauser; and Senior Historical Architect, Grant Crosby.

improvements. The design project will require an interdisciplinary team of architects and mechanical, electrical, and fire suppression engineers to implement the design process. The 2009 and 2024 structural and seismic evaluation should guide all future work, including the potential construction of a false front addition to the building's west side.

- Install fire alarm and suppression systems for life safety and resource protection.

- Provide code-compliant egress signage per code.

- Conduct analysis of remaining paint on west elevation to determine paint color history.

ACCESSIBILITY & SAFETY

EXTERIOR

- Provide a code-compliant accessible entrance that is compatible with the historic character of the building and meets the Architectural Barriers Act Accessibility Standard (ABAAS) accessibility requirements. The preferred accessible entrance location is the existing north (primary) entrance. The accessible building entrance must connect to the boardwalk and include an accessible ramp with handrails and maximum slope, door clear dimension widths, door clear floor areas, and floor height transition accessibility requirements with the existing +/- 3 feet height difference between the finished floor and grade. If the building remains in its current location, the boardwalk will have to be relocated and reconstructed to meet slope requirements.

- Provide code-compliant operating hardware at exterior entry doors. Door hardware should meet ABAAS Section 404. Most door hardware manufacturers provide accessible products meeting ABAAS/ADA (Americans with Disabilities Act) with a range of lever-type handles for manual operation and power-assisted door equipment for retrofit of historic doors.

- Provide code-compliant accessible signage at all visitor access locations.

INTERIOR

- Provide a compliant accessible route from the building entrance to all interior rooms.

- Install code-compliant accessible restroom to include required minimum door opening width, clear floor area at door, accessible hardware, required maneuvering space at water closet and lavatory fixtures, and accessible restroom accessories (grab bars, dispensers, and mirrors).

- Provide code-compliant accessible signage and egress lighting at all locations.

EXTERIOR

STRUCTURAL SYSTEMS

- Refer to 2009 and 2024 structural evaluation on existing structural systems to determine necessary removal, repair, and/or replacement of components that have been structurally compromised due to damage and/or decay, as well as structural improvements required for rehabilitation of the building. Fire damage will require necessary removal of compromised elements. Structural components damaged beyond repair should be replaced in-kind or with compatible substitute materials. As indicated in *Historic Preservation Brief 41 - Seismic Rehabilitation of Historic Buildings*, historic features and materials (structural and nonstructural) should be preserved and retained to the greatest extent possible, and avoid being replaced wholesale in the process of seismic strengthening.

- Following structural evaluation, sister wall studs (or replace in kind where needed).

- Sister flooring systems in-kind where possible to retain historic fabric. Replace all missing flooring system members in-kind, including floor beams, floor joists, floor sheathing, and finished floor boards using Douglas fir that matches existing flooring components in dimension and profile.

- Install continuous concrete stem wall foundation at building perimeter to provide for long-term structural performance and building durability.

ROOF

- Develop a cyclic maintenance program to properly maintain the existing corrugated metal roof. Perform periodic inspections and address deficiencies.

EXTERIOR WALLS

- Repair and/or replace decayed wood siding and sheathing on exterior walls in-kind utilizing proper workmanship techniques. Match wood species, board profile, dimension, grade, and surface texture. Determine original finish coating of exterior wood elements prior to application of new protective coating.

DOORS

- Restore entry freight doors, frame, and surrounding trim at north elevation, including restoration of damaged wood material and restoration of door hardware, removing oxidization from metals components.

WINDOWS

- Restore wood windows including damaged or deteriorated wood components on all sashes, sills, and trim, replacing muntins and glazing if necessary, as well as restoring hardware. Each window opening should have paired and fixed identical sashes with a single vertical muntin. Add weatherstripping

during restoration process and paint entire window assembly to protect wood surfaces.

- Replace missing exterior trim on windows in kind with Douglas fir and referencing extant historic trim, HABS drawings, and historic photographs.

INTERIOR

GENERAL

- In reference to *Preservation Brief 18 - Rehabilitating Interiors in Historic Buildings: Identifying and Preserving Character-Defining Elements*, retain the building's floorplan layout, its interior spaces, and features that define the historic character of the building. While some degree of alteration to historic elements may be inevitable, avoid or minimize cutting original flooring and/or ceiling that would alter or modify character-defining elements of the interior.

- Installation of mechanical and electrical systems should be designed to minimize impact to extant historic fabric. Ducts, pipes, and wiring should be installed in the attic or crawl space as inconspicuously and unobtrusive as possible.

- A thermal upgrade of the building's envelope should not permanently impact historic fabric. Foam insulation, as used in the YMCA/Meyer complex should be avoided, as it adheres to the historic fabric and is irreversible. A thermal audit should be performed in order to adaptively reuse the structure as a space inhabited seasonally by staff and visitors. The 9 1/2" wall cavity provides ample space to install insulation, especially considering the condition of exterior cladding and ease of access available when wall studs and exterior cladding is replaced in-kind.

- Prior to installing new insulation, complete photographic documentation of wall cavities with extant sawdust insulation. Consider leaving a small area at headheight of one wall to provide a view into the wall cavity to demonstrate original historic insulation for interpretive purposes.

- Perform metal conservation treatment to overhead trolley track, hardware, and extant pieces of cooling system according to 2023 Peters report (Appendix E).

WALLS

- Rehabilitate wall and ceiling finishes using materials and finishes that are compatible with the building’s historic character, while fulfilling the needs of the building’s new use.

- Locate, inventory, and document extant interior graffiti on walls and preserve in place. Follow the treatment used to protect period graffiti at the Moore House.

CEILING

- Install comprehensive finished ceiling, maintaining any extant boards that can be repaired or preserved in place and completing the ceiling with in-kind boards that match the original.

FLOORS

- Restore existing original Douglas fir tongue-and-groove floors throughout interior.

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12. Appendices

APPENDIX A: PRELIMINARY CONDITION ASSESSMENT WITH RECOMMENDATION FOR TREATMENT, ICE HOUSE, 2003

National Park Service
U.S. Department of the Interior

Alaska Support Office
Anchorage, Alaska

Preliminary Condition Assessment with Recommendations for Treatment

The Ice House



EXPERIENCE YOUR AMERICA
The National Park Service cares for special places saved by the American people so that all may experience our heritage.





▲
The pair of doors located on the north elevation provide the only entry into the buidling.

◀
The north elevation of the Ice House fronts fifth street.

Executive Summary

The Ice House, also known as "Moe Warehouse #2", was built ca. 1900 and is a contributing resource to The Skagway & White Pass District National Historic Landmark and the City's Historic District for its association with the Klondike Gold Rush. The historic period of significance for this NHL is 1897-19010. The NHL Nomination listing for the Ice House is as follows:

349. Moe Warehouse #2, ca. 1900. One story wood frame warehouse with attic, gable roof, double bevelled shiplap and tongue and groove siding, double freight door.

The Ice House appears to be the last of this building type in Skagway, Alaska and one of a few remaining in the State of Alaska. Historic photographs indicate that the building has remained in its original location over its one-hundred year history and continues to contribute to the gold rush era streetscape within Skagway's Historic District. Character defining features of this building include its simple form and medium pitched gable roof, thick structural walls containing sawdust insulation, refrigeration piping, an overhead transport system, doubled two light windows and thick, insulated doors with canted casements.



▲ The south wall of the building has deteriorated considerably as a result of the sawdust insulation and the regions perpetual harsh southern storms.



▶ The west elevation of the structure is clad in a drop siding that was common during the gold rush era.

The building is in fair to poor condition and if rehabilitated, would require a new foundation, some structural repairs and a new roof structure. Damage sustained in a fire affected the roof structure, some interior finishes and exterior sheathing and two windows on the east elevation. Despite the fair to poor condition assessment, the possibility of rehabilitating this structure should not be overlooked. One must bear in mind that nearly all of the historic structures in Skagway were once in a dilapidated condition which required extensive restoration efforts. Many of these structures were successfully rehabilitated to accommodate contemporary uses while maintaining the historic appearance of Skagway which draws thousands of visitors each summer.

General Description:

This wood framed building consists of a simple rectangle measuring approximately 33' x 30' with its primary axis running north-south. The building is covered with a simple gable roof. There are seven windows, two on the north elevation and four on the east elevation and one on the south elevation. A pair of freight doors are located on the north elevation.

The interior of the structure consists of three spaces. Two enclosed spaces occupy two-thirds of the east half of the structure and a third space forms an "L" to the west and south of the two freezer spaces.





▲
View south of the Ice House interior. The overhead track transported ice into the larger of the two freezer rooms.

◀
The east elevation suffered the most severe damage from the building fire. This elevation also has four windows.

Foundation:

A preliminary investigation suggests that the foundation consists of 1 ¾" x 11 ½" joists on grade. The joists support flooring material which consists of 1 ½" x 5 ¼" tongue and groove boards which run perpendicular to the ridge.

Existing Condition:

Only one area was able to be inspected and it revealed very deteriorated joists. The joists appear to be in contact with the soil. It is likely that the majority of the original floor joists have deteriorated. The floor boards appear to be in good condition.

Recommended Treatment:

If a rehabilitation treatment is prescribed, it will be necessary to lift the building to a sufficient height to remove deteriorated joists and construct an all-weather wood foundation or pour a concrete perimeter foundation wall which would incorporate a crawl space. New beams and joists would be necessary and the crawl space could be utilized for mechanical and electrical chases.



▲ The southern portion of the "L" houses the water pipes and a shut off valve.



▶ Sawdust filled the cavity between the 11 1/2" ceiling joists which created a drop ceiling for the interior of the structure.

Primary Structure:

The structure is a one-story, wood framed building with a simple gable roof. The nature of its historic use as an ice house required thick exterior and interior walls for insulation purposes. The perimeter wall is constructed of 1 ½" x 9 ½" studs and is clad on the exterior with two layers of ¾" x 7 ¼" horizontal ship lap boards. The walls are filled with sawdust for insulation. The west elevation includes one layer of the above material as a substrate and is finished with a 5 ½" drop siding common to the gold rush era. The material appears to be original to the structure.

Existing Condition:

A significant portion of the exterior sheathing has been burned by a fire, primarily on the east elevation. The fire appears to have damaged the exterior cladding only. Portions of the south elevation have deteriorated but the north and west elevations appear to be in fair condition.

Recommended Treatment:

If a rehabilitation treatment is prescribed, it will be necessary to remove the exterior sheathing to assess the condition of the structural





▲
This photo illustrates the interior of the small freezer room and the many items inside.

◀
Charred rafters are visible in this photo of the eastern half of the attic space. Note the sawdust between the ceiling joists.

members. It is likely that the entire exterior layer of sheathing on the east elevation will require replacement. It will also be necessary to remove the sheathing on the remaining three elevations to inspect the primary structure, to install fiberglass insulation, an adequate shear layer of plywood and a vapor barrier. All replacements should match the existing material.The exterior sheathing should be back primed.

Interior Partitions:

The interior partition walls are constructed in a similar fashion to the exterior walls. The walls are constructed with 1 ¾" x 9 ½" studs and are faced with ¾" x 7 ¼" horizontal shiplap sheathing similar to that on the exterior of the building. The large void is filled with sawdust for insulation.

The plan of the building consists of three rooms, two rooms were used for ice storage, the third as a work space. The two storage rooms occupy the front two thirds of the building's east half. The three rooms were constructed with drop ceilings which were covered in sawdust. The ceiling joists are 1 ¾" x 11 ½" boards spaced at 24" on center and run perpendicular to the ridge of the roof. Additional 1" x 3 ½" boards were installed flush to the bottom of the ceiling joists to act as a ledger for ¾" x 7 ¼" shiplap boards which were cut to fit into the 21 ½" space between joists. Sawdust filled this cavity.



▲
The thich freezer door jambs are canted to create a tighter seal. The refrigeration pipes and overhead track are also visible.



▶
Large hinges support the refrigeration doors and are still operate smoothly.

Existing Condition:

The two spaces are currently being used for storage and make it difficult to view the rooms in their entirety. Preliminary investigation indicates that the interior sheathing of the two freezer rooms is in good condition. The ceilings have been removed or fallen in since the fire. Supports for the drop ceiling were cut in the larger of the two spaces. The floors were not able to be inspected.

Recommended Treatment:

Remove the personal affects from the building's interior so a more thorough inspection is possible. Determine the condition of the floor and walls and replace where necessary with in-kind materials should a rehabilitation treatment be prescribed.

Roof:

The 6:12 gable roof is oriented along the long axis of the building and is clad in corrugated metal. The roof is supported by 1 ½" x 5 ½" rafters at 24" on center which bear on a 1 ½" x 5 ½" top plate. A king truss of ¾" x 5 ½" boards support the roof structure and are located at 24" on center. Skip sheathing consists of ¾" x 3" to 5" boards at approximately 16" on center. Historically, the building was likely clad with cedar shingles.





▲
Each window was accompanied by a storm window which provided a thermal air space to increase insulation.

◀
The cooling pipes are located on the north and south walls of the larger freezer room.

Existing Condition:

The corrugated metal roof appears to be relatively new and was likely installed in the last 10 years. The attic space of this structure suffered the most damage from the fire and the vast majority of the rafters, skip sheathing and truss members are charred. Some new skip sheathing has been installed to maintain the roof.

Recommended Treatment:

The condition of the roof structure is beyond repair and should be replaced. A structural analysis may be necessary to insure that the members are sized appropriately for the reconstruction. A sub sheathing of plywood will be necessary for shear. Further research will aid in determining the original roofing material.

Doors:

The interior of the building is accessed by a pair of doors on the north elevation. The doors are constructed with 2" x 4" lumber and are clad in ¾" x 3 ¼" clear Douglas fir on both sides. A sliding bar lock provides security. On the interior, two large, insulated doors provide access to the freezer areas. The northern door measures 41 ½" x 82" and the southern door measures 41 ½" x 84". Each door has two



▲
This detail illustrates the overhead track used to transport the ice into the freezer rooms.



▶
Many potential artifacts remain stored inside the freezer rooms.

large hinges, large thresholds and the casements are canted to the interior to provide a more weather tight seal when closed. The door edges are covered in nylon which acts as weather stripping.

The southern door which accesses the larger storage area incorporates a horizontal metal track which was used to haul ice. The track was designed to run through the door's header uninterrupted. Evidence suggest that the door may have been moved or resized at some point.

Existing Condition:

The doors are in very good condition and continue to operate smoothly.

Recommended Treatment:

The doors are a character defining feature of this structure and should be preserved. Necessary adjustments and repairs may be needed to insure their preservation.

Windows:

There are seven windows on this structure, two on the north elevation,





▲
The electrical wiring was likely the source of the building fire which was associated with overhead drop in the southwest corner.

◀
The fire primarily affected the attic space of the structure. If rehabilitated, a new roof will be required.

four on the east elevation and one on the south elevation. The remaining windows are fixed, have two lights and are separated by a vertical muntin. The window on the north elevation indicates that there was a storm window on the exterior, matching the window on the interior. This may be an early form of providing insulation. Several of the windows have been boarded up. The original sash remains intact.

Existing Condition:

The window on the north elevation and two windows on the east elevation appear to be in good condtion. The remainder are either missing, burned or boarded over. Several windows have been boarded up from the interior. The sash remains intact but without glass. They appear to be in fair condition.

Recommended Treatment:

Remove the windows from the wall and restore them using in-kind material where necessary. If an adaptive use of the building is considered, double pane glass may be appropriate to enhance the thermal performance of the structure.

Additional Features:

There are several character defining features in this building which include but are not limited to the overhead transport system, the insulated doors and the refrigeration coils. In addition, the items that are currently being stored in the building may have historic significance to the history of Skagway and the gold rush.

Existing Condition:

Some of the features, such as the doors, are in working condition. The others remain in fair condition, but are inoperable. The potential artifacts in the building are in varying conditions but warrant closer inspection.

Recommended Treatment:

These features are the primary elements of this building that contribute to its historic significance. These elements should be preserved in-situ if possible, or salvaged for possible reconstruction. The owner of the building and / or owner of the items stored in the Ice House should contact the Skagway Museum and the National Park Service for assistance in determining the significance of the potentail artifacts prior to appropriate disposal. There is a good chance that significant historic items are being stored within this collection.

Adaptive Reuse

Rehabilitating this building for contemporary use offers a variety of commercial and industrial possibilities. The owner may wish to consider how this building could fit into the development plans of the site. Several suggestions are outlined below and illustrate varying degrees of preserving the building's historic appearance and spatial organization through rehabilitation. The National Park Service is available for further assistance regarding this issue.

Option 1:

Retain the building's setback, form, historic exterior and interior finishes and spaces while providing a contemporary use.

Adaptive Reuse Possibilities:

1. Develop a contemporary commercial use which draws from the building's historic use and character such as an ice cream parlor, cold or heated storage, food preparation or interpretive exhibit. These options would require structural upgrades.

Option 2:

Retain building's setback, form and historic exterior appearance and alter the interior space to accommodate a contemporary commercial or industrial use.

Adaptive Reuse Possibilities:

1. Develop a contemporary commercial or industrial use to serve retail, storage or industrial workshop needs.
2. A variation of this possibility may incorporate alterations to the secondary elevations to make the building useable such as adding a garage door to the south elevation.

Option 3:

Retain the historic appearance of the primary elevations and the building's form. Acceptable alterations to the secondary elevations may include additional window openings. The interior space could be adapted to accommodate contemporary use.

Adaptive Reuse Possibilities:

1. Develop a contemporary commercial or industrial use to serve retail, storage or industrial workshop needs that require more alterations to the secondary elevations.

Moving the Ice House

Historically, it was not uncommon for buildings to be moved to a new location in Skagway to accommodate new opportunities. Moving the Ice House is feasible, but may be costly. Although this preliminary investigation could not determine the overall condition of the foundation, it is safe to assume that it is in poor condition. As a result, moving this structure would require additional stabilization and bracing.

Documentation and Demolition

If the determination is made to demolish the Ice House, the building should be documented to a sufficient level so that it could be reconstructed using a set of drawings and photographs produced under this effort. The National Park Service would recommend referring to the standards of the Historic American Building Survey, a national collection of drawings and photographs established to record America's significant architectural achievements. As a contributing resource to The Skagway and White Pass District National Historic Landmark, the Ice House should be documented to the HABS Level I standard. This level of documentation would include the following:

1. Full set of measured drawings.
2. Large format photographs exterior and interior.
3. History and description in narrative format.

The features that are unique to this structure and its history such as the freezer and exterior doors, windows, overhead transport system, and refrigeration coils should be removed in such a manner that they could be reinstalled into a reconstructed building. These items should be stored for a specified period during which the building could be reconstructed. At the end of the specified period, the notion of reconstruction could be reevaluated or the components placed in curatorial storage or disposed of properly.

Additional Considerations

National Park Service Technical Assistance

The National Park Service Technical Assistance Program includes assistance to the owners of historic buildings which contribute to a National Historic Landmark Technical assistance includes preservation planning, condition assessment and recommendations for treatment reports and grant administration. We are unable to provide full architectural services. The National Park Service is also available to assist in the determination of historic artifacts and treatment options which are currently being stored in the building.

Federal Tax Incentives

Federal historic preservation tax incentives are available for any qualified project that the Secretary of the Interior designates as a

certified rehabilitation of a certified historic structure. The Ice House or Moe Warehouse #2, qualifies for these incentives as a contributing resource to a listed National Historic Landmark. To qualify for the tax incentives, property owners must complete the appropriate part or parts of the Historic Preservation Certification Application which is included in the appendix of this report. For further information, contact the National Park Service.

Potential Grant Sources

Several sources of grant funding are available for historic preservation planning and projects. Examples include the following:

Historic Preservation Fund

http://www2.cr.nps.gov/hpf/index.htm

Save America's Treasures

http://www.saveamericastreasures.org/funding.htm

Alaska Humanities Forum

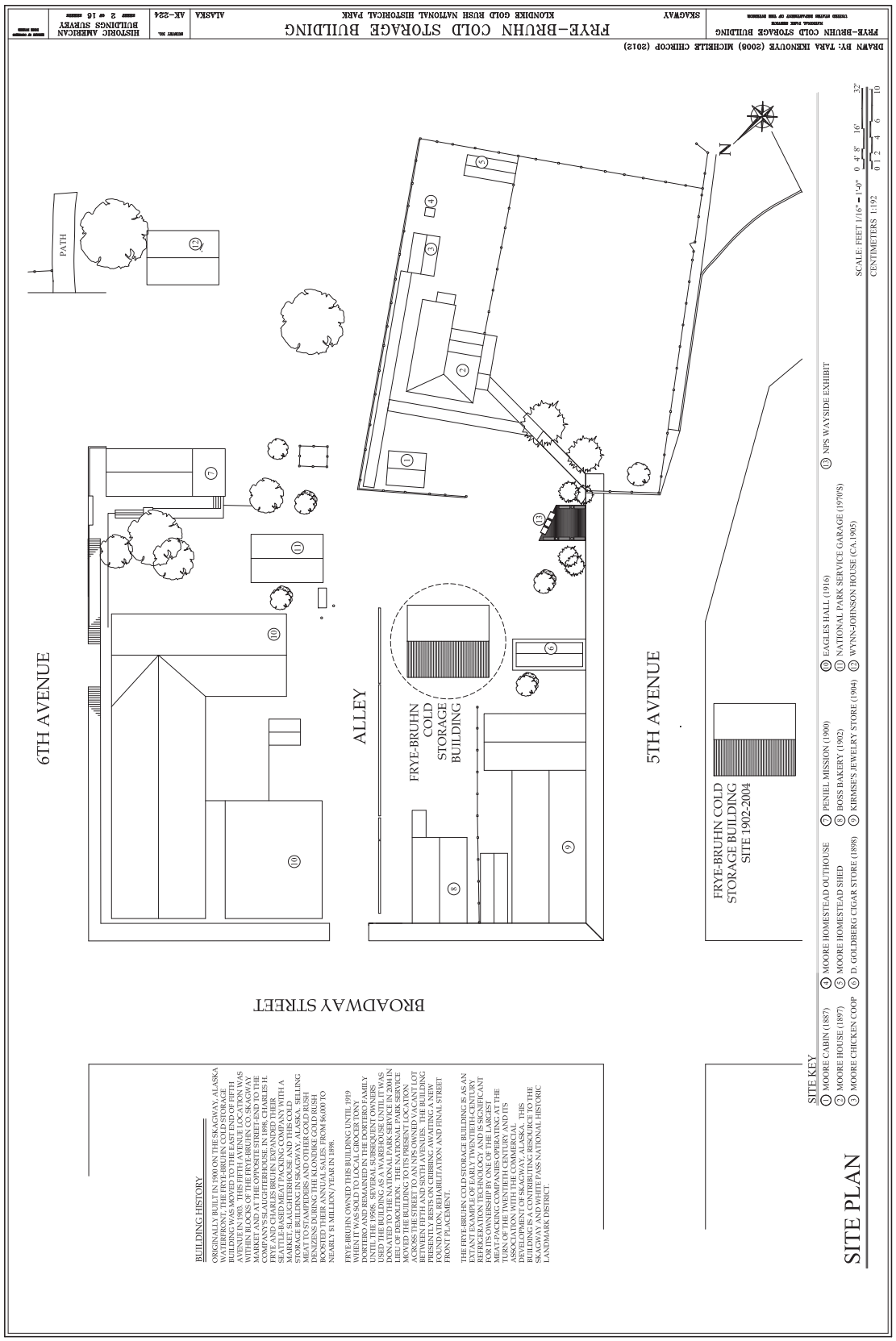
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APPENDIX B: HISTORIC AMERICAN BUILDINGS SURVEY (HABS) AK-224 DRAWINGS, 2008, 2012

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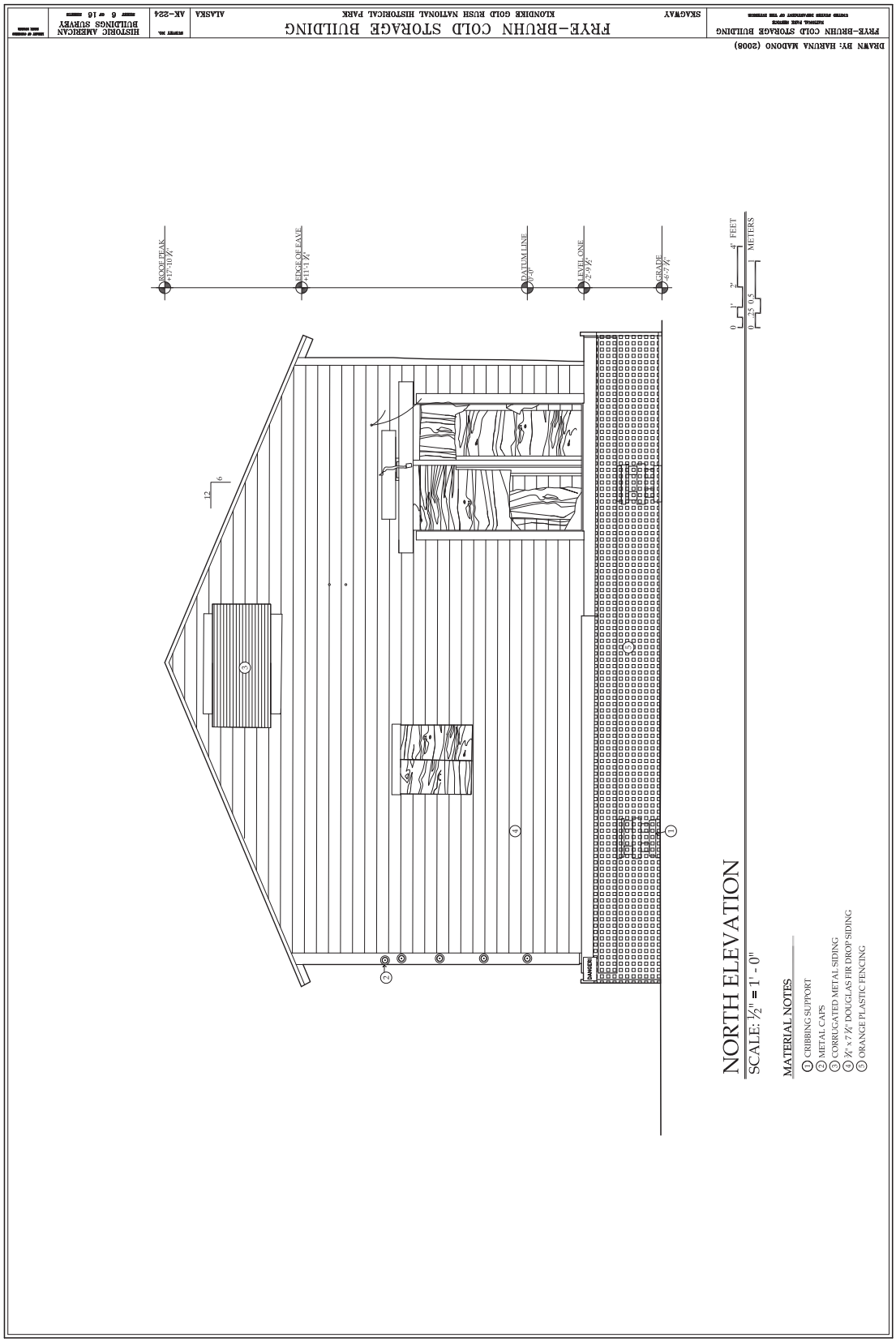
FRYE-BRUHN COLD STORAGE BUILDING
DRAWN BY: TARA IKENOUYE (2008) MICHELLE CHIRCOP (2012)
FRYE-BRUHN COLD STORAGE BUILDING
SKAGWAY
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
1 OF 16 SHEETS
TEAM MEMBERS
MICHELLE CHIRCOP INTERN, M.S HPRES CANDIDATE '13 SCHOOL OF THE ART INSTITUTE CHICAGO
LISL COADY INTERN, B.ARCH CANDIDATE '09 NATIONAL PARK SERVICE
GRANT CROSBY HISTORICAL ARCHITECT NATIONAL PARK SERVICE
MAGGIE FERNANDEZ INTERN, M.ARCH CANDIDATE '10 NATIONAL PARK SERVICE
TARA IKENOUYE INTERN, M.S HPRES CANDIDATE '09 NATIONAL PARK SERVICE
HARUNA MADONO INTERN, M.ARCH CANDIDATE '10 NATIONAL PARK SERVICE
SIGNIFICANCE
WHEN THE KLONDIKE GOLD RUSH BEGAN, CHARLES FRYE AND CHARLES BRUHN QUICKLY EXPANDED THEIR SEATTLE-BASED MEAT PACKING COMPANY WITH A MARKET, SLAUGHTERHOUSE AND THIS COLD STORAGE BUILDING IN SKAGWAY, ALASKA. THEY ALSO BUILT RETAIL STORE IN SEVERAL OTHER ALASKA PORTS. SELLING MEAT TO STAMPEDERS, THE FRYE-BRUHN COMPANY BOOSTED THEIR ANNUAL PAYROLL FROM $6,000 TO NEARLY $1 MILLION PER YEAR IN 1900. BUILT IN 1900 NEAR THE SKAGWAY WATERFRONT ON SECOND AVENUE, THE FRYE-BRUHN COLD STORAGE BUILDING WAS MOVED TO THE EAST END OF FIFTH AVENUE AROUND NOVEMBER 1902. THE FRYE-BRUHN COMPANY OWNED THIS BUILDING UNTIL 1919, WHEN THE DEMAND FOR MEAT HAD SLOWED DUE TO THE LOSS OF POPULATION IN SKAGWAY AND IN THE YUKON. THE BUILDING WAS SOLD TO GROCER, TONY DORTERO, IN 1919 AND REMAINED IN THE DORTERO FAMILY UNTIL 1954. MALCOM MOE BOUGHT THE STRUCTURE AND USED IT PRIMARILY AS A WAREHOUSE. THE BUILDING REMAINED IN THE SAME LOCATION UNTIL 2004 WHEN THE BUILDING WAS DONATED TO THE NATIONAL PARK SERVICE BY A SKAGWAY RESIDENT. IN 2005, THE STRUCTURE WAS MOVED TO ITS CURRENT LOCATION ON THE WATERFRONT. THE BUILDING PRESENTLY RESTS ON CRIBBING AWAITING A NEW FOUNDATION AND FULL REHABILITATION TREATMENT. THE FRYE-BRUHN COLD STORAGE BUILDING IS SIGNIFICANT FOR ITS ASSOCIATION WITH ONE OF THE LARGEST MEAT-PACKING COMPANIES OPERATING ON THE WEST COAST AT THE TURN OF THE CENTURY, THE COMMERCE ASSOCIATED WITH THE KLONDIKE GOLD RUSH IN SKAGWAY AND FOR ITS TECHNOLOGY WHICH INCLUDES ITS ORIGINAL REFRIGERATION EQUIPMENT.
DRAWING INDEX
01. COVER SHEET
02. SITE PLAN
03. FLOOR PLAN
04. ROOF AND JOIST PLAN
05. REFLECTED CEILING PLAN
06. NORTH ELEVATION
07. EAST ELEVATION
08. SOUTH ELEVATION
09. WEST ELEVATION
10. SECTION A-A
11. SECTION B-B
12. SECTION C-C
13. COLD STORAGE DOOR ASSEMBLY
14. COLD STORAGE WALL ASSEMBLY
15. FLOOR DETAILS
16. MEAT TRACK DETAILS
1 STATE MAP
SCALE 1" = 375 MILES
2 TOWN MAP
SCALE 1" = 2000 FT
3 VICINITY MAP
SCALE 1" = 125 FT
ARCTIC OCEAN
CANADA
ALASKA
RUSSIA
BERING SEA
PACIFIC OCEAN
SKAGWAY
TAIYA INLET
BROADWAY ST
6TH AVENUE
5TH AVENUE


FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK–224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: TARA HENOUVE (2006) MICHELLE CHIRCOP (2012)
SITE PLAN
SCALE: FEET 1/16" = 1'-0"
CENTIMETERS 1:192
N
6TH AVENUE
5TH AVENUE
ALLEY
BROADWAY STREET
PATH
FRYE-BRUHN COLD STORAGE BUILDING
FRYE-BRUHN COLD STORAGE BUILDING SITE 1902-2004
SITE KEY
1 MOORE CABIN (1887)
2 MOORE HOUSE (1897)
3 MOORE CHICKEN COOP
4 MOORE HOMESTEAD OUTHOUSE
5 MOORE HOMESTEAD SHED
6 D. GOLDBERG CIGAR STORE (1898)
7 PENIEL MISSION (1900)
8 BOSS BAKERY (1902)
9 KIRMSE'S JEWELRY STORE (1994)
10 EAGLES HALL (1916)
11 NATIONAL PARK SERVICE GARAGE (1970'S)
12 WYNN-JOHNSON HOUSE (C.A. 1905)
13 NPS WAYSIDE EXHIBIT
BUILDING HISTORY
ORIGINALLY BUILT IN 1900 ON THE SKAGWAY, ALASKA WATERFRONT, THE FRYE-BRUHN COLD STORAGE BUILDING WAS MOVED TO THE EAST END OF FIFTH AVENUE IN 1903. THIS FIFTH AVENUE LOCATION WAS WITHIN BLOCKS OF THE FIRST BREWERY CO. SKAGWAY WAREHOUSE, AND ALL THE PROPERTIES OF THE KLONDIKE COMPANY'S SLAUGHTERHOUSE, IN 1898, CHARLES H. FRYE AND CHARLES BRUHN EXPANDED THEIR BUSINESS INTERESTS IN SKAGWAY WITH A MARKET, SLAUGHTERHOUSE AND THIS COLD STORAGE BUILDING IN SKAGWAY, ALASKA. SELLING MEAT TO STAMPEDERS AND OTHER GOLD RUSH INDUSTRIES, THE FRYE-BRUHN COLD STORAGE BOOSTED THEIR ANNUAL SALES FROM $6,000 TO NEARLY $1 MILLION/YEAR IN 1898.
FRYE-BRUHN OWNED THIS BUILDING UNTIL 1919 WHEN IT WAS SOLD TO LOCAL GROCER TONY DORTERO AND REMAINED IN THE DORTERO FAMILY UNTIL THE 1950S. SEVERAL SUBSEQUENT OWNERS USED THE BUILDING AS A WAREHOUSE UNTIL IT WAS DONATED TO THE NATIONAL PARK SERVICE IN 2004 IN LIEU OF DEMOLITION. THE NATIONAL PARK SERVICE MOVED THE BUILDING TO ITS PRESENT LOCATION ACROSS THE STREET TO ITS ORIGINAL LOCATION LOT BETWEEN FIFTH AND SIXTH AVENUES. THE BUILDING PRESENTLY RESTS ON GRIBBING AWAITING A NEW FOUNDATION AS PART OF REHABILITATION AND FINAL STREET FRONT PLACEMENT.
THE FRYE-BRUHN COLD STORAGE BUILDING IS AS AN EXCELLENT EXAMPLE OF EARLY 20TH CENTURY REFRIGERATION TECHNOLOGY AND IS SIGNIFICANT FOR ITS OWNERSHIP BY ONE OF THE LARGEST MEAT PACKING COMPANIES OPERATING AT THE TURN OF THE 19TH/20TH CENTURY AND ITS ASSOCIATION WITH THE COMMERCIAL DEVELOPMENT OF SKAGWAY, ALASKA. THE BUILDING IS CONTRIBUTING RESOURCE TO THE SKAGWAY AND WHITE PASS NATIONAL HISTORIC LANDMARK DISTRICT.

FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)
N
29'-11½"
30'-2½"
40'-1"
40'-7⅞"
A
B
C
REFRIGERATED STORAGE ROOM 10'-0" x 18'-6"
MISSING FLOOR
HALLWAY & UTILITY SPACE 38'-2" x 28'-2"
MISSING FLOOR
REFRIGERATED STORAGE ROOM 18'-0" x 18'-6"
0 1' 2' 4' FEET
0 .25 0.5 METERS
FLOOR PLAN
SCALE: ½" = 1' - 0"

FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)
A
B
C
DASHED LINE REPRESENTS BUILDING ABOVE
FLOOR FRAMING PLAN
SCALE: 1/4" = 1' - 0"
0 1' 2' 5' 10' FEET
0 0.5 2 3 METERS
ROOF PLAN
SCALE: 1/4" = 1' - 0"
40'-8 5/8"
36'
MATERIAL NOTES
1 CORRUGATED METAL ROOFING
2 12" x 12" SUPPORT BEAM
3 1 1/2" x 13 1/2" JOIST

DRAWN BY: HARUNA MADONO (2006)
FRYE-BRUHN COLD STORAGE BUILDING
SKAGWAY
FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
CEILING JOIST DETAIL
SCALE: 3" = 1' - 0"
0 1½" 3" 6" INCHES
0 5 10 CENTIMETERS
REFLECTED CEILING PLAN
SCALE: ½" = 1' - 0"
0 1' 2' 4' FEET
0 .25 0.5 METERS
MATERIAL NOTES
1 MEAT TRACK
2 MEAT TRACK SUPPORT BRACE
3 1½" x 11½" JOIST
4 LADDER

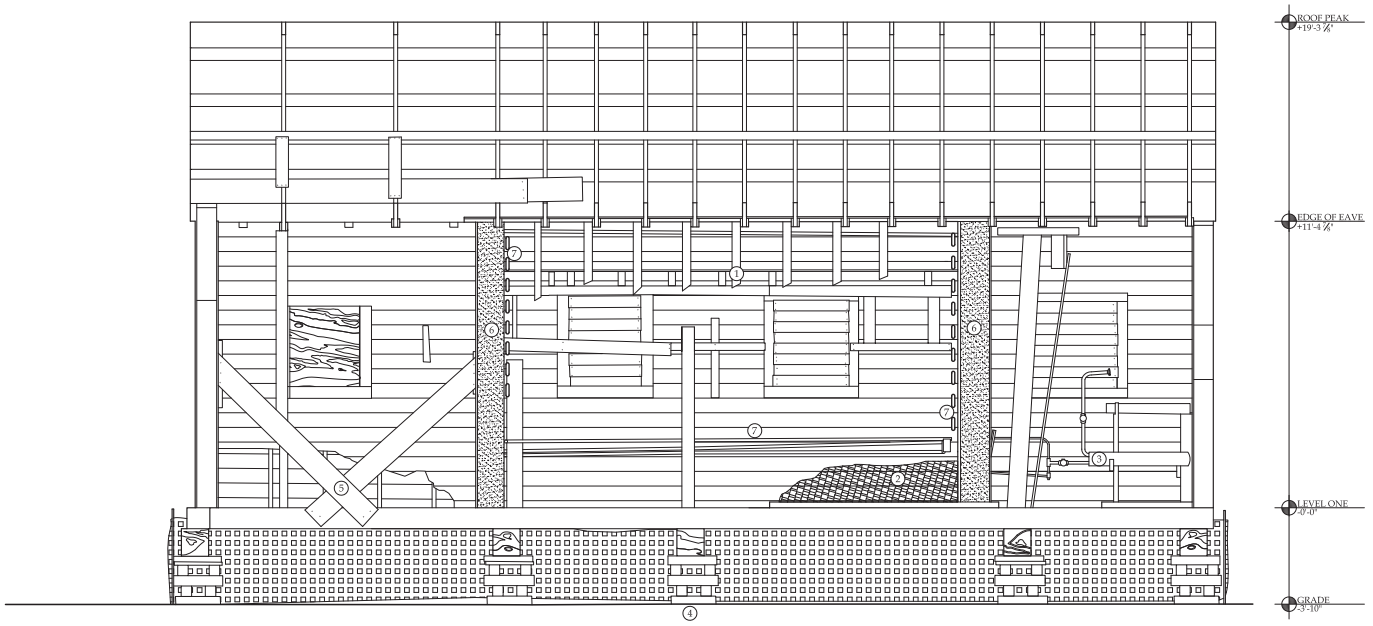

FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2006)
ROOF PEAK +17-10 1/4"
EDGE OF EAVE +11-1 1/4"
DATUM LINE 0'-0"
LEVEL ONE -2'-9 1/2"
GRADE -6'-6 1/4"
0 1' 2' 4' FEET
0 .25 0.5 METERS
NORTH ELEVATION
SCALE: 1/2" = 1' - 0"
MATERIAL NOTES
1 CRIBBING SUPPORT
2 METAL CAPS
3 CORRUGATED METAL SIDING
4 3/4" x 7 1/4" DOUGLAS FIR DROP SIDING
5 ORANGE PLASTIC FENCING

DRAWN BY: HARUVA MADONO (2008)
FRYE–BRUHN COLD STORAGE BUILDING
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 7 OF 16 SHEETS
ROOF PEAK +17'-6½"
EAVE +9'-5⅜"
DATUM LINE 0'-0"
LEVEL ONE +2'-10½"
GRADE -6'-1⅞"
EAST ELEVATION
SCALE: ½" = 1' - 0"
MATERIAL NOTES
1 CHARRED SIDING FROM 1980s FIRE
2 ORANGE PLASTIC FENCING
3 CORRUGATED METAL ROOFING
4 ¾" x 7½" DOUGLAS FIR DROP SIDING
0 1' 2' 4' FEET
0 .25 0.5 METERS

SOUTH ELEVATION
SCALE: 1/2" = 1' - 0"
MATERIAL NOTES
1 ROUGH OPENING FROM PREVIOUS DOORS
2 CORRUGATED METAL SIDING
3 ROOF LINE GHOSTING
4 SUPPORT CRIBBING
5 3/4" x 7 1/4" DOUGLAS FIR DROP SIDING
0 1' 2' 4' FEET
0 .25 0.5 METERS
ROOF PEAK
EDGE OF EAVE
DATUM LINE
LEVEL ONE
GRADE
FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)

ROOF PEAK
19'-7 7/8"
EDGE OF EAVE
+9'-3 3/8"
DATUM LINE
0'-0"
LEVEL ONE
-2'-8 1/4"
LEVEL ONE
-5'-8"
DANGER
GAS VENT
DO NOT
BLOCK
NO
SMOKING
0
1'
2'
4' FEET
0
.5
1
METERS
WEST ELEVATION
SCALE: 1/2" = 1' - 0"
MATERIAL NOTES
1 7/8" x 5 1/4" DOUGLAS FIR SHIPLAP SIDING
2 CORRUGATED METAL ROOFING
3 TEMPORARY BRACING
4 7/8" x 5 1/4" SHIPLAP SIDING, CHARRED IN FIRE

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE. NAME OF STRUCTURE, DATE OF DRAWING
DRAWN BY: HARUNA MADONO (2008)
FRYE–BRUHN COLD STORAGE BUILDING
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK–224
SHEET NO.
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 10 OF 16 SHEETS
ROOF PEAK
EDGE OF EAVE
LEVEL ONE
LEVEL ONE
SECTION A-A
SCALE: ½" = 1' - 0"
MATERIAL NOTES
1 CRIBBING SUPPORT
2 IRON STRAP HINGES
3 REFRIGERATION PUMP
4 METAL TROLLEY TRACK OPENING
5 1⅛" x 11½" CEILING JOISTS, CHARRED
6 ⅞ x 7¼" DOUGLAS FIR SHIPLAP SIDING
A ⅞"X 5¼" DOUGLAS FIR DROP SHIPLAP SIDING
B ⅞" x 7½" SQUARE DOUGLAS FIR SIDING
A
B
SIDING PROFILES
SCALE: 3" = 1' - 0"
FEET
METERS
CENTIMETERS



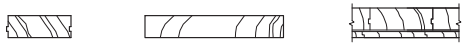
SECTION B-B

SCALE: ½" = 1' - 0"

0 1' 2' 4' FEET
0 .25 0.5 1 METERS

MATERIAL NOTES

1. MEAT TROLLEY CEILING SUPPORTS
2. ¾" x 7 ¼" DOUGLAS FIR SQUARE SIDING, CHARRED
3. REFRIGERATION PUMP
4. CRIBBING SUPPORT
5. TEMPORARY BRACING
6. SAWDUST INSULATION
7. REFRIGERATING PIPING COILS
8. ¾" x 3" TO 5" SKIP SHEATHING AT 16" ON CENTER
9. 1 ½" x 5 ½" RAFTER AT 24" ON CENTER
A. 1¾" x 5" TONGUE & GROOVE DOUGLAS FIR FLOORING
B. 1 ⅞" x 11" DOUGLAS FIR FLOORING
C. 1 ¾" x 5" TONGUE & GROOVE DOUGLAS FIR FLOORING WITH 5" SHIPLAP SUBFLOOR



FLOORING PROFILES

SCALE: 3" = 1' - 0"

0 ½" 1" 2" FEET
0 1 2 3 CENTIMETERS

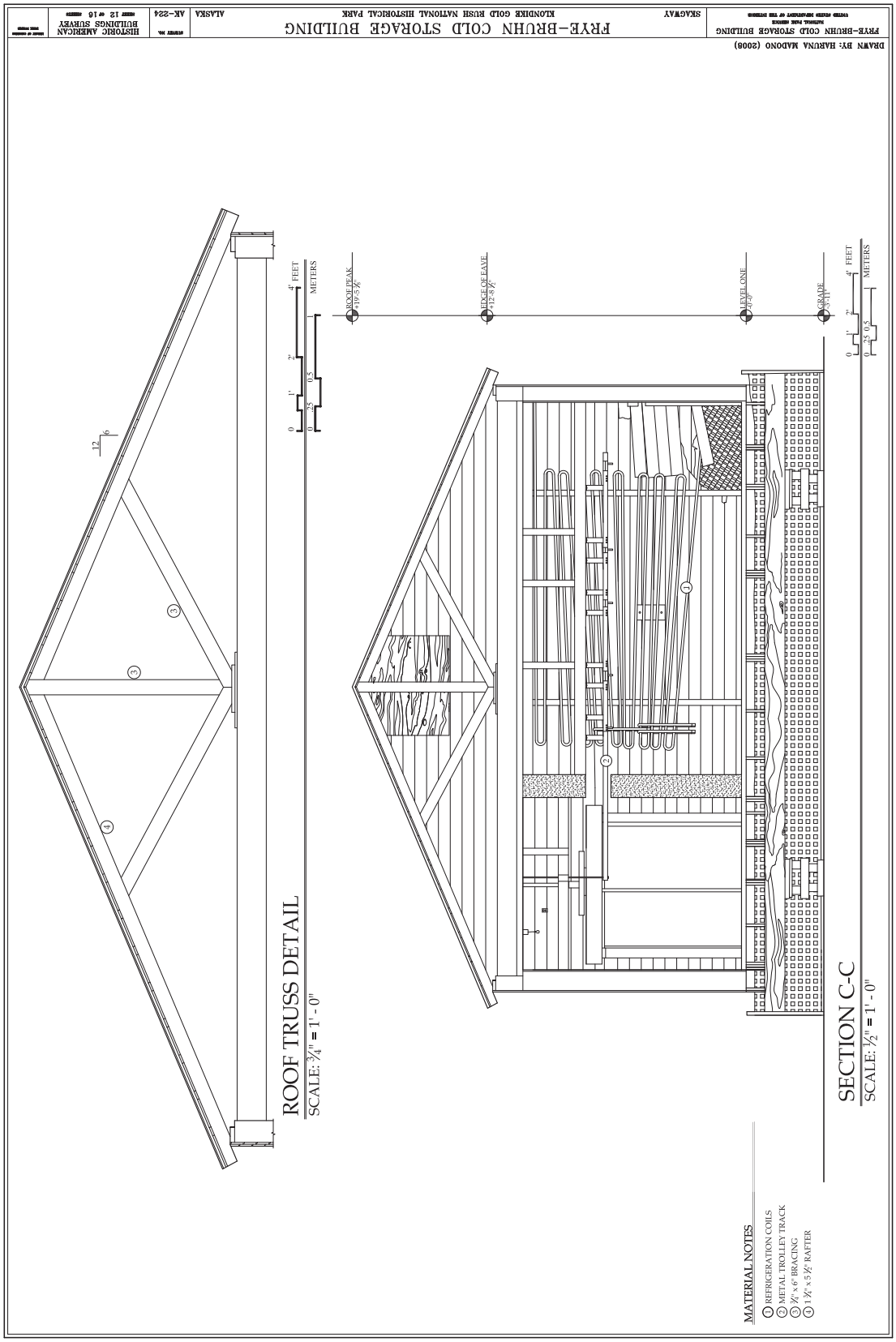
DRAWN BY: HARUNA MADONO (2008)

FRYE–BRUHN COLD STORAGE BUILDING
SKAGWAY

FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
ALASKA

HISTORIC AMERICAN BUILDINGS SURVEY
1" = 1'-0"
AK-224

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DRAWING, DATE OF DRAWING


FRYE–BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK–224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)
ROOF TRUSS DETAIL
SCALE: 3/4" = 1' - 0"
SECTION C-C
SCALE: 1/2" = 1' - 0"
ROOF PEAK
EDGE OF EAVE
LEVEL ONE
GRADE
FEET
METERS
MATERIAL NOTES
1 REFRIGERATION COILS
2 METAL TROLLEY TRACK
3 3/4" x 6" BRACING
4 1 7/8" x 5 1/2" RAFTER

COLD STORAGE WALL ASSEMBLY
SCALE: 1" = 1' - 0"
COLD STORAGE DOOR
SCALE: 1" = 1' - 0"
FEET
METERS
FRYE-BRUHN COLD STORAGE BUILDING
SKAGWAY
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)

FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2006)
EAVE DETAIL
SCALE: 1" = 1' - 0"
FLOOR DETAIL
SCALE: 1 ½" = 1' - 0"
FLOOR TO WALL CONNECTION
SCALE: 3" = 1' - 0"
INCHES
CENTIMETERS

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF BUILDING(S), DATE OF DRAWING
DRAWN BY: HARUNA MADONO (2006)
FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 15 OF 16 SHEETS
D
B
A
C
WINDOW ASSEMBLY
SCALE: 3" = 1' - 0"
0 1/4" 3" 6"
0 4 8 CENTIMETERS
INCHES
WINDOW AXON
SCALE: 3" = 1' - 0"

FRYE-BRUHN COLD STORAGE BUILDING
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY
DRAWN BY: HARUNA MADONO (2008)
MEAT TROLLEY DETAIL
SCALE: 3" = 1' - 0"
MEAT TROLLEY SECTION
SCALE: 1" = 1' - 0"
MEAT TROLLEY ELEVATION
SCALE: 1" = 1' - 0"
MEAT TROLLEY AXON
SCALE: ½" = 1' - 0"
INCHES
CENTIMETERS
FEET
METERS

APPENDIX C: HISTORIC AMERICAN BUILDINGS SURVEY (HABS) AK-224 PHOTOGRAPHS, 2019

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FRYE-BRUHN COLD STORAGE BUILDING HABS AK-224
Klondike Gold Rush National Historical Park
Skagway and White Pass Historic District
Alley off east side of Broadway between 5th and 6th Avenues
Skagway
Municipality of Skagway Borough
Alaska

NOTES:

Within Skagway, cardinal directions are colloquially oriented with reference to the city's street grid instead of true north. The north-south axis is aligned with State Street, making "north" closer to northeast. The photo captions follow this convention.

The building is not square; camera standards were set plumb unless otherwise indicated.

Additional general perspective view(s) that include this structure can be found within the photographs of HABS AK-283

INDEX TO BLACK AND WHITE PHOTOGRAPHS

Rob Park, photographer, August 2019

AK-224-1	Elevation view of the north (front) facade (with scale device) and boardwalk
AK-224-2	Elevation view of the north (front) facade and boardwalk
AK-224-3	Perspective view of the northwest corner and boardwalk
AK-224-4	Elevation view of the west side
AK-224-5	General perspective view of the southwest corner, including: the boardwalk along 5th Ave., surrounding lot, and Moore Homestead Cabin in center-right background
AK-224-6	Elevation view of the south (rear) side
AK-224-7	Elevation view of the east side
AK-224-8	General perspective view of the alley (off the east side of Broadway St. between 5th and 6th Avenues), taken from northeast, including the boardwalk and the northeast corners of (from left to right along the alley) Frye-Bruhn Cold Storage Building (HABS AK-224), Essie Miller Crib (HABS AK-289), Kitty Faith Crib (HABS AK-288) (barely visible), and Goldberg Cigar Store and Confectionery (HABS AK-283)

FRYE-BRUHN COLD STORAGE BUILDING
HABS AK-224
INDEX TO PHOTOGRAPHS
(Page 2)

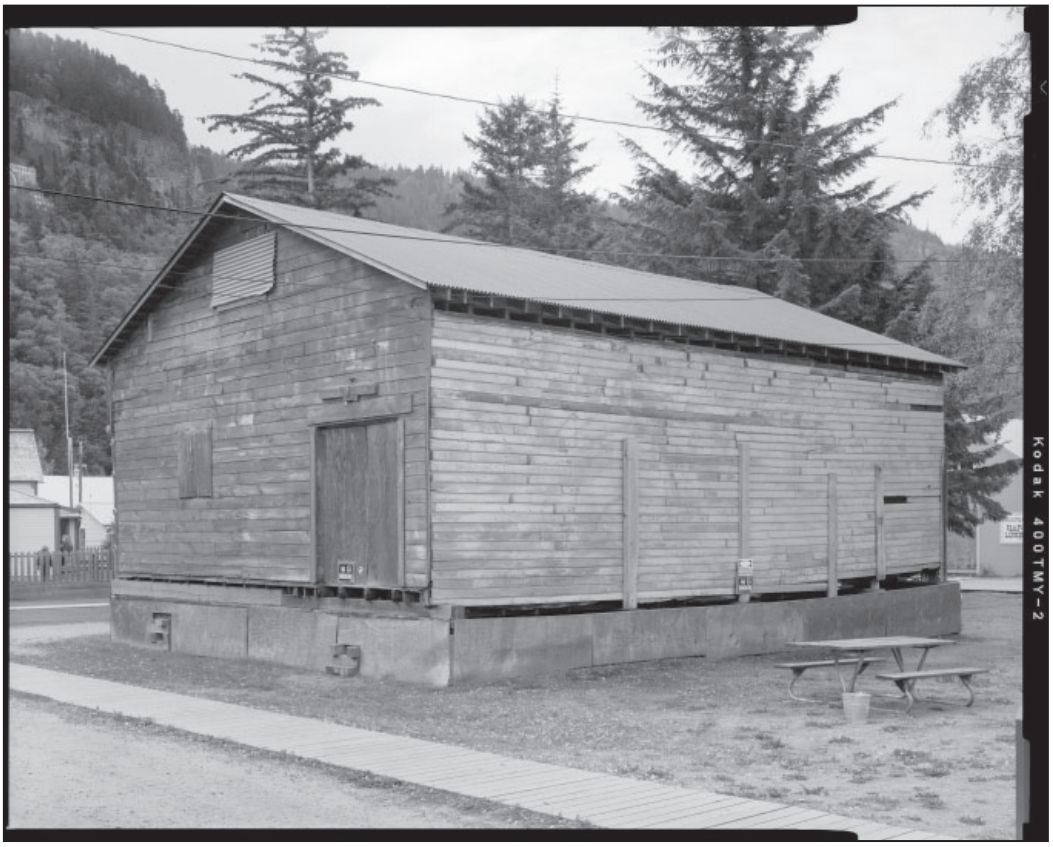
AK-224-9	Interior view of front hallway and utility space from the north (front) entrance. Note meat trolley track leading from central refrigerated storage room on the left, and cold storage doors in foreground
AK-224-10	Interior view of front hallway and utility space, facing front (north) entrance from south
AK-224-11	Interior view of rear hallway and utility space from southwest
AK-224-12	Closer interior perspective detail in rear hallway and utility space looking down at refrigeration pump from west
AK-224-13	Closer interior perspective detail in rear hallway and utility space looking down at refrigeration pump controls from southwest
AK-224-14	Interior perspective detail in front hallway and utility space looking down at exposed sawdust insulation near the middle of the west exterior wall
AK-224-15	Interior view of northeast corner refrigerated storage room from west doorway leading to front hallway and utility space
AK-224-16	Interior view of central refrigerated storage room from southwest. Note meat trolley track and refrigeration coils
AK-224-17	Interior perspective detail looking up at refrigeration coils (right) and meat trolley track passing through from central refrigerated storage room to the front hallway and utility space and curving toward front entrance, taken from southeast
AK-224-18	Interior perspective detail in central refrigerated storage room looking up at refrigeration coils, fan, meat trolley ceiling supports, and ceiling structure from northwest



Historic American Buildings Survey (AK-224). Photograph AK-224-1 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-2 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-3 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-4 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-5 by Rob Park, 2019 (Library of Congress).



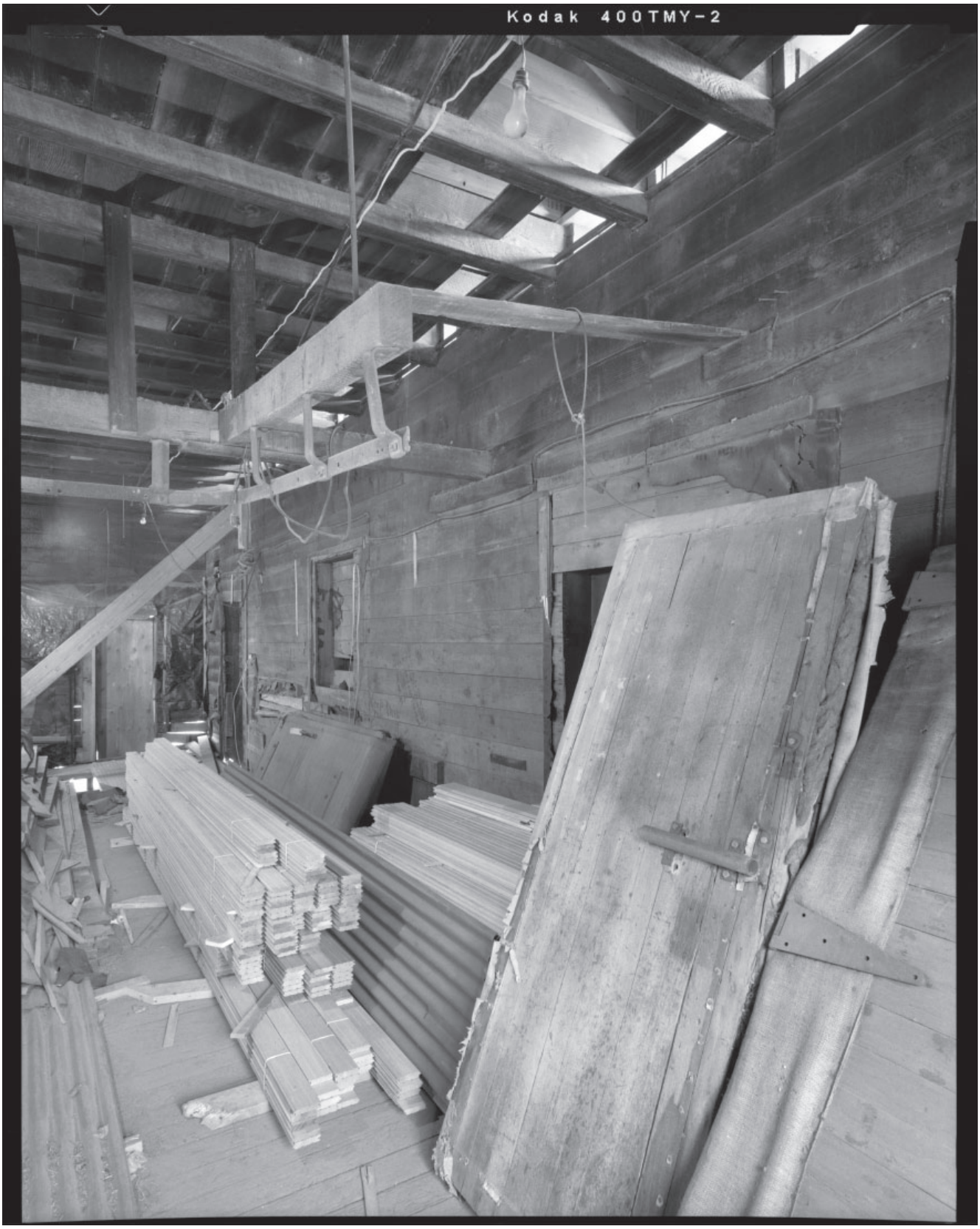
Historic American Buildings Survey (AK-224). Photograph AK-224-6 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-7 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-8 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-9 by Rob Park, 2019 (Library of Congress).



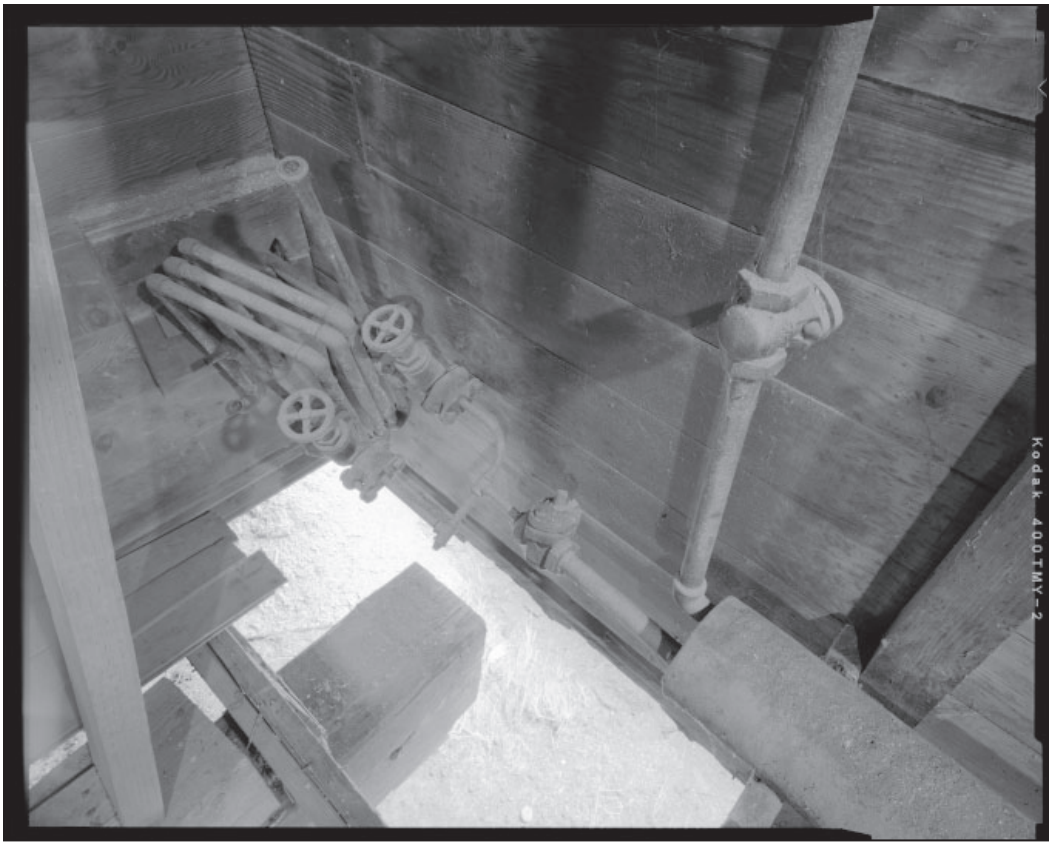
Historic American Buildings Survey (AK-224). Photograph AK-224-10 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-11 by Rob Park, 2019 (Library of Congress).



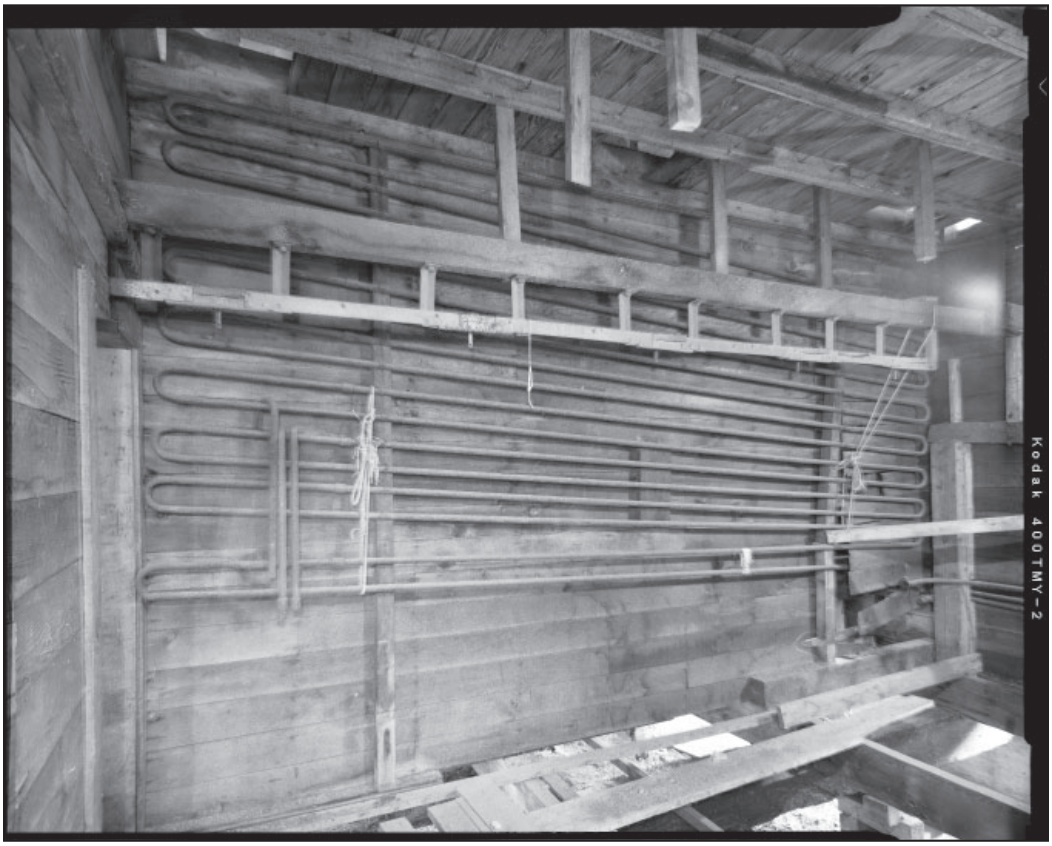
Historic American Buildings Survey (AK-289). Photograph AK-289-12 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-13 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-14 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-289). Photograph AK-289-16 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-15 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-17 by Rob Park, 2019 (Library of Congress).



Historic American Buildings Survey (AK-224). Photograph AK-224-18 by Rob Park, 2019 (Library of Congress).

APPENDIX D: MEMORANDUM OF AGREEMENT - KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK & ALASKA STATE HISTORIC PRESERVATION OFFICE (SHPO), 2015

THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Natural Resources
DIVISION OF PARKS AND OUTDOOR RECREATION
OFFICE OF HISTORY AND ARCHAEOLOGY
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April 6, 2015

File No.: 3490 NPS Relocation of Three Properties in KLGO

Michael J. Tranel
Superintendent
Klondike Gold Rush National Historical Park
P.O. Box 517
Skagway, Alaska 99840

Subject: Final Memorandum of Agreement for Relocation of Three Contributing Historic Properties

Dear Mr.Tranel:

The Alaska State Historic Preservation Office (AK SHPO) received the final subject Memorandum of Agreement (MOA) on April 1, 2015.

We have reviewed the subject MOA and find it to be satisfactory. We have signed the one copy of the signature page provided for the *Memorandum of Agreement Between the Klondike Gold Rush National Historical Park (U.S. Department of the Interior) and the Alaska State Historic Preservation Officer Regarding the Relocation of Three Contributing Historic Properties of the Skagway and White Pass National Historic Landmark* and are returning one copy to you for your records. We have retained a fully executed copy for our records.

Thank you for the opportunity to comment. Please contact Shina duVall at 269-8720 or shina.duvall@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,

Judith E. Bittner
State Historic Preservation Officer

JEB:sad

4.6.15

3490 NPS Relocation of Three Properties in KLGO

MEMORANDUM OF AGREEMENT

BETWEEN

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK

(U.S. DEPARTMENT OF THE INTERIOR)

AND THE

ALASKA STATE HISTORIC PRESERVATION OFFICER

REGARDING THE RELOCATION OF THREE CONTRIBUTING HISTORIC PROPERTIES OF THE SKAGWAY AND WHITE PASS NATIONAL HISTORIC LANDMARK

WHEREAS, Klondike Gold Rush National Historical Park (KLGO) is relocating three buildings that contribute to the Skagway and White Pass National Historic Landmark (NHL) within and onto KLGO owned and managed land, pursuant to the enabling legislation of the Park to "preserve in public ownership for the benefit and inspiration of the people of the United States, the historic structures, trails, artifacts and landscapes and stories associated with the Klondike Gold Rush of 1898" (Public Law 94-323); and

WHEREAS, KLGO has taken into account, to the maximum extent possible, such planning and actions as necessary to minimize harm to the Skagway and White Pass National Historic Landmark per Section 110(f) of the NHPA of 1966 as amended through 2006 (54 U.S.C. § 306107); and

WHEREAS, the undertaking consists of KLGO relocating three buildings that contribute to the Skagway and White Pass NHL, which are identified in the 1999 NHL nomination as the: 1) Goldberg Cigar Store (#366); 2) (Alaska/) Brass Pic Crib (#347); and 3) Dennis Rental House/Crib (#29); and

WHEREAS, KLGO has defined the undertaking's area of potential effects (APE) as being within the Skagway historic district portion of the Skagway and White Pass NHL [See Attachment A map]; and

WHEREAS, Skagway has a long tradition of relocating buildings; many buildings were moved within the period of significance and later, yet were still considered to be contributing elements of the NHL; and

WHEREAS, KLGO is moving the Goldberg Cigar Store (#366), located on 5th Avenue, which has been in NPS ownership for several years and has been moved several times in the recent past, and it will be relocated to its permanent location on Block 24, Lot 7 with its primary elevation oriented to face Broadway; and

2015-00675

WHEREAS, KLGO has acquired, through a Deed of Gift, the Brass Pic Crib (#347), located on the alley between 11th and 12th Avenues off Alaska Street, and which has been moved at least two times in the recent past, and it will be relocated to Block 24, Lot 8, between the Goldberg Cigar Store and the Dennis Rental House/Crib, with its primary elevation oriented to face the alleyway; and

WHEREAS, KLGO has acquired, through a Deed of Gift, the Dennis Rental House/Crib (#29) located on Alaska Street between 4th and 5th Avenues, in its 1909 location, and it will be relocated to Block 24, Lot 8, just to the east of the Brass Pic Crib, with its primary elevation oriented to face the alleyway; and

WHEREAS, KLGO has determined that the undertaking will have an adverse effect (as per 36 CFR Section 800.6) on the Skagway and White Pass National Historic Landmark, which is listed in the National Register of Historic Places, and has consulted with the SHPO pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C § 306108); and

WHEREAS, KLGO has intensively studied the relocation site, Block 24, through numerous archaeological investigations, and this area, part of the original Captain Moore homestead, has been vacant for several decades and in NPS ownership since 1977, and while a significant number of artifacts have been recovered from the lots, the deposits generally represent numerous episodes of disturbance and more recent 'fill' deposits from excavated areas in other parts of town. While the original White Pass Trail was located within Block 24 as seen in historic surveys and historic photos, no physical evidence of the trail on Block 24 has been discerned; and

WHEREAS, KLGO has consulted with the Mayor, Manager, Planning and Zoning Commission, and Historic District Commission from the Municipality of Skagway Borough and neighboring property owners regarding the effects of the undertaking on historic properties through informal meetings and by going through the formal process within the Municipality to move buildings within the Skagway Historic District, and determined that all entities fully supported the project as contributing significantly to sharing Skagway's history with the public; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), KLGO has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination by letter on January 30, 2015, inviting ACHP to participate in consultation pursuant to 36 CFR § 800.6(a)(1)(iii), and received a response letter dated March 18, 2015 in which ACHP declined to participate; and

WHEREAS, KLGO sent a letter to the Keeper dated October 14, 2014 regarding re-evaluation of eligibility of the buildings for inclusion in the National Register in accordance with the applicable provisions of 36 CFR 600 and applicable National Park Service guidelines and did not receive any comments; and

NOW, THEREFORE, KLGO and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

KLGO shall ensure that the following measures are carried out:

1. KLGO shall ensure that before and after photographs will be taken of the buildings in their respective setting and context.

2. KLGO shall ensure that the relocated buildings are properly secured and protected in their new locations.

3. KLGO shall provide appropriate preservation and continued maintenance for all three buildings in their new locations. All three buildings are to be placed on compacted gravel pads to serve as foundations. KLGO will maintain the feeling, design, and workmanship of each building as well as protect the original historic fabric of each building.

4. Once the property is moved, KLGO shall submit to the Keeper of the National Register for review:

    1. A letter notifying him or her of the date the property was moved;
    2. Photographs of the property on its new site;
    3. Revised maps, including a USGS map;
    4. Total acreage; and
    5. A verbal boundary description.

5. KLGO will prepare and install an interpretive exhibit with 7 separate 24 inch by 36 inch panels to tell the story of:

    a) Women during the Gold Rush with these tangible buildings as a focal point in a setting that mimics the original.
    b) The Goldberg Cigar Store, the Brass Pic Crib and the Dennis Rental House/Crib in context with how buildings were moved around in Skagway as well as to state that these three buildings had recently been relocated and were no longer in their original/authentic locations. The interpretation will include a diagram/map showing building moves in Skagway.
    c) The White Pass Trail given its history through Block 24.

6. KLGO will finalize *Paradise Alley or the Cribs of Skagway: A Preliminary Historic Photo Essay* by Karl Gurcke for internal use and to share with the public by request.

DELIVERABLES

1. Within one year after the buildings have been relocated, KLGO will provide before and after photos of each building, including images that show the buildings in their broader setting/streetscape, to SHPO.

2. Within two years of the MOA effective date, KLGO will provide draft interpretative signage for review by SHPO. The SHPO will have 45 days to review and provide comments back to KLGO. KLGO will install interpretive exhibits for the public within three years of the MOA effective date.

3. Within two years of the MOA effective date, KLGO will provide a final copy of *Paradise Alley or the Cribs of Skagway: A Preliminary Historic Photo Essay* by Karl Gurcke to SHPO. This document will also be available to the public.

DURATION

This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, KLGO may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with the Amendments Section below.

POST-REVIEW DISCOVERIES

If properties are discovered that may be historically significant, or if unanticipated effects on historic properties are found, KLGO shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties in consultation with SHPO (36 CFR § 800.13).

MONITORING AND REPORTING

Each year, following the execution of this MOA until it expires or is terminated, KLGO shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. The report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in KLGO's efforts to carry out the terms of this MOA.

DISPUTE RESOLUTION

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, KLGO shall consult with such party to resolve the objection. If KLGO determines that such objection cannot be resolved, KLGO will:

1. Forward all documentation relevant to the dispute, including the KLGO proposed resolution, to the ACHP. The ACHP shall provide KLGO with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, KLGO shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. KLGO will then proceed according to its final decision;

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, KLGO may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, KLGO shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response; and

3. Continue to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute.

AMENDMENTS

This MOA may be amended when such an amendment is agreed to in writing by all signatories.

The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

TERMINATION

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per the "Amendments" section, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, KLGO must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. KLGO shall notify the signatories as to the course of action it will pursue.

Execution of this MOA by KLGO and SHPO and implementation of its terms evidence that KLGO has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.*

SIGNATORIES:

Klondike Gold Rush National Historical Park

By: _____ Date: 3/27/15

Michael J. Tranel
Superintendent, Klondike Gold Rush National Historical Park

Alaska State Historic Preservation Officer

By: _____ Date: 4/6/2015

Judith Bittner
Alaska State Historic Preservation Officer

APPENDIX E: CONDITION ASSESSMENT & TREATMENT PLAN FOR THE REFRIGERATION COILS, MEAT TROLLEY, AND COLD STORAGE DOORS INSIDE THE FRYE-BRUHN COLD STORAGE BUILDING, 2023

NATIONAL PARK SERVICE

CONDITION ASSESSMENT & TREATMENT PLAN FOR THE REFRIGERATION COILS, MEAT TROLLEY, AND COLD STORAGE DOORS INSIDE THE FRYE-BRUHN COLD STORAGE BUILDING

KLONDIKE GOLD RUSH NAT'L HISTORICAL PARK

AUGUST 31, 2023





REPORT BY:
NICOLE PETERS, CONSERVATOR
NPS HARPERS FERRY CENTER

FRYE-BRUHN COLD STORAGE BUILDING

Historical Significance:

When the Klondike Gold Rush began, Charles Frye and Charles Bruhn quickly expanded their Seattle-based meat packing company with a market, slaughterhouse, and this cold storage building in Skagway, Alaska. They also built retail stores in several other Alaska ports. Selling meat to stampeders, the Frye-Bruhn company boosted their annual payroll from $6,000 to nearly $1 million per year in 1898.

Built in 1900 near the Skagway waterfront on Second Avenue, the Frye-Bruhn Cold Storage Building was moved to the east end of Fifth Avenue around November 1902. The Frye-Bruhn Company owned this building until 1919, when the demand for meat had slowed due to the loss of population in Skagway and in the Yukon. The building was sold to grocer, Tony Dortero, in 1919 and remained in the Dortero family until 1954. Malcolm Moe bought the structure and used it primarily as a warehouse. The building remained in the same location until 2004 when the building was donated to the National Park Service by a subsequent owner with the stipulation it be moved to make room for proposed development. The building presently rests on cribbing awaiting a new foundation and full rehabilitation treatment. The Frye-Bruhn Cold Storage Building is significant for its association with one of the largest meat-packing companies operating on the west coast at the turn of the century, the commerce associated with the Klondike Gold Rush in Skagway, and for its technology which includes its original refrigeration equipment.

It is not known how long the refrigeration units in the Frye-Bruhn warehouse operated. Commercial refrigeration was introduced in the United States in 1856. However, the ice industry had become well-established, and its relative simplicity compared to commercial refrigeration kept it dominant until the 1890s when problems with ice from polluted rivers and lakes forced breweries and meat packers to take a closer look at commercial refrigeration. These early commercial refrigeration units, such as the Frye-Bruhn Cold Storage Building in Skagway, used either gaseous ammonia, methyl chloride, or sulfur dioxide as refrigerants. Leakages often had fatal results for those nearby when the leakage occurred. It wasn't until the 1920s that chlorofluorocarbons for cooling were developed by Frigidaire.

CONDITION ASSESSMENT

REFRIGERATION COILS

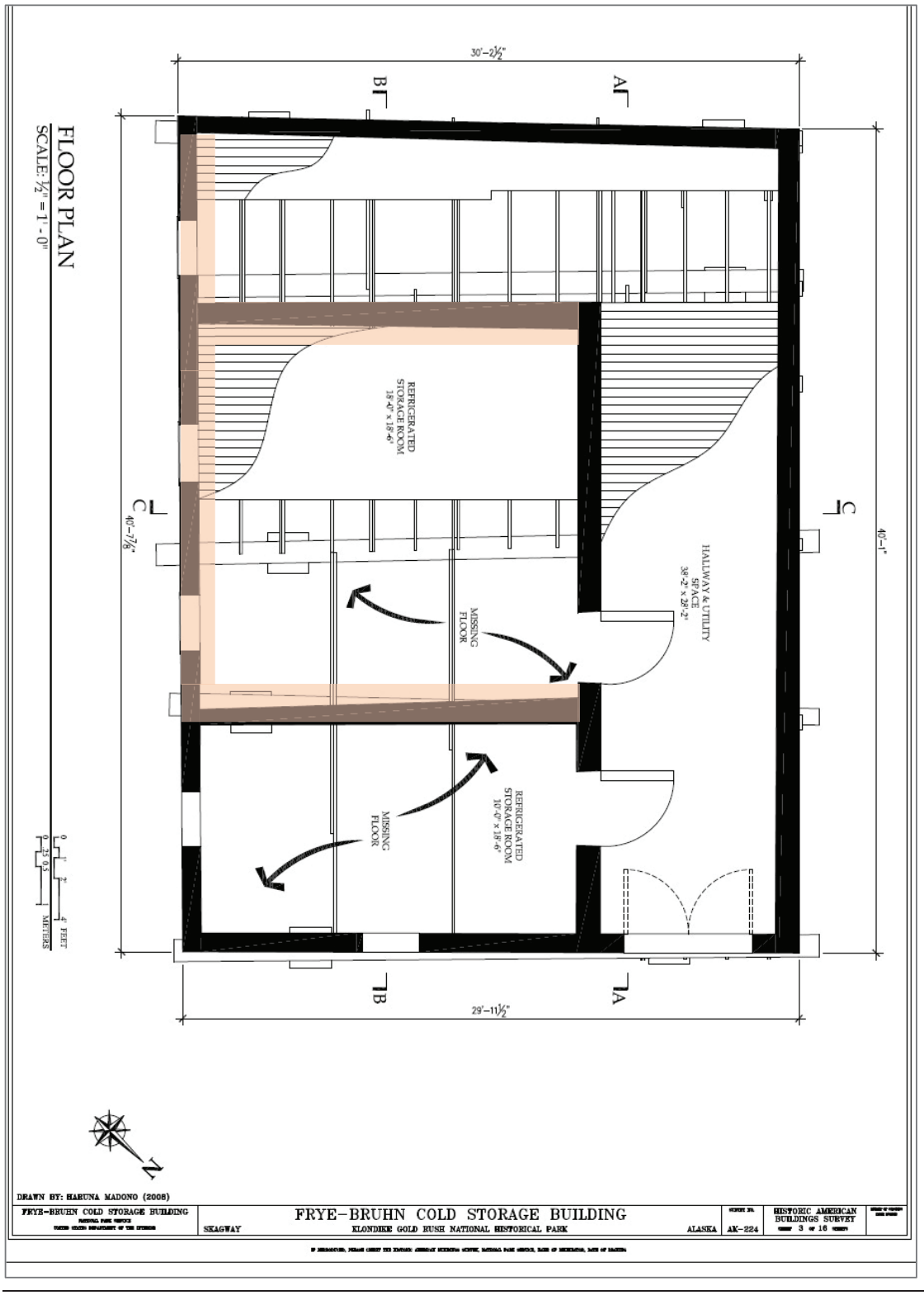
Summary

The refrigeration coil system throughout the Frye-Bruhn Cold Storage Building is in poor condition with detached and missing components, bent/misaligned areas, active corrosion, and significant compact soiling and debris accumulation. The metal exhibits heavy corrosion encrustations, corrosion-fused bolts and hardware, and actively flaking surfaces. The system is empty of all fluids.

Layout

The refrigeration coil systems assessed during the site visit are installed along the southwest, southeast, and northeast walls inside the Refrigerated Storage Room 18’-0” x 18’-6”. A cylindrical tank attached to valved pipe dividers is installed along the southeast wall of the Hallway & Utility Space 38’-2” x 28’-2”. The location of the refrigeration coils and parts is denoted by the highlighted regions in the Historic American Buildings Survey (HABS) drawing on the following page.

Frye-Bruhn Cold Storage Building: Klondike Gold Rush National Historical Park, Alaska
Survey No. AK-224
Drawn by: Haruna Madono (2008)
Sheet 3 of 16 sheets


FLOOR PLAN
SCALE: ½" = 1'-0"
30'-2½"
29'-11½"
40'-7⅞"
40'-1"
REFRIGERATED STORAGE ROOM 18'-0" x 18'-6"
MISSING FLOOR
HALLWAY & UTILITY SPACE 38'-2" x 28'-2"
MISSING FLOOR
REFRIGERATED STORAGE ROOM 10'-0" x 18'-6"
DRAWN BY: HARUNA MADONO (2008)
FRYE-BRUHN COLD STORAGE BUILDING
SKAGWAY
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
ALASKA
AK-224
HISTORIC AMERICAN BUILDINGS SURVEY

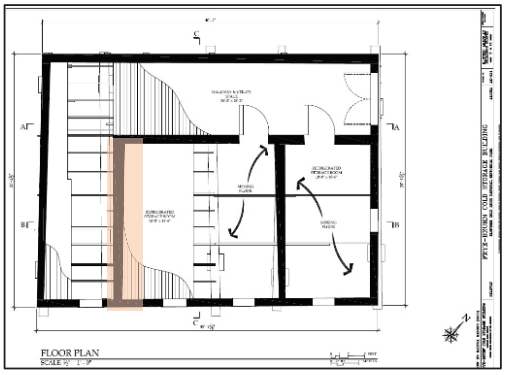
Room: Refrigerated Storage Room 18’-0” x 18’-6”

Southwest Wall



Figure 1. Refrigeration coil system and fan installed on the southwest wall of the Refrigerated Storage Room 18’-0” x 18’-6”.

The southwest wall refrigeration coil system is largely intact aside from 2 coil lines missing from the bottom area. The system is mounted to the wall by bent nail “brackets” installed around each coil line attached to two wooden vertical support beams. Each coil line is connected to the next by a threaded coupler installed on alternating rows on both the far left and far right sides of the system. There are two main bolted pipe connector valves: one at the central bottom coil line and one at the top upper left coil line. The lower left corner contains connection and splitting hardware, facilitating coil transition into adjacent rooms. There is a central aluminum 4-bladed fan mounted to custom blocking in the upper center wall space. The fan system extends through the wall to the room just southwest, but no mechanism is present on the other side of the wall other than the fan rod.



The metal coil surfaces exhibit an overall oxidation layer with areas of active corrosion ranging from mild to severe. There is significant compacted dust, soiling, and debris accumulation on all coil surfaces. An unidentified black surface coating observed on some areas of the coil system is largely lost (due to corrosion) and is only partially intact around the coil bends at each end of the system (Figure 2). The coating could be an applied system, or it could be an original residue from the metal coil fabrication process. A third possibility is that the coating is an unintentional byproduct of the refrigeration process. Literature on the history of refrigeration states the following regarding cold storage rooms:

> *During these years the cold storages and freezers used bare-pipe coils, usually 1¼ in. steel pipe, along the walls and in bunker form on the ceilings.*
>
> *Defrosting the coils was difficult in freezers as removing the ice from the rooms was strictly manual labor. The coolers' condensate drains also were numerous. The coils fouled with oils from the compressors because oil separation systems were not perfected.*[1]

Refrigerated Storage Room 18'-0" x 18'-6"
Southwest Wall Annotated Photography



Figure 2. Image of coils and connection and splitting hardware, facilitating coil transition into adjacent rooms in the bottom left corner of the southwest wall.



Figure 3. Detail of bent nail "brackets" supporting the coil system installed into vertical beams along southwest wall.

[1] *A History of Refrigeration*, George C. Briley, P.E., ASHRAE Journal (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.), July 2006.



Figure 4. Image of missing coil lines along bottom perimeter of room. Note excess debris at the coil line transition into the adjacent room.



Figure 5. Detail of upper left connecting coupler with bolts that appear to be seized and fused due to advanced corrosion.



Figure 6. Detail of bottom connecting coupler and excess debris leading into adjacent room.



Figure 7. Detail of bent nail brackets and missing refrigeration coil lines.



Figure 8. Detail of central aluminum ventilation fan and iron bolt fasteners.



Figure 9. Detail of custom blocking and connecting hardware of fan.

Room: Refrigerated Storage Room 18’-0” x 18’-6”

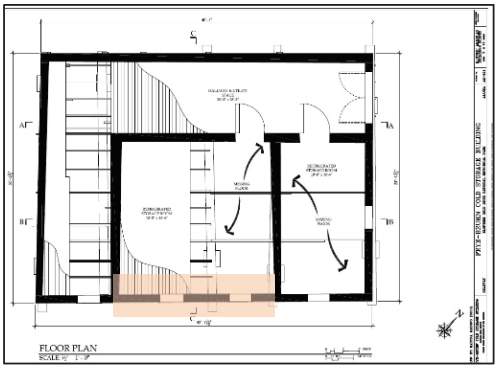
Southeast Wall



Figure 10. Refrigeration coil system on the southeast wall of the Refrigerated Storage Room 18’-0” x 18’-6”.

The southeast wall coil system consists of 4 coil lines. One coil line travels along the top perimeter of the wall and transitions at a bend in the corner to the north wall. Three coil lines that travel along the bottom perimeter of the wall, two of which terminate at the northeast wall, and one travels through the wall and terminates in the room just east/ northeast.

The system is mounted to the wall by bent nail support “hooks” installed under the coil lines and anchored directly into the wall. Part of the lower coil system travels behind a vertical support beam where the wood has been notched out to accommodate for the coils. The lower system coils terminate in partial pipe connector valves and pipe splitter hardware.



Similar to the condition of the coils on the south wall, the pipe surfaces exhibit an overall oxidation layer with areas of active corrosion ranging from mild to severe. An applied unidentified black coating system is largely lost (due to corrosion). There is significant compacted dust, soiling, and debris accumulation on all coil surfaces.

Refrigerated Storage Room 18’-0” x 18’-6”
Southeast Wall Annotated Images



Figure 11. Detail of curved coil transition from the southwest wall to the southeast wall in the upper corner of the Refrigerated Storage Room 18’-0” x 18’-6”.



Figure 12. Detail of coil transitions from the southwest wall to the southeast wall in the lower corner of the Refrigerated Storage Room 18’-0” x 18’-6”.



Figure 13. Coil line traveling along top of room with heavy debris deposits and tar paper scraps resting along wood ledge below.



Figure 14. Detail of black coating on refrigeration coils and active corrosion formation resulting in loss of coating.



Figure 15. Detail of coil lines traveling through notched vertical support beam.



Figure 16. Detail of coil line in bottom corner traveling under the wall planks from the southeast to the north/ northeast wall, terminating with a connecting coupler.

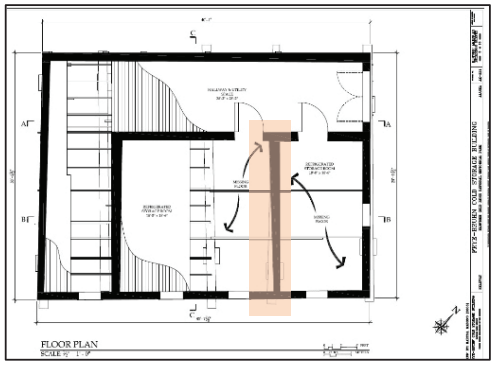
Room: Refrigerated Storage Room 18’-0” x 18’-6”

Northeast Wall



Figure 17. Refrigeration coil system on the northeast wall of the Refrigerated Storage Room 18’-0” x 18’-6”.

The northeast wall coil system is not intact or structurally stable. The far-right vertical support beam to which the system is mounted is damaged and not aligned with its left counterpart. The beam is in two pieces and is shorter in length than the other vertical beam. The top section of the right vertical beam is installed on the wall approximately 10’’ lower than the left beam, causing the coil system to bend open. The bottom two coil lines are being held in place with rope strung around upper lines on the left-hand side, and there is a rope support tethering 5 lines of coil at the right-hand side of the system. There are three partial coil segments hooked over the coil lines at the lower left region; these pieces are not physically attached. Several lines appear to be missing towards the bottom of the system.



The system is mounted to the wall by bent nail “brackets” installed around each coil line attached to two wooden vertical support beams. Each coil line is connected to the next by a threaded coupler installed on alternating rows on both the far left and far right sides of the system. There is one main bolted pipe connector valve at the top right area, adjacent to the damaged support beam.

Similar to the southeast and southwest walls, coil surfaces exhibit an overall oxidation layer with areas of active corrosion ranging from mild to severe. The metal on this wall is in particularly poor condition with considerable dimensional corrosion encrustations and areas of actively spalling corrosion byproducts. An applied unidentified black coating system is largely lost (due to corrosion) and is only partially intact around the coil bends at each end of the system. There is significant compacted dust, soiling, and debris accumulation on all coil surfaces.

Refrigerated Storage Room 18'-0" x 18'-6"

Northeast Wall Annotated Images



Figure 18. Detail of the top portion of the altered right-side vertical beam. Note how the top and lower coil lines are not parallel to one another as a result of the vertical support not being installed at the same height as the left-counterpart beam. The lower orientation of the right-side beam support is causing the coil line to bend open, instead of the coils running in consistent, parallel rows.



Figure 19. Detail of the widening gap between the top and lower coil lines on the northeast wall.

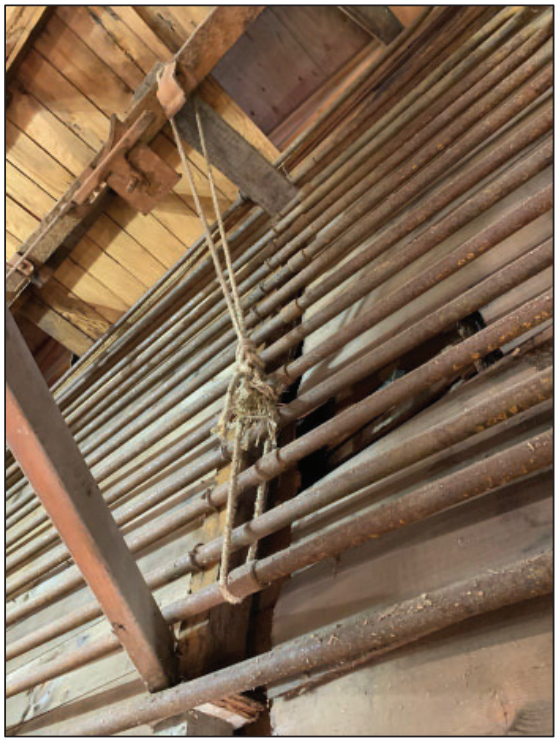


Figure 20. Detail of rope support on right-hand side of wall, tethering coil lines to the meat trolley support beam.



Figure 21. Detail of advanced active corrosion and encrustations on coil surfaces. Coil lines on the northeast wall area heavily pitted and flaking.



Figure 22. Detail of advanced active corrosion and encrustations on coil surfaces. Coil lines on the northeast wall area heavily pitted and flaking.

Room: Hallway and Utility Space 38’-2” x 28’-2”
Southeast Corner

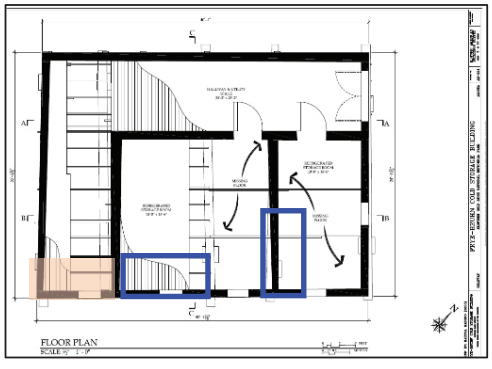


Figure 23. Cylindrical tank attached to valved pipe dividers in the southeast corner of the Hallway and Utility Space, connecting to the main coil system in the adjacent room.

In the southeast corner of the L-shaped Hallway and Utility Space is a cylindrical tank attached to valved pipe dividers connecting to the refrigeration coil system in the adjacent room. The tank is mounted to the wall via notched ledges made from wood blocking. There is a smaller coil system lodged into the dividers; this component does not appear to be positioned in the correct orientation or location within the system. This feature measures approximately 100’’ x 50’’ x 20’’. It has been expressed that the tank and corresponding parts will need to be relocated once building rehabilitation commences, as the space is intended to be used as a restroom facility.

Similar to the other refrigeration coils, the surfaces exhibit an overall oxidation layer with areas of active corrosion ranging from mild to severe. There is significant compacted dust, soiling, and debris accumulation on all coil surfaces.

The relocation of this feature may require cutting it free from its current location. All nuts and attachment hardware are extremely corroded and fused in its current position; if the piece cannot be removed with basic tools, penetrating oil, and heating/cooling, then cutting the pipes may be warranted. Potential new locations where the component could fit given its dimensions include: the southeast wall in the larger refrigeration room or the southwest wall in the Refrigerated Storage Room 10’-0” x 18’-6”.



ANALYSIS

X-ray Fluorescence Spectrometry (XRF):

XRF was used to analyze and help characterize the refrigeration coil coating. Spectra were collected using a Bruker Tracer 5i handheld energy dispersive X-ray spectrometer that was held in place on specific locations on the object. The excitation source was a Rhodium (Rh) target X-ray tube, operated on the "Metal Alloys 2" setting: 15 keV, 11.35 uA, 12 seconds, no filter. The X-ray beam interacts with the sample at approximately a 3mm circle. X-ray signals were detected using a proprietary 20mm^2 silicon drift detector (SDD) with a resolution of <140 eV @ 250,000 cps Mn Ka. Spectral interpretation was performed by the instrument in this standard setting.

Results of XRF: Black Coating from Refrigeration Coils

Element	Percentage
Fe (Iron)	98.82
Si (Silica)	0.62
S (Sulfur)	0.24
P (Phosphorus)	0.17
Ti (Titanium)	0.05
Ni (Nickel)	0.05
Cu (Copper)	0.04
Mn (Manganese)	trace amount

The elements detected during XRF analysis correspond with the elemental composition of oil-hardened steel. These results suggest that the black coating is from the metal composition and manufacture. However, these results could also be interpreted to support the theory that the black coating is instead an oil-based byproduct from the refrigeration process, which has been described to soil the refrigeration coils "with oils from the compressors because oil separation systems were not perfected," as mentioned in the above citation from Briley.

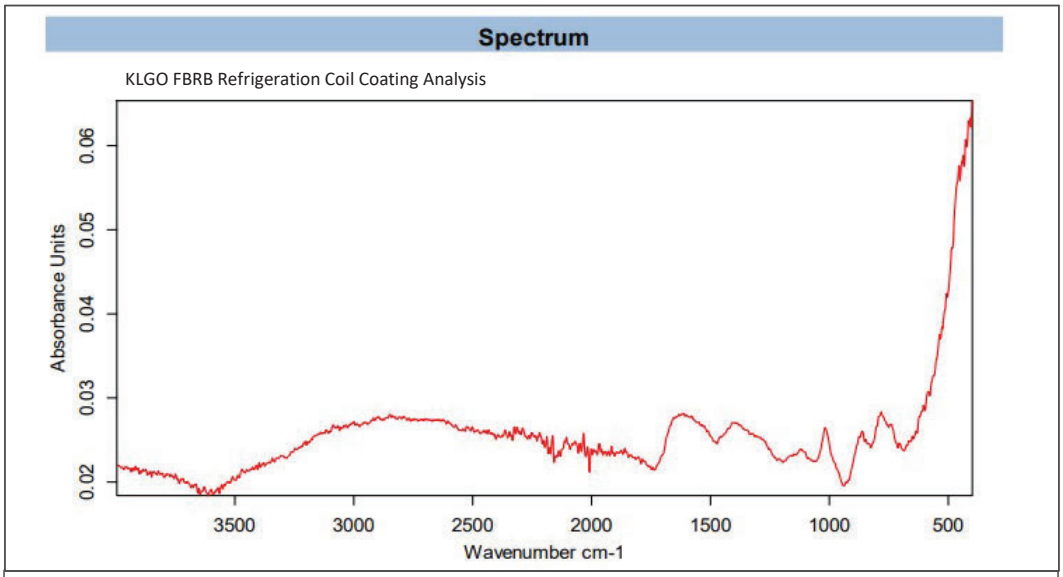
Fourier-transform Infrared Spectrometry (FTIR):

A piece of flaking and detached black coating was sampled from the refrigeration coils and taken back to the Harpers Ferry Center (HFC) conservation labs for analysis. The sample was analyzed and infrared spectra were collected using a Bruker ALPHA II compact FT-IT spectrometer with a platinum ATR accessory. Samples were analyzed by pressing them against the monolithic diamond crystal. The spectra are the average of 24 scans at 4.0 cm-1 spectral resolution. An ATR correction routine was applied to compensate for variations in penetration depth with wavenumber.

FTIR results were inconclusive as to the molecular composition of the material. (See below for full FTIR spectrum and report). This may be the result of the sample being aged (deteriorated) to a degree where the original molecular structure is obscured, rendering the sample unrecognizable and therefore, uncharacterizable. Alternatively, inconclusive FTIR results suggest the possibility that the coating is largely inorganic in nature, suggesting the presence of a synthetic coating system rather than an organic lipid-based or wax coating.

IR Analysis

Instrument type (SN)	Alpha II (112397)
Accessory	ATR platinum Diamond 1 Refl #2709917D2D
OPUS version	Version 8.5 Build: 8, 5, 32, 422.B 20200203
Operator	Admin
Experiment name	ATR_DI.xpm
Experiment path	T:\Bruker\OPUS_8.5.29\Instruments\ALPHA_II\XPM
Number of sample scans	24
Resolution	4
Spectrum file name	KLGO_FBcoilcoating.0
Spectrum file path	T:\Bruker\Data\MEAS
Measurement date and time	11/08/2023 17:55:60 (GMT+2)
Sample name	KLGO Coil coating FB
Sample form	Instrument type and / or accessory



Data Interpretation:
The only significant peaks recorded during analysis are noted around 1000 cm^{-1} in the IR fingerprint region (1200-700 cm^{-1}). This region is notable for the large number of infrared bands that are found there. Absorbance is medium-weak, indicating the presence of alkyl halides. Alkyl halides are compounds that have a C–X bond, where X is a halogen: bromine, chlorine, fluorene, or iodine. Theoretically, the sample could be a fluoroalkane, chloroalkane, bromoalkene, or iodoalkane. Of these possible chemical compositions, it is likely that the coating sample contains a fluoroalkane, given that organofluorine compounds have historically been used in diverse applications ranging from oil and water repellents to pharmaceuticals, refrigerants, and reagents in catalysis.

TREATMENT RECOMMENDATIONS

REFRIGERATION COILS

Summary

The treatment of the refrigeration coils requires building improvements, structural stabilization and remounting of coil lines, cleaning, mechanical removal of corrosion, and coating of metal surfaces. These tasks will be performed by a cross-departmental team which includes the KLGO Preservationist and Maintenance Division, NPS Conservator, and trained KLGO Conservation Technicians. All building improvements, architectural rehabilitation, and structural stabilization of wooden support beams, walls, and blocking should be carried out by the KLGO Preservationist and Maintenance Division and are not the responsibility of the NPS Conservator or KLGO Conservation Technicians. All conservation treatment procedures for the refrigeration coil system should be guided and performed by the NPS Conservator and trained KLGO Conservation Technicians.

All treatment work will have to be executed in situ, as all hardware and couplers are fused and attempts at deinstalling the hardware would likely result in irreparable damage to significant areas of the original surface. Deinstalling the system for treatment may prove to be unsuccessful and time-consuming. The author believes that a significant portion of the treatment of the refrigeration coils can be executed by skilled KLGO Conservation Technicians after receiving hands-on instruction from an NPS Conservator. Ideally, the treatment would be carried out by either two trained KLGO Conservation Technicians, or one trained KLGO Conservation Technician and the KLGO Preservationist. Once the techniques involving cleaning, corrosion removal, and coating are reviewed and practiced by the NPS Conservator, KLGO Preservationist, and KLGO Conservation Technicians, the trained KLGO team could proceed with treatment. Given the sheer surface area of the coil system and the type of work required for this specific treatment, utilizing trained Conservation Technicians is recommended and ethically appropriate as long as regular progress reports and check-ins with the NPS Conservator are conducted throughout the project.

The steps for each procedure are described below along with the personnel recommendations for each task. Time *estimates* are included for each process as appropriate. The time estimates for tasks assigned to the KLGO Conservation Technicians are the total hours projected for two technicians.

1. ***Building Improvements (KLGO Preservationist and Maintenance Division)***- The damaged and misaligned vertical support beam on the right side of the northeast wall in the Refrigerated Storage Room 18’-0” x 18’-6” must be stabilized and moved upwards to its original positioning so that the coil system is not bent and opened. Custom scaffolding must be erected inside the rooms in order to grant safe and close access to the coils for conservation treatment. **Hourly estimate unknown.**
2. ***Testing and Analysis of detached coil lines to establish treatment protocol. (HFC Conservator)***- It is requested that the 3 detached refrigeration coils temporarily hooked onto the northeast wall of the Refrigerated Storage Room 18’-0” x 18’-6”, be deinstalled, packed, and shipped to HFC Conservation labs for testing and analysis. Corrosion removal procedures and coating systems will be applied and evaluated. Results will inform the trajectory of treatment for the entire coil system. **16 hours for HFC Conservator**

3. ***Structural Stabilization/ Remounting (KLGO Preservationist with remote technical support from HFC Conservator)***- All coil lines on the northeast wall of the Refrigerated Storage Room 18'-0" x 18'-6" must be securely mounted and stabilized with appropriate hardware. The tank feature in the southeast corner of the hallway and utility space must be relocated and mounted. **40 hours for Maintenance, 4 hours for Conservation**
4. ***Cleaning (KLGO Conservation Technicians)***- Surfaces must be cleared of excess debris. This can be done with brushes, vacuum, or forced air methods. **10 hours**
5. ***Corrosion Removal (KLGO Conservation Technician and HFC Conservator)***- Corrosion encrustations and unstable oxides should be removed from the surface to mitigate further deterioration of the alloy. The procedure for safe and efficient corrosion removal may involve the following techniques. Testing on loose or detached sections in inconspicuous locations will be necessary to understand the efficacy of each process. **160 hours for KLGO Conservation Technicians, 40 hours for HFC Conservator**
    - **a.** Air abrasion: using a portable micro-air abrasion using a soft, inert blasting media (walnut shell, garnet) with low psi is often one of the safest yet effective ways to remove corrosion encrustations without damaging the underlying metal. Air abrasion would likely be the most thorough methods of corrosion removal, as the forced air abrasive can access hard to reach areas and can easily make contact with the rounded contour of the pipes. This treatment procedure would take place in situ, and the installation of a protective sheathing between the back of the coil system and the wall will be necessary to protect the wall boards from receiving any abrasion. By placing plastic sheeting on the ground, blasting media can be either vacuumed and collected for reuse or can be discarded.
    - b. Wire brushes: using a series of stiff-bristle and wire brushes with solvent to mechanically remove corrosion encrustations. This process is good for detail work but is usually not time efficient. Using wire bristles may be appropriate for addressing tight areas around the bent nail brackets.
    - c. Angle grinder with abrasive pad: using power tools with an abrasive flap-wheel bit may be another possible solution to address corrosion encrustations; however, the process will involve the user to pay close attention to how much surface material is being removed. The tool may not be able to reach behind the coil system to address corrosion on the back side of the pipes.
6. ***Coating Application (KLGO Conservation Technicians and HFC Conservator)***- Once corrosion is cleared, a protective coating will need to be applied to the coils. A commercially available, high-performance metal coating will be tested and selected by the HFC Conservator. The coating will protect the coils against exposure to UV light, moisture and humidity, temperature extremes and fluctuations, coastal sea salt aerosols, and pollutants. **80 hours for KLGO Conservation Technicians, 16 hours for HFC Conservator.**

CONDITION ASSESSMENT

MEAT TROLLEY

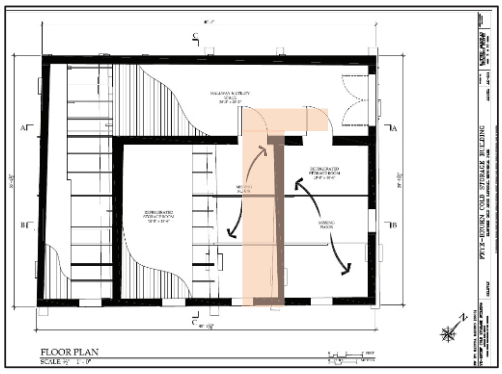
Rooms: Refrigerated Storage Room 18’-0” x 18’-6” and the Hallway & Utility Space 38’-2” x 28’-2”

Summary



Figure 24. The meat trolley system installed inside the Refrigerated Storage Room 18’-0” x 18’-6” and extends into the Hallway and Utility Space 38’-2” x 28’-2” where it transitions towards the exterior northeast facing door of the room.

The meat trolley system installed through the Refrigerated Storage Room 18’-0” x 18’-6” and the Hallway and Utility Space 38’-2” x 28’-2” is in poor condition with detached and missing components, bent and misaligned areas, flaking and missing paint coatings, active corrosion, and significant compacted soiling and debris accumulation. The metal components exhibit heavy corrosion encrustations and actively flaking surfaces. There are infrastructure issues impacting the stability and orientation of the system which will require the attention of the KLGO Preservationist and Maintenance Division.



The meat processing track system was designed for easy transportation and storage of carcasses in the cold storage room by using sliding or roller hooks that traveled along an overhead track. The system is comprised of a series of vertical brackets bolted to an overhead support beam. The brackets are attached to flat metal stock with custom supporting clamps and rail switch hardware.

The system appears to be properly installed along the northeast wall of the Refrigerated Storage Room 18'-0" x 18'-6" but is misaligned in the Hallway and Utility Space 38'-2" x 28'-2" hallway. The long support bolt at the terminus of the system is lower in elevation, causing the track to slant downward. (The author is unaware whether this may be an inherent design feature of the system.) Otherwise, the system appears to be securely mounted to the building infrastructure. However, it is still recommended that the KLGO Preservationist inspect the meat trolley hardware connections to confirm its stability prior to conservation treatment.

The track system is missing parts, resulting in lost bolts and hardware. The two-part sheet metal flap above the interior door opening connecting the Refrigerated Storage Room 18'-0" x 18'-6" and the Hallway and Utility Space 38'-2" x 28'-2"is distorted and bent. The salmon-colored paint system is largely intact in the large refrigeration room but largley lost in the hallway. There are localized areas of unstable oxide and active corrosion, resulting in the tenting and spalling of the paint system.

Meat Trolley: Refrigerated Storage Room 18'-0" x 18'-6"
Northeast Area Annotated Images



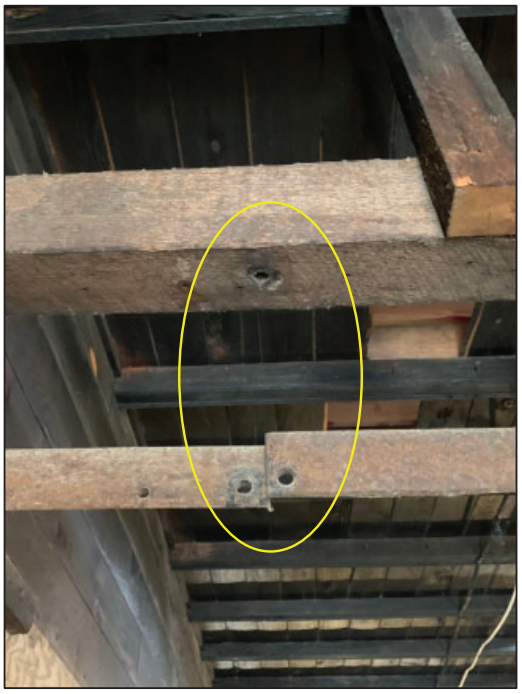
Figure 25. Image showing top of support beam with hardware attachments securing the Meat Trolley to the beam.

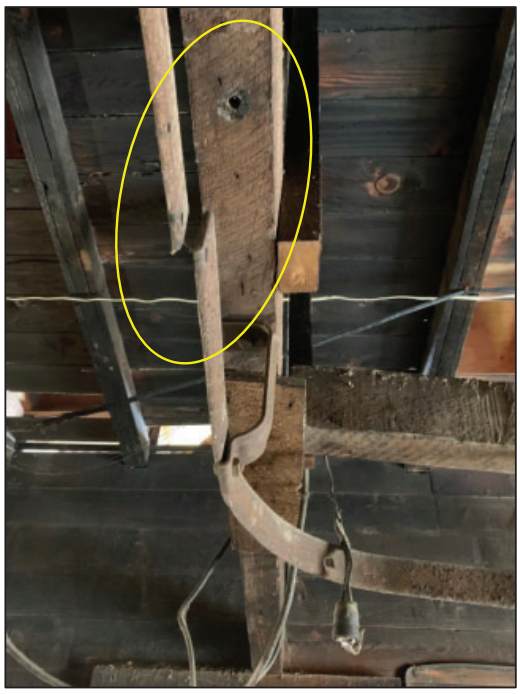


Figure 26. Detail of painted vertical bracket.



Figure 27. Condition detail of active corrosion and the loss and damage to paint system. Paint is actively flaking from metal surface due to underlying corrosion.





Figures 28 and 29. Detail of track misalignment and missing hardware in the Hallway & Utility Space.



Figure 30. Image of the terminus of the continuous track in the Hallway & Utility Space.



Figure 31. Image attempting to capture the different planes on which the support beams are oriented. The end of the continuous track on the left is lower than its right-side counterpart above the exterior doorway in the Hallway & Utility Space.



Figure 32. Detail of track transition from the Refrigerated Storage Room into the Hallway & Utility Space through the notched cavity of the interior doorway between the two rooms.



Figure 33. Detail of the bent and distorted sheet metal flap above the interior doorway of the Hallway & Utility Space leading into the Refrigerated Storage Room.
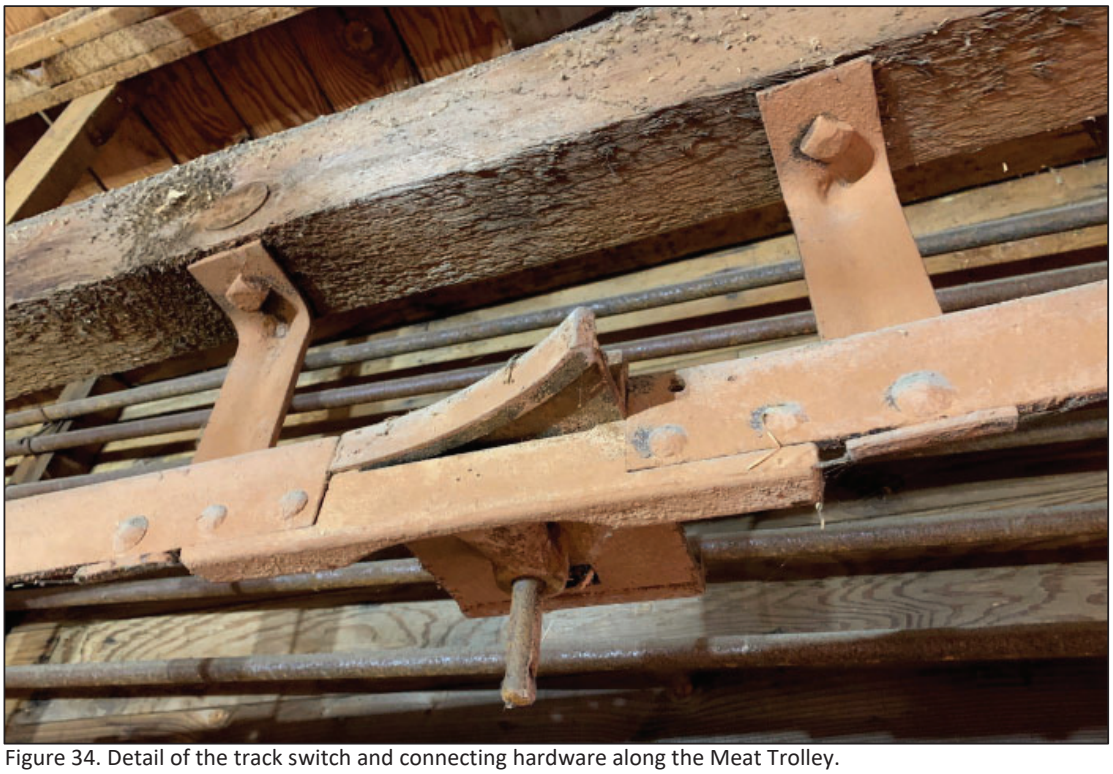


Figure 34. Detail of the track switch and connecting hardware along the Meat Trolley.



Figure 35. Underside view of the track switch and Meat Trolley hardware and connecting bolts.

TREATMENT RECOMMENDATIONS

MEAT TROLLEY

Summary

The treatment of the Meat Trolley requires building improvements, structural stabilization of the track and blocking, surface cleaning of all track components, mechanical removal of corrosion and the pre-existing paint system, and the coating or priming of metal surfaces followed by repainting to match the original color. These tasks will be performed by a cross-departmental team which includes the KLGO Preservationist and Maintenance Division, NPS Conservator, and trained KLGO Conservation Technicians. All building improvements, architectural rehabilitation, and structural stabilization of wooden support beams, ceilings, and blocking should be carried out by the KLGO Preservationist and Maintenance Division and are not the responsibility of the NPS Conservator or KLGO Conservation Technicians. All conservation treatment procedures for the Meat Trolley should be guided and performed by the NPS Conservator and trained KLGO Conservation Technicians.

Most of the treatment work will have to be executed in situ, as deinstalling the entire track system for treatment may prove to be unsuccessful and time-consuming. The damaged sheet metal flap above the interior doorway connecting the Refrigerated Storage Room and the Hallway and Utility Space may require removal for conservation treatment, if possible. The author believes that a significant portion of the treatment of the Meat Trolley can be executed by trained KLGO Conservation Technicians after receiving hands-on instruction from an NPS Conservator. Ideally, the treatment would be carried out by either two trained KLGO Conservation Technicians, or one trained KLGO Conservation Technician and the KLGO Preservationist. Once the techniques involving cleaning, corrosion removal, and coating are reviewed and practiced by the NPS Conservator, KLGO Preservationist, and KLGO Conservation Technicians, the trained KLGO team could proceed with treatment.

Given the sheer surface area of the Meat Trolley and the type of work required for this specific treatment, utilizing trained Conservation Technicians is recommended and ethically appropriate as long as regular progress reports and check-ins with the NPS Conservator are conducted throughout the project.

The steps for each procedure are described below along with the personnel recommendations for each task. Time *estimates* are included for each process as appropriate. The time estimates for tasks assigned to the KLGO Conservation Technicians are the total hours projected for two technicians.

1. ***Building Improvements (KLGO Preservationist and Maintenance Division)***- Inspect the long support bolt at the end of the Meat Trolley track and the associated blocking in the Hallway & Utility Space. If necessary and historically appropriate/accurate, elevate the track and blocking structure so that the track corresponds with the fragmentary counterpart installed above the exterior doorway on the north interior wall. **Hour estimate unknown.**
2. ***Structural Stabilization and Remounting (HFC Conservator and KLGO Conservation Technician)***- Deinstall the sheet metal "flap" above the doorway to the large refrigeration room. Attempt to deinstall the component and gently tap with a non-metal mallet to reform the sheet into a flat plane. Reinstall component. If deinstallation is not possible, work on component in

situ to reform and align flaps. **8 hours for HFC Conservator, 12 hours for KLGO Conservation Technicians**

3. ***Cleaning (KLGO Conservation Technician)***- All Meat Trolley surfaces must be cleared of excess debris. This can be done with brushes, vacuum, or forced air methods. **8 hours**
4. ***Corrosion and Paint Removal (KLGO Conservation Technician and HFC Conservator)***- Corrosion encrustations and unstable oxides should be removed from the surface to mitigate further deterioration of the alloy. This will require the removal of the original paint system. The procedure for safe and efficient corrosion removal may involve the following techniques. Testing on loose or detached sections in inconspicuous locations will be necessary to understand the efficacy of each process.
   80 hours for HFC Conservation Technicians, 20 hours for HFC Conservator
   a. Air abrasion: using a portable micro-air abrasion using a soft, inert blasting media (walnut shell, garnet) with low psi is often one of the safest yet effective ways to remove corrosion encrustations without damaging the underlying metal. Air abrasion would likely be the most thorough method of corrosion removal, as the forced air abrasive can access hard to reach areas and interstice of the track system. This treatment procedure would take place in situ, and the installation of a protective sheathing between the metal track and wood infrastructure is necessary to protect the boards from receiving any abrasion. By placing plastic sheeting on the ground, blasting media can be either vacuumed and collected for reuse or can be discarded.
   b. Wire brushes: using a series of stiff-bristle and wire brushes with solvent to mechanically remove corrosion encrustations. This process is good for detail work but is usually not time efficient. Using wire bristles may be appropriate for addressing tight areas around hardware and track switches.
   c. Angle grinder with abrasive pad: using power tools with an abrasive flap-wheel bit may be another possible solution to address corrosion encrustations; however, the process will require that the user pay close attention to how much surface material is being removed. The tool will not likely be able to address crevices and interstices.
5. ***Coating and Paint Application (KLGO Conservation Technicians and HFC Conservator)***- Once corrosion is cleared, a protective coating will need to be applied to the coils. A commercially available, high-performance metal coating will be tested and selected by the HFC Conservator. The coating will protect the coils against exposure to UV light, moisture and humidity, temperature extremes and fluctuations, coastal sea salt aerosols, and pollutants. The application of a zinc-based primer followed by a color-matched paint system may be the desired system.
   50 hours for KLGO Conservation technician, 8 hours for HFC Conservator

CONDITION ASSESSMENT

COLD STORAGE DOORS

Summary

The four cold storage doors inside the Frye-Bruhn Cold Storage Building are unstable and in poor condition with splits in wood structure, pest damage, unstable and missing textile components, exposed and shedding interior material, corrosion on metal components, and compacted soiling, dust, and debris accumulation. Given the weight of each door, physical constraints, instability of each door, and the restricted safe staging space, access to all sides of each door was limited. Assessments were made to the best of the author's ability given these conditions.

Cold Storage Building North Entry Door- West Side



Figure 36. Image of the North Entry Door- West Side, as stored inside the Frye Bruhn Cold Storage Building. Note: Door is positioned upside down in this image.

The door is fabricated from joined interior wood beams incased by horizontal 3 ¼" wide tongue and groove laid planks on the door interior, and vertical 3 ¼" tongue and groove planks on the door exterior. The gasket system around the perimeter of the door consists of woven canvas stuffed with a horsehair and excelsior mixture. Excelsior, also referred to as "wood wool", is a product made of fine wood slivers cut from logs. It was commonly used as a padding and stuffing material throughout the 1800s and into the early 1900s.

The canvas is tacked onto the structure of the door with flat head nails. There are three ferrous metal butterfly hinges installed at the top, middle, and bottom of the interior face of the door, causing the door to swing inwards. The exterior face of the door contains a forged iron handle installed with through-bolts and the receiving end of the deadbolt system consisting of an attached cut metal pipe just below the handle. Approximate dimensions of the overall door are: 35'' x 85'' x 5.5''.

The door structure appears largely intact. There are minor splits in the wood, notably around inserted through-bolts. The stuffed canvas gasket is unstable with tears, losses, and exposed stuffing material at immediate risk of loss. Pest damage to organic gasket

material is noted. The iron handle is heavily pitted and corroded. The ferrous hinges are bent and distorted with corrosion throughout. The bottom hinge is immobile and stuck in its current orientation due to corrosion. There is a bright orange paint spatter at the lower central region on the exterior of the door.

Door surfaces contain scuffs and abrasions consistent with original use, wear and tear. All surfaces contain heavy soiling, dust, and debris accumulation.

Cold Storage Building North Entry Door- West Side

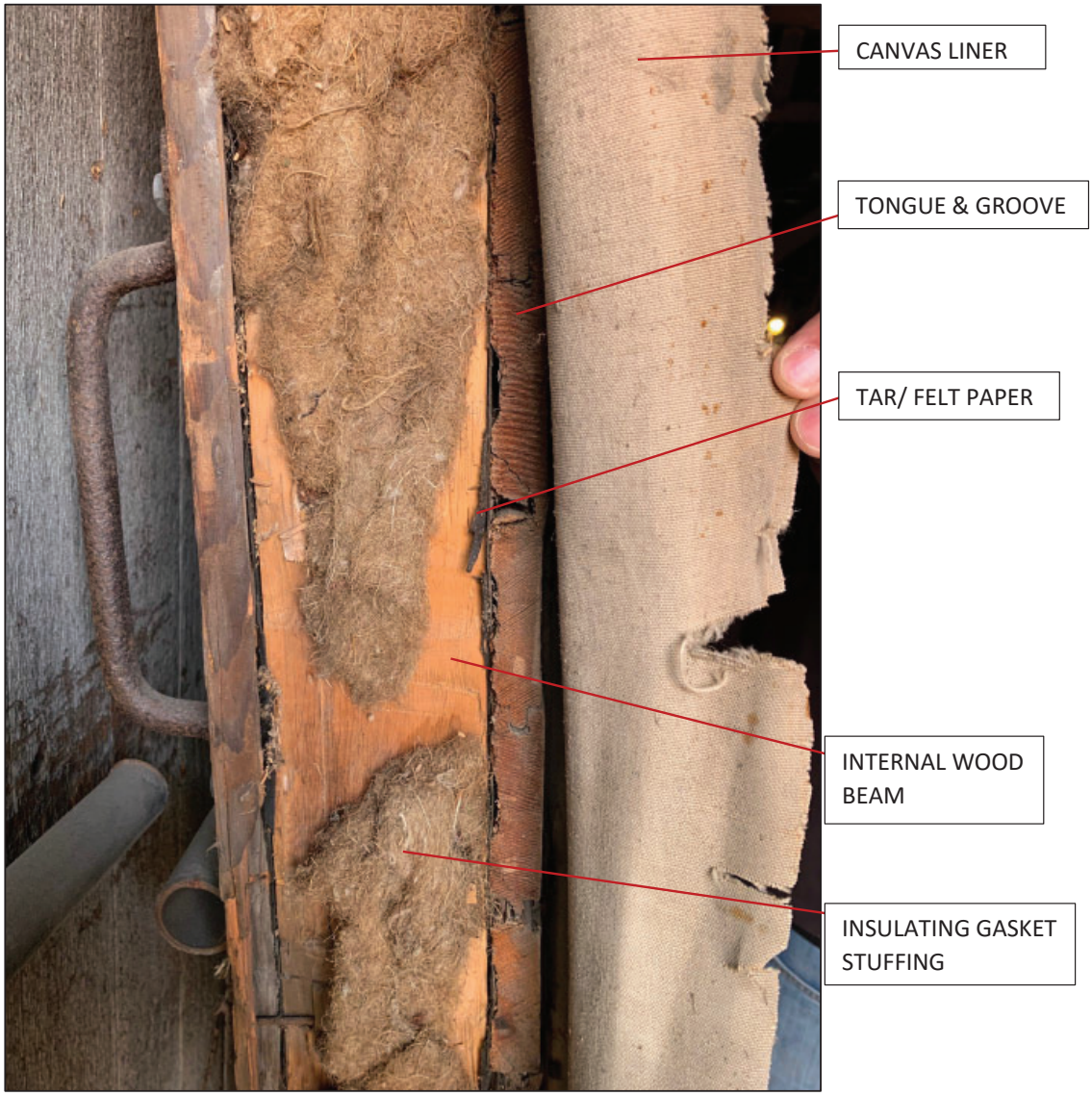


Figure 37. Cross-section of the North Entry Door- West Side, illustrating the different materials used in the construction of the door.

Cold Storage Building North Entry Door - West Side



Figure 38. Detail of the butterfly hinge installed on the North Entry Door- West Side.



Figure 39. Detail of the flat head nails used to secure a hinge on the North Entry Door- West Side. The canvas edges are neatly tucked under and nailed to the structure with a 3.5’’ -4’’ margin around the door perimeter.

Cold Storage Building North Entry Door- East Side



Figure 40. Image of the North Entry Door- East Side, as stored inside the Frye Bruhn Cold Storage Building.

The door is fabricated from joined interior wood beams incased by horizontal 3 ¼" wide tongue and groove laid planks on the door interior, and vertical 3 ¼" tongue and groove planks on the door exterior. The gasket system around the perimeter of the door consists of coarse burlap stuffed with excelsior. The burlap is tacked onto the door structure with flat head nails. There are three ferrous metal butterfly hinges installed at the top, middle, and bottom of the interior face of the door, causing the door to swing inwards. The exterior face of the door contains a cut pipe deadbolt bar that slides into the receiving end on the west side door. The deadbolt is installed with through-bolts, a hinged lock panel, and a contemporary pad lock attached to a loop bolt. Approximate dimensions for the door are: 38'' x 85'' x 5.5''.

The internal door structure appears intact, but the tongue and groove outer boards are damaged with loss, unstable splits, and abraded edges. There are minor splits in the wood, notably around inserted through-bolts. There is localized damage surrounding the padlock. The stuffed burlap gasket is unstable with tears, losses, and exposed stuffing material at immediate risk of loss. Pest damage to organic gasket material is noted. The ferrous metal hinges and lock panel are corroded. Deep scars in outer wood surfaces and ghost lines of where burlap gasket fabric existed are noted.

Door surfaces contain scuffs and abrasions consistent with original use/ wear and tear. All surfaces contain heavy soiling, dust, and debris accumulation.

Cold Storage Building North Entry Door- East Side

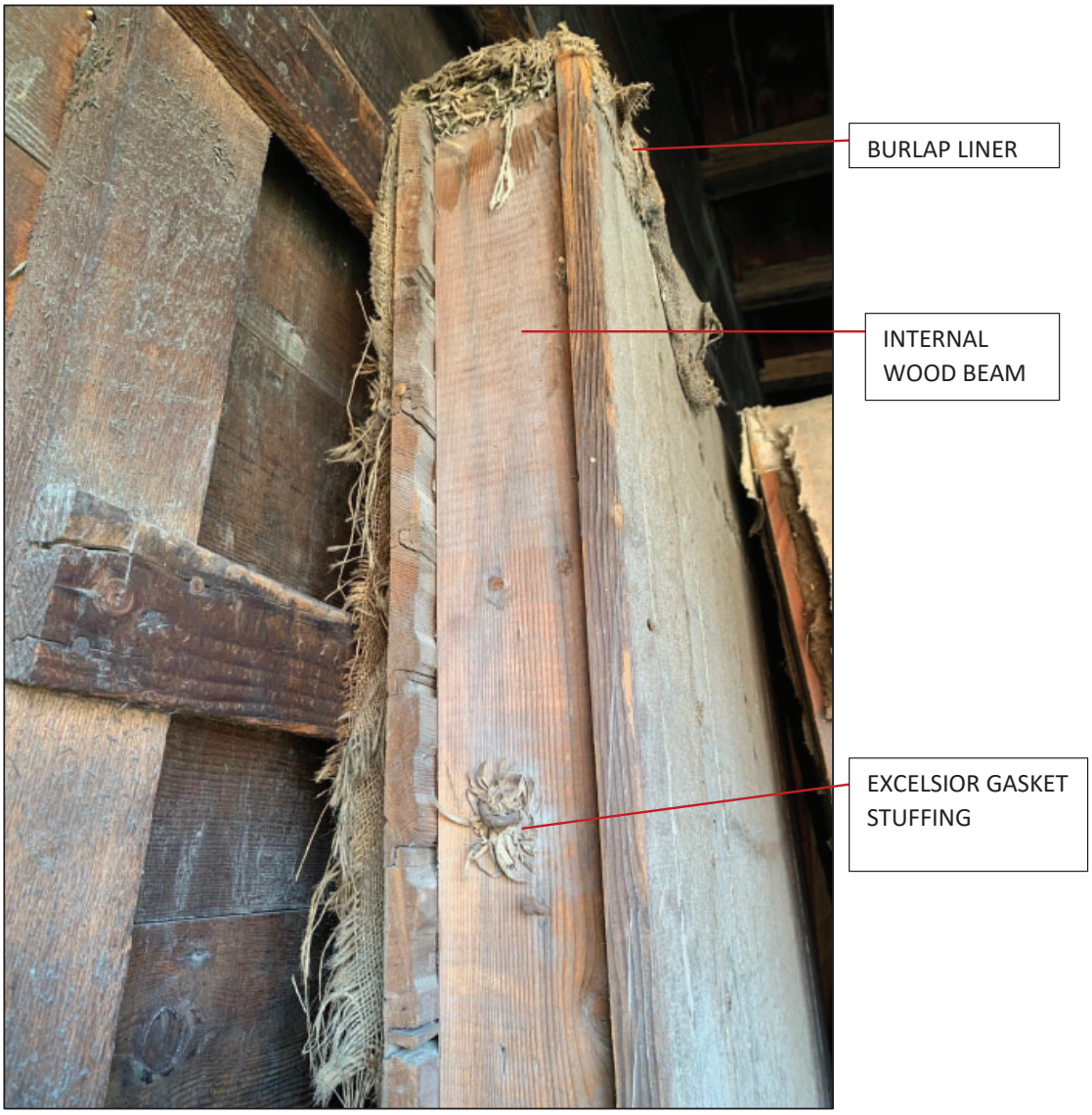


Figure 41. Cross-section of the North Entry Door- West Side, illustrating the different materials used in the construction of the door.

Cold Storage Building North Entry Door- East Side



Figure 42. Detail of damaged burlap textile and exposed excelsior stuffing.



Figure 43. Detail of damaged and lost burlap along the edge of the North Entry Door- East



Figure 44. Detail of torn and damaged burlap along the top of the North Entry Door- East Side.

North Door to Refrigerated Storage Room 10'-0" x 18' -6"



Figure 45. Image of the North Door to the Refrigerated Storage Room 10'-0" x 18' -6", as stored inside the Frye Bruhn Cold Storage Building.

The door is fabricated from joined interior wood beams incased by horizontal 3 ¼" wide tongue and groove planks laid on both the interior and exterior face. The gasket system around the perimeter of the door consists of woven canvas stuffed with a horsehair and excelsior mixture. The canvas is tacked into structure with flat head nails. There are two robust forged iron door hinges at the top and bottom of the door structure, with large iron flat stock support panels bolted to the exterior face of the door. The hinges terminate with a cylindrical loop head, which correspond with bolted hinges installed on the outside of the Refrigerated Storage Rooms, causing the doors to swing outward into the L-shaped Hallway & Utility Space. The wrought iron door handles installed on both sides of the door are connected by large threaded bolts installed through the entire thickness of door, with the threaded bolt ends and hardware exposed on the interior face. There is no closure or locking system present on the exterior face of the door. Approximate dimensions for the door are: 43'' x 81'' x 5.5''.

The internal door structure and external tongue and groove boards appear to be intact and stable. The stuffed canvas gasket is unstable with tears, losses, and exposed stuffing material at immediate risk of loss. Pest damage to organic gasket material is noted. The iron hinges and handle are corroded.

Door surfaces contain scuffs and abrasions consistent with original use/ wear and tear. All surfaces contain heavy soiling, dust, and debris accumulation.

North Door to Refrigerated Storage Room 10'-0" x 18' -6"



Figure 46. Detail of severely damaged textile with exposed stuffing. Evidence of pest activity and nesting was noted during site visit.



Figure 47. Detail of severely damaged textile with exposed stuffing.



Figure 48. Detail of forged iron loop hinges.

North Door to Refrigerated Storage Room 10'-0" x 18' -6"



Figure 49. Detail of the neatly tucked and tacked canvas corner. The intact section seen here illustrates how each margin edge would have been folded and tacked in place with flat head nails.



Figure 50. Detail of forged iron loop hinges.



Figure 51. Close-up of severely damaged textile with exposed stuffing.

South Door to Refrigerated Storage Room 18'-0" x 18'-6"



Figure 52. Image of the South Door to the Refrigerated Storage Room 18'-0" x 18'-6", as stored inside the Frye Bruhn Cold Storage Building.

The door is fabricated from joined interior wood beams incased by horizontal 3 ¼" wide tongue and groove planks laid on both the interior and exterior face. The gasket system around the perimeter of the door consists of woven canvas stuffed with a horsehair and excelsior mixture. The canvas is tacked into structure with flat head nails. There are two robust forged iron door hinges at the top and bottom of the door structure, with large iron flat stock support panels bolted to the exterior face of the door. The hinges terminate with a cylindrical loop head, which correspond with bolted hinges installed on the outside of the Refrigerated Storage Rooms, causing the doors to swing outward into the L-shaped Hallway & Utility Space. The wrought iron door handles installed on both sides of the door are connected by large threaded bolts installed through the entire thickness of door, with the threaded bolt ends and hardware exposed on the interior face. There is no closure or locking system present on the exterior face of the door. Approximate dimensions for the door are: 43'' x 81'' x 5.5''.

The internal door structure and external tongue and groove boards appear to be intact and stable. The stuffed canvas gasket is unstable with tears, losses, and exposed stuffing material at immediate risk of loss. Pest damage to organic gasket material is noted. The iron hinges and handle are corroded.

Door surfaces contain scuffs and abrasions consistent with original use/ wear and tear. All surfaces contain heavy soiling, dust, and debris accumulation.

South Door to Refrigerated Storage Room 18'-0" x 18'-6"



Figure 53. Detail of severely damaged textile with exposed stuffing.



Figure 54. Detail of damaged and lost textile along the corner edge.



Figure 55. Detail of the forged and bolted iron handle.

ANALYSIS

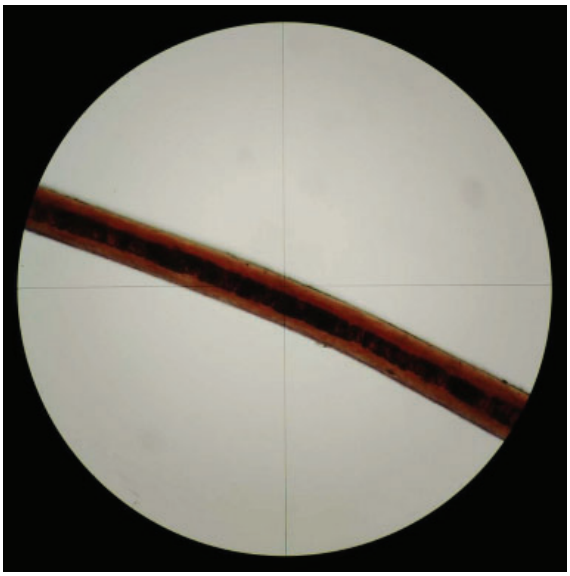
Detached pieces of the excelsior stuffing and the tar paper were sampled from the *Cold Storage Building North Entry Door- West Side* and taken back to the Harpers Ferry Center (HFC) conservation labs for analysis. Fourier-transform Infrared Spectrometry (FTIR) and Polarized Light Microscopy (PLM) were utilized to characterize sample compositions.

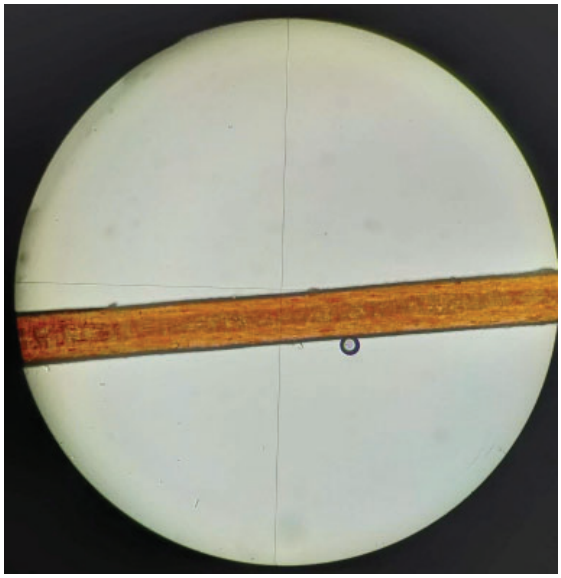
Polarized Light Microscopy (PLM):

PLM is a technique that uses transmitted plane-polarized light (PPL) and cross-polarized light (XPL) conditions to examine very small samples, usually of pigments, particles, and fibers, mounted on a glass microscope slide and embedded in media of choice. Physical properties (such as size, shape, color) and optical properties (such as relative refractive index, pleochroism, anisotropy, extinction) can be observed which helps to identify the materials present in the sample as compared to reference standards, published literature, or databases. When used appropriately, PLM can detect materials (particularly in small amounts) that may go undetected by other, more advanced techniques (SEM, FTIR, XRF).

Results:

Excelsior Stuffing Sample Mixture





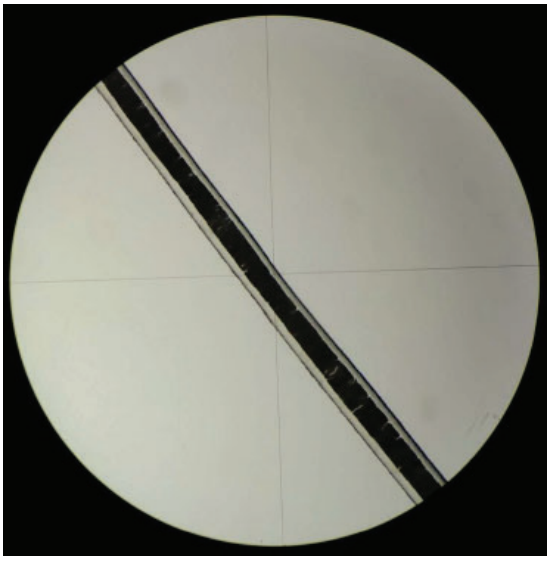
The excelsior mixture contained hair samples within the matrix. The hair strands have been identified as **horsehair**. A horsehair shaft has a characteristic medulla texture and visible hollow core-that is the that is darker in color. Surrounding this core (the medulla) is the pigment, which gives the shaft its color.



The excelsior mixture contained different types of fibrous material. The fiber strands in the image on the left have been identified as a **cotton** and **sisal fibers**. The translucent, light colored cotton fibers present their characteristic twist. Cotton is typically a twisted ribbon in appearance under the microscope, but the frequency of the twists varies with maturity of the fibers, they species of fiber, and chemical processing of the fiber. The darker sisal fiber bundle contains parallel columns comprised of ultimate (elementary) fibers. Sisal fibers are vegetable fibers containing characteristic spiral vessels that extend from the main bundle.



Note the spiral vessels extending from the ultimate (elementary) **sisal bundle fiber**.



Another mammalian hair that was discovered during analysis is **alpaca hair.** This has a distinctive clear medulla with a strong black continuous center, indicative of alpaca hair or fur.

Fourier-transform Infrared Spectrometry (FTIR):

A detached piece of tar paper from the *Cold Storage Building North Entry Door- West Side* was analyzed and infrared spectra were collected using a Bruker ALPHA II compact FT-IT spectrometer with a platinum ATR accessory. Samples were analyzed by pressing them against the monolithic diamond crystal. The spectra are the average of 24 scans at 4.0 cm-1 spectral resolution. An ATR correction routine was applied to compensate for variations in penetration depth with wavenumber.

IR Analysis

Instrument type (SN)	Alpha II (112397)
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Operator	Admin
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Measurement channel	Sample Compartment
Spectrum file name	KLGO_FB_doors_tarpaper.0
Spectrum file path	T:\Bruker\Data\MEAS
Measurement date and time	11/08/2023 18:05:33 (GMT+2)
Sample name	Section of tar paper
Sample form	Instrument type and / or accessory

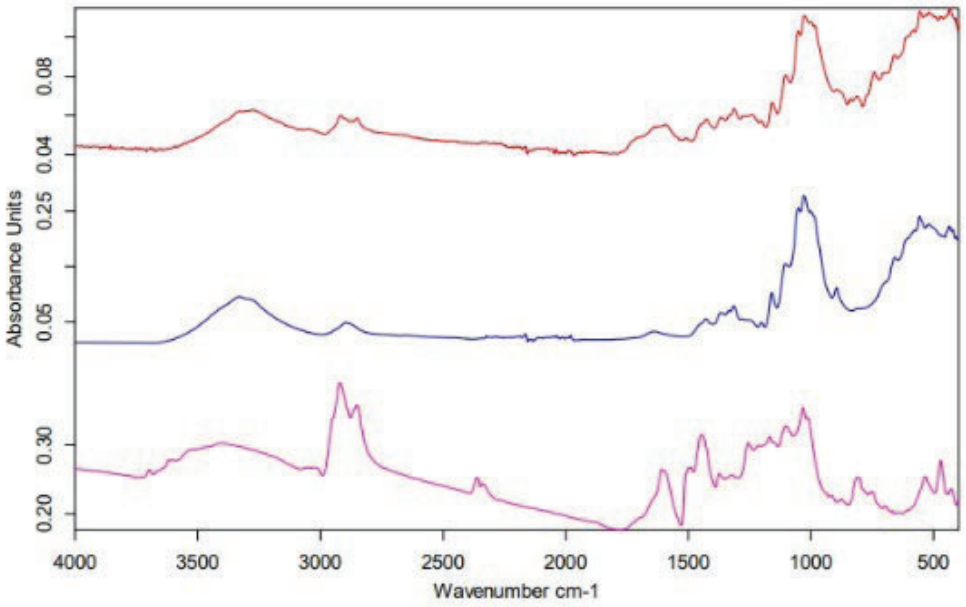
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1. library:	T:\Bruker\Methods\Libraries\BPAD.S01
2. library:	T:\Bruker\Methods\Libraries\Demolib.s01
3. library:	T:\Bruker\Methods\Libraries\IRUG_2019_OPUS.S01

Hit No.	Hit qual.	Compound name	Entry no.	Lib. index	CAS number
1	465	ICB00122 AA Blotting Paper for AATCC test meth.; Testfabrics; VMFA; tran	92	3	
2	395	IUC00003 Jet, Whitby, Lower Jurassic; N. Yorkshire, UK; WJ1; NMGM; tran	1920	3	

Library Spectra and Query Spectrum (red)

KLGO FBRB tar paper sample from the Cold Storage Building North Entry Door- West Side



Complete Info

Hit No.	Label	Info
1	Compound Name	ICB00122 AA Blotting Paper for AATCC test meth.; Testfabrics; VMFA; tran
	Molecular Formula	
	Molecular Weight	
	CAS Registry Number	
2	Compound Name	IUC00003 Jet, Whitby, Lower Jurassic; N. Yorkshire, UK; WJ1; NMGM; tran
	Molecular Formula	
	Molecular Weight	
	CAS Registry Number	

Data Interpretation:
Two spectra from the IRUG FTIR library were identified as likely matches to the tar paper sample. The correlating spectra included a cotton rag blotter paper, and jet. Jet is a type of lignite, the lowest rank of coal. The jet found at Whitby, in England, is the "Jet Rock" unit of the Mulgrave Shale Member, which is part of the Whitby Mudstone Formation. This jet deposit was formed approximately 181 million years ago, during the Toarcian age of the Early Jurassic epoch. Tar paper used to be made by soaking a porous paper made from cotton rag scraps with thinned liquid asphalt. Asphalt, of course, is one of the final products that comes out of a catalytic convertor that's used to refine crude oil. Essentially, the FTIR results reflect a paper substrate containing a coal or petroleum product.

TREATMENT RECOMMENDATIONS

COLD STORAGE DOORS

Summary

The cold storage doors require professional conservation treatment. Treatment could be performed on site at KLGO in a temporary lab setting or the doors could be crated and shipped offsite to receive treatment. Each door presents its own condition issues, however; treatment procedures for each door are similar enough for one main treatment plan. It is estimated that each door will take **40 hours** of conservation treatment, totaling **160 hours** for all four doors. Treatment steps are listed below.

1. Pre-treatment written and photographic documentation.
2. Surface clean with brush and variable-speed HEPA vacuum, cosmetic sponges, and dry-surface cleaning media.
3. Remove corroded hardware as possible. Mechanically remove corrosion from metal surfaces or with the aid of solvent, if necessary.
4. Locally treat all metal hardware permanently affixed to door: mechanically remove corrosion with glass bristle brushes, nylon mesh pads and solvent, if necessary.
5. Apply protective resin coating to metal components with built-in corrosion inhibitor.
6. Apply final coating of protective microcrystalline wax to metal surfaces.
7. Stabilize textile gaskets. The process will involve encapsulation of salvageable areas, partial removal of unsalvageable areas, and the installation of reproduction gasket textile and stuffing materials.
8. Stabilize all cracked and vulnerable wood planks with adhesive and clamps.
9. Reinstall any removed hardware with period-appropriate, removable hardware.
10. After-treatment written and photographic documentation.

TIME AND COST ESTIMATE TOTALS

REFRIGERATION COILS

HFC Conservator: 76 hours for labor + 16 hours for documentation = **92 hours total**

KLGO Conservation Technicians: (by task)

- Cleaning: 2 Conservation Techs, 5 hours each: **10 hours**
- Corrosion removal: 2 Conservation Techs, 80 hours each: **160 hours**
- Coating application: 2 Conservation Techs, 40 hours each: **80 hours**

Conservation Technician Hours: **250 hours total**

MEAT TROLLEY

HFC Conservator: 36 hours for labor + 8 hours for documentation= **42 hours total**

KLGO Conservation Technicians: (by task)

- Stabilization/remounting of sheet metal flap: **12 hours**
- Cleaning: 2 Conservation Techs, 5 hours each: **8 hours**
- Corrosion & Paint removal: 2 Cons. Techs, 40 hours each: **80 hours**
- Coating & Repainting: 2 Conservation Techs, 20 hours each: **50 hours**

Conservation Technician Hours: **150 hours total**

COLD STORAGE DOORS

HFC Conservator: 160 hours for labor + 30 hours for documentation: **190 hours total**

Custom crating (if shipping doors off-site for treatment):

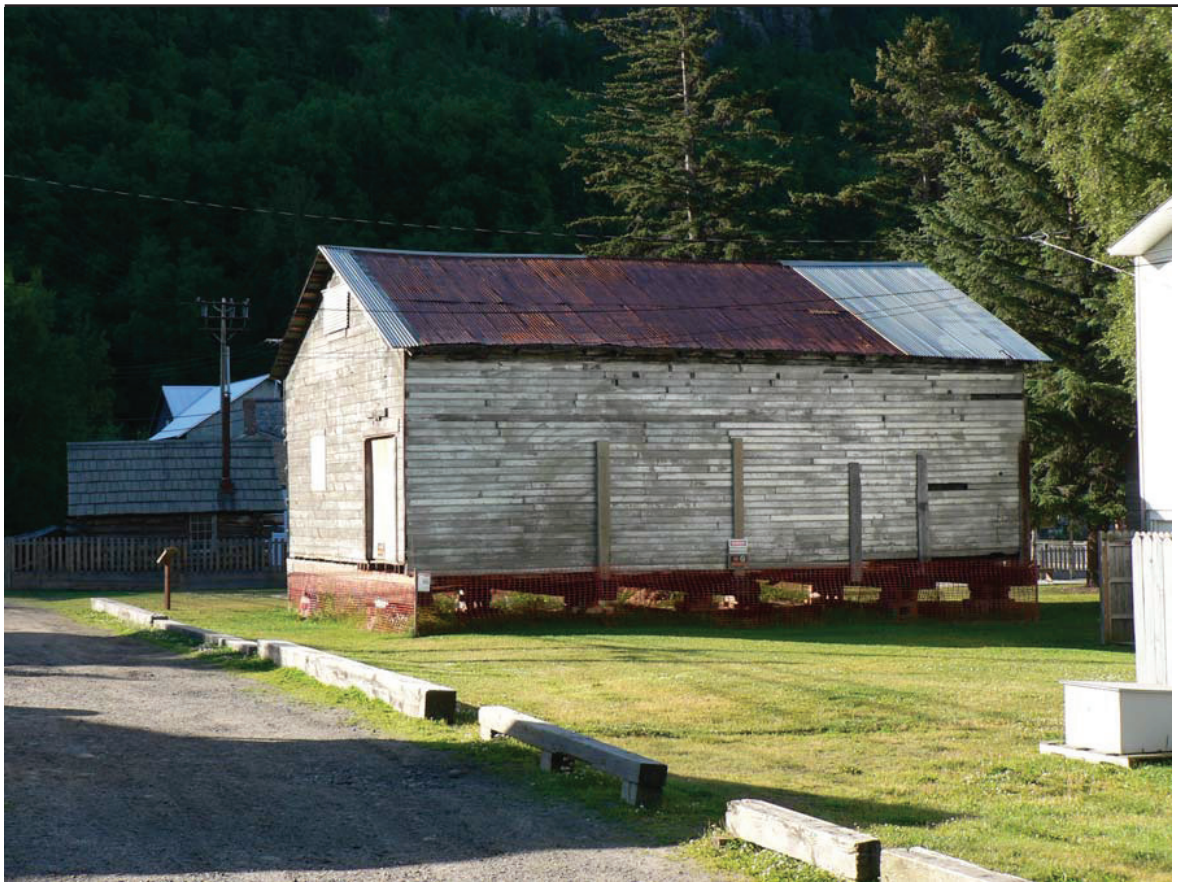
- HFC Registration: **20 hours**
- KLGO Maintenance: **40 hours**

The FY23 hourly rate for HFC Conservators ranges from **$63- $70** per hour, depending on the conservator selected to conduct the treatment. The hourly rate for HFC Registration services is **$55** per hour.

Additional costs for travel, lodging, and transportation for HFC Conservation will be added to a formal Cost Estimate upon request.

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APPENDIX F: VALUE ANALYSIS STUDIES, 2006 & 2009



final report

value analysis study

ice house location

klondike gold rush national historical park

july 11-12, 2006

FOREWORD

This Value Analysis Report presents the recommendations of the Value Analysis Study for the Site Location for the historic Ice House at Klondike Gold Rush National Historical Park conducted on July 11-12, 2006.

This is to certify that the Value Analysis Study was led by the undersigned National Park Service Value Analysis Facilitator and was conducted in accordance with National Park Service value analysis principles and guidelines.

Bradley A. Richie
Value Study Facilitator

EXECUTIVE SUMMARY

In May of 2004, the Ice House, also known as Moe Warehouse #2, was donated to the National Park Service by Mr. Andrew Knorr of Skagway, Alaska with the stipulation that it be moved from its location so that he could utilize that portion of his property for a new building. The building was moved from its original location to a vacant area on the Moore Homestead in June of 2004 and remains there today.

The park superintendent requested that a Value Analysis Study be performed to evaluate alternatives and develop a recommendation on a permanent location for the Ice House. The study was conducted on July 11-12, 2006 at the headquarters of Klondike Gold Rush National Historical Park.

Project Background
(from "Ice House Planning Report" by Grant Crosby, NPS)

In November of 2003, Mr. Andrew Knorr of Skagway, Alaska, applied for a demolition permit from the City of Skagway to demolish the Ice House, a turn of the century building located within the Skagway Historic District and White Pass National Historic Landmark, and within the City of Skagway's Historic District. The building's early construction date required that the permit request be send to the Historic District Commission (HDC) for approval. The HDC, without researching the history of the property, approved the demolition permit. However, evidence of the building's history surfaced shortly thereafter indicating that it was considered a "contributing" property within the Skagway and White Pass Historic District and may be one of the last few buildings of this type in the State of Alaska. Under the direction of Superintendent Bruce Noble, the NPS appealed the HDC's decision and requested they review the building's history prior to allowing the permit request.

At that time, the Superintendent hoped to ameliorate Mr. Knorr's demolition plans noting that the historic streetscape of Skagway is being jeopardized by frequent demolishing of the extant historic structures which are thought to provide no economic value. In December of 2003, the Superintendent asked ARO Historical Architect, Grant Crosby, to conduct a preliminary condition assessment of the building and to provide recommendations for treatment and adaptive use. This report was given to Mr. Knorr for consideration. The Superintendent made several attempts to review the document with Mr. Knorr but was unsuccessful.

In May of 2004, Andrew Knorr donated the Ice House to the National Park Service. At that time, the building was located in its original location on the south side of 5th avenue adjacent to the lumber yard, across the street from the Moore Homestead and Goldberg Cigar Store. With a $10,000 contribution from the City of Skagway and NPS funds, the National Park Service contracted with Hamilton Construction in June of 2004 to move the building to a vacant space on the

Moore Homestead property where it remains today. The building is set on blocks and surrounded by a safety fence.

Historic Significance

- A review of the Alaska Heritage Resources Study (AHRS) indicates that this structure is one of the last few ice houses remaining in state.
- Early maps and photographs of Skagway illustrate the ice house and provide a date of circa 1900 for its construction.
- Robert L.S. Spude's book, *Skagway, District of Alaska 1884-1912: Building the Gateway to the Klondike* cites the building as follows:

  > *349. Moe Warehouse #2, ca. 1900. One story wood frame warehouse with attic, gable roof, double beveled shiplap and tongue and groove siding, double freight door.*

- The building retains a high level of historic integrity with its original plan, form, interior and exterior components and character defining features intact.

Value Study Objectives

The general objectives of the value analysis study include:

- Arrive at an optimal site location through a structured and reasoned analysis
- Evaluate potential uses of the facility
- Ensure:
  - all viable alternatives are considered
  - evaluation factors are sound
  - benefits to cost are considered
  - project review includes an independent second opinion
- Provide clear documentation of decision-making
- Develop confidence that best solution/best value is achieved

Site Alternatives Considered

Alternative 1: Peniel Mission

This site would locate the Ice House on the present site of an NPS owned non-historic garage adjacent to the Peniel Mission.

Alternative 2: Present Location

This site is an NPS owned lot adjacent to the Moore House and Goldberg Cigar Salon.

Alternative 3: Goldberg Cigar Salon

This site would locate the Ice House at the present location of the Goldberg Cigar Salon with the Goldberg Cigar Salon relocating to a site adjacent to the Pantheon Saloon or Boss Bakery.

Alternative 4: Pantheon West

This site is an NPS owned vacant lot immediately west of the Pantheon Saloon. This site could also accommodate a relocated Goldberg Cigar Salon.

Summary of Recommendations

The Value Analysis Team evaluated the four different sites for the permanent location of the Ice House. The Peniel Mission site was eliminated early in the study due to the lack of historic context and potential impact on the Moore House. The remaining three alternatives represented a range of appropriate site solutions and were evaluated through the Choosing by Advantages (CBA) process. Using this process, the team recommends that the site alternative adjacent to the Pantheon Saloon provides the greatest value to the National Park Service and the project stakeholders.

The advantages of the recommended site alternative over the other alternatives include the following:

- Most positive effect on the historic context and landscape
- Good potential for visitor and education opportunities
- Mostly positive effect on adjacent properties
- Reasonable ease of implementation

value analysis study

6

STUDY SPECIFICS AND OBJECTIVES

The VA team consisted of staff from the Alaska Regional Office of the National Park Service, Klondike Gold Rush National Historical Park and the Skagway Historic District Commission. A list of VA team participants is included on the following page.

The study team was composed of a mix of professional disciplines and individuals with experience in planning, compliance, design, preservation, interpretation, education, operations and maintenance. Some team members had experience working on prior VA studies as well as having completed the Module I Value Analysis training course.

The specific value analysis objectives of this study included:

- Selection of a preferred location alternative
- Potential uses of the facility
- Creation of budgetary cost estimates for the location alternatives

The team reviewed the history of the structure and it's acquisition by the NPS, the various proposed site locations, potential uses and budgetary cost estimates as part of the workshop.

ATTENDANCE LIST

Value Study

Project: **Ice House**
Location: **Klondike Gold Rush NHP**
Date: **07/11/06**

( ) Pre-Workshop
(X) Workshop
( ) Post Workshop

PARTICIPANTS:

Name/ Title:	Job Function:	Organization/Address:	Phone/ Fax/ e-mail:
Brad Richie Architect	Facilitator & Architect	NPS, Alaska Support Office 240 W 5th Ave.. Anchorage AK 99501	907-633-3387 907-644-3304 brad_richie@nps.gov
Steve Peterson Historic Architect	Team Member	NPS, Alaska Support Office 240 W 5th Ave.. Anchorage AK 99501	
Grant Crosby Historic Architect	Team Member	NPS, Alaska Support Office 240 W 5th Ave.. Anchorage AK 99501	
Theresa Thibault Chief of Resources	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Erica Foss Park Ranger, Education	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Tim Steidel Acting, Chief Ranger	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Andy Higgs Archeology Manager	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Ray Moore Chief of Maintenance	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Jim Corless Superintendent	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Sandy Snell-Dobert Chief of Interpretation and Education	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Reed McCluskey Acting, Chief of Business Management	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Karl Gurcke Historian	Team Member	Klondike Gold Rush NHP PO Box 517 Skagway, AK 99840	
Casey McBride Chair, Skagway Historic District Commission	Team Member		

ATTENDANCE LIST

Value Study

Project: **Ice House**
Location: **Klondike Gold Rush NHP**
Date: **07/11/06**

( ) Pre-Workshop
(X) Workshop
( ) Post Workshop

PARTICIPANTS:

Name/ Title:	Job Function:	Organization/Address:	Phone/ Fax/ e-mail:
Virginia Long Skagway Historic District Commission	Team Member		
Karl Klupar property owner	stakeholder	4th Street Skagway, Alaska 99840	

PHASE I - INFORMATION

Alternatives Considered

The Value Analysis Team evaluated the four different sites for the permanent location of the Ice House.

Alternative 1: Peniel Mission

This site would locate the Ice House on the present site of an NPS owned non-historic garage adjacent to the Peniel Mission.

Alternative 2: Present Location

This site is an NPS owned lot adjacent to the Moore House and Goldberg Cigar Salon.

Alternative 3: Goldberg Cigar Salon

This site would locate the Ice House at the present location of the Goldberg Cigar Salon with the Goldberg Cigar Salon relocating to a site adjacent to the Pantheon Saloon or Boss Bakery.

Alternative 4: Pantheon West

This site is an NPS owned vacant lot immediately west of the Pantheon Saloon. This site could also accommodate a relocated Goldberg Cigar Salon.



peniel mission garage site



present location site



goldberg cigar salon site



pantheon saloon site

Stakeholders

In an effort to understand the context for this project, the following list of "stakeholders", or persons with an active interest in the making of project decisions or the outcome of such decisions was developed:

#	Stakeholders	Primary Interest
1	• *Visitors* • *Independent Traveler* • *Package Tours* • *Local Users*	• *Interpretive Opportunity* • *Access to Facility*
2	• *Congressional Delegations*	• *Local Economy* • *Project Cost* • *Community Relations*
3	• *Preservation Community* • *State Historic Preservation Officer* • *Skagway Historic District Commission* • *National Historic Landmark Body*	• *Protection of Resources* • *Context* • *Compliance with Standards and Guidelines*
4	• *National Park Service* • *Servicewide* • *Park* • *Management* • *Interpetation* • *Education* • *Maintenance* • *Operations* • *Alaska Regional Office*	• *Protection of Resources* • *Employee Health, Safety and Welfare* • *Efficiency of Park Operations* • *Project Cost* • *Quality of Life* • *Interpretation/Education* • *Sustainability*
5	• *Adjacent Property Owners*	• *Aesthetics* • *Compatibility with their uses*
6	• *Local Community*	• *Community Use and Opportunities* • *Location*

PHASE II - CREATIVITY

The value study team examined the four site locations and evaluated the best and weakest features. The findings are summarized on the following pages

VALUE OPPORTUNITIES
Force Field Analysis

Ice House
Klondike Gold Rush NHP
Alternative: Peniel Mission Site

BEST FEATURES

1. displaces non-contributing contemporary garage
2. improved aesthetics by removing garage
3. good proximity to public restroom
4. potentially lower level of treatment required
5. has restoration interpretation potential
6.
7.
8.
9.
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11.
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13.
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15.

WORST FEATURES

1. requires Ice House to be oriented 180 degress from original
2. site is located off alley, not street
3. Ice House is out of scale with Peniel Mission
4. impacts existing trees and vegetation
5. poor public exposure and access
6. limited uses
7. displaces employee parking
8. public use not compatible with residence
9. least historically correct
10. loss of storage
11. conflicts with Eagles use?
12.
13.
14.
15.

IDEAS FOR VALUE ENHANCEMENT

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VALUE OPPORTUNITIES
Force Field Analysis

Ice House
Klondike Gold Rush NHP
Alternative: Present Site

BEST FEATURES	WORST FEATURES
1 retains "correct" orientation of building has restoration interpretation potential and	1 less visitor exposure
2 proximity to existing interpetive programs	2 no connection to street requires moving building off present location and
3 no Goldberg move required	3 back
4 has exterior space for large groups	4 little lease back potential
5 good proximity to public restrooms	5 does not contribute to historic grid
6 room for accessible ramps	6
7	7
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IDEAS FOR VALUE ENHANCEMENT

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VALUE OPPORTUNITIES
Force Field Analysis

Ice House
Klondike Gold Rush NHP
Alternative: Goldberg Cigar Salon Site (Goldberg to Boss or Pantheon sites)

	BEST FEATURES		WORST FEATURES
1	maintains connection to street	1	requires reorientation from original
2	provides buffer/transition from commercial to residential	2	may impact adjacent tree
3	lower level of treatment required?	3	requires fire protection?
4	good potential for variety of uses	4	Goldberg may not be appropriate scale for Broadway
5	Goldberg on Broadway provide lease back potential	5	Boss site is not historically accurate
6	Goldberg on Broadway continues infill	6	parking challenges
7	short move	7	
8		8	
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14		14	
15		15	

IDEAS FOR VALUE ENHANCEMENT

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VALUE OPPORTUNITIES
Force Field Analysis

Ice House
Klondike Gold Rush NHP
Alternative: Pantheon West Site

	BEST FEATURES		WORST FEATURES
1	good public exposure	1	requires some relocation of existing utilities (fuel tank, etc.)
2	proximity to Broadway	2	may require higher level of treatment
3	good historic context	3	eliminates open space
4	proximity to Saloon	4	lack of parking
5	orientation is same as original	5	relocates Goldberg (again)
6	infills an empty lot	6	
7	preserves integrity of Moore landscape	7	
8	good potential for variety of uses	8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	

IDEAS FOR VALUE ENHANCEMENT

1	move Goldberg adjacent to Ice House
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PHASE III - EVALUATION (Part 1 - Evaluation Factors)

As the first task of the evaluation phase the team developed and discussed the factors which would be used to evaluate the alternatives.

The NPS Objectives and Factors 1-5 shown below were established for the NPS servicewide priority setting process and grow out of the NPS National Leadership Council guidance and formed a framework for evaluation.

The study team then defined specific project considerations and subfactors to tailor the evaluation factors to the needs of this project.

Factor 1: Provide Safe Visits and Working Conditions

Advantages in Protecting Public Health, Safety and Welfare
Advantages in Protecting Employee Health, Safety and Welfare

Subfactor: None

Factor 2: Protect Natural and Cultural Resources

Advantages in Preventing the Loss of Resources
Advantages in Maintaining or Improving the Condition of Resources

Subfactor: Effect on Historic Landscape

Factor 3: Improve Visitor Enjoyment Through Better Service and Educational and Recreational Opportunities

Advantages in Improving Visitor Services and Educational and Recreational Opportunities

Subfactor: Opportunities for Various Uses
Subfactor: Opportunities for Interpretation

Factor 4: Improve the Efficiency, Reliability and Sustainability of Park Operations

Advantages in Improving the Efficiency, Reliability and Sustainability of Park Operations

Subfactor: Effect on Adjacent Property Owners
Subfactor: Ease of Implementation

Factor 5: Provides Cost-Effective, Environmentally Responsible and Otherwise Beneficial Development to the National Park System

Not Used

CBA

Choosing By Advantages

Project/Location: **Ice House**

Component: **Site**
Function: **Park Operations**

Factor	Alternative 1 Present Location (Moore House)		Alternative 2 Goldberg Site (Goldberg moves to either Pantheon or Boss Bakery)		Alternative 3 Pantheon West (w/ or w/o Goldberg Cigar Salon)	
Protect Natural and Cultural Resources						
Subfactor: Effect on Historic Landscape (Context, Orientation, Grid, Historic Guidelines, NHL, Secretary's standards)						
Attributes:	Maintains north orientation, not adjacent to street, open site (not on grid), 1 block from original site, very close to White Pass trail		South orientation, adjacent to street, infill site, 1/2 block from original site across the street, very close to "historic" tree		Maintains original north orientation, adjacent to street, infill site, adjacent to saloon	
Advantages:		**0**	Better compatability	**55**	**Best Compatibility: The combination of original building orientation, an infill site on the street, the context provided by it's adjacency to the Pantheon Saloon provides significantly better compatability with the historic landscape**	**100**
Improve Visitor Enjoyment Through Better and Service and						
Subfactor: Opportunities for Various Visitor Uses (Interpretive, Education, Public Restrooms, Exterior Restoration)						
Attributes:	Little opportunity for lease-back, some separation from Broadway for educational use, good room for expansion "annex"		Some separation from Broadway for educational use, good room for expansion "annex"		No restrooms nearby, close to Broadway for interpretive use, some room for expansion "annex", drop-off potential for schools groups	
Advantages:		**0**	More opportunities	**30**	**Most opportunities: The site near Broadway and its adjacency to the Pantheon saloon provides much greater opportunies for a variety of visitor uses**	**70**
Subfactor: Opportunities for Interpretation/Visitor Use						
Attributes:	Co-located w/ exisiting interpretive programs at Moore House		Co-located with existing interpretive programs at Moore House, relocation of Goldberg to Pantheon or Boss provides additional interpretive opportunity		2 blocks from existing interpetive programs at Moor House, relocation of Goldberg to Pantheon or Boss provides additional interpretive opportunity	
Advantages:		**0**	Better opportunities	**20**	**Best Opportunites: This alternative adjacent to Broadway provides slightly better interpretive opportunites than those available near the Moore House**	**25**

CBA

Choosing By Advantages

Project/Location: **Ice House**

Component: **Site**
Function: **Park Operations**

Improve the Efficiency, Reliability and Sustainability of Park Operations						
Subfactor: Effect on Adjacent Properties (Public/Private)						
Attributes:	Encroaches into Moore historic landscape, adjacent to Eagles, Goldberg in it's present location provides transition		Site would provide transition from Broadway district to Moore landscape, site encroaches into Moore historic landscape		Site may provide catalyst tor adjacent private properties for restoration or visitor use, screens back parking area from street, some potential visual impact to adjacent residences	
Advantages:		**0**	More positive effects	**15**	**Most positive effects; Although this site may create some minor impact on adjacent residences this is outweighed by it's location on a side street off Broadway and the potential postive effect of drawing visitors down xx street and by eliminating any adverse effect on the Moore cultural landscape**	**50**
Subfactor: Ease of						
Attributes:	Requires moving Ice House to restore, large utility footprint, can be incrementally funded, short move, room for accessible features (ramps)	0	Requires moving Ice House and Goldberg, 2 buildings have large footprint, large utility footprint, short move, can be incrementally funded		Requires moving Ice House and possibly Goldberg, large utility footprint, Goldberg relocation may attract ANHA funding, long move, site close to Broadway may attract funding	
Advantages:	**Easiest Implementation: The fact that the Ice House is already located at this relatively large site and that the Goldberg Cigar Salon would not have to be relocated allows this alternative to be much more easily implemented**	**80**	Easier Implementation	**60**		**0**
Total Importance of Advantages (Benefits)		**80**		**180**		**245**
Initial Cost	$740,000		$760,000		$800,000	
Benefit to Cost Ratio Initial Cost	**10.81**		**23.68**		**30.63**	

PHASE III - EVALUATION (Part 2 - Choosing by Advantages)

After evaluating the best and worst features of each of the four location alternatives and the evaluation factors, it was determined that the Peniel site was no longer a viable site. It was eliminated from further consideration.

The three remaining site location alternatives were further evaluated using a process called Choosing by Advantages, where decisions are based on the importance of advantages between alternatives. The evaluation involves the identification of the attributes or characteristics of each alternative relative to the evaluation criteria, a determination of the advantages for each alternative within each evaluation factor, and then the weighing of importance of each advantage.

The highest importance advantage is identified in each factor. The paramount advantage, across factors, was determined and assigned a weight of 100. Remaining advantages were rated on the same scale. Rough cost estimates (Class C-) were developed for each alternative. Recommendations are based on a balance of cost and importance.

The evaluation sheets form the basis for presenting the location alternatives. The evaluation tables present many types of information. Attributes of an alternative are shown above the dotted line in the tables. Advantages between alternatives are shown below the dotted line. An anchor statement summarizes those advantages. The advantage with the highest importance within a factor is indicated by a bolding the text in the advantage cell. The advantages are all rated on a common scale.

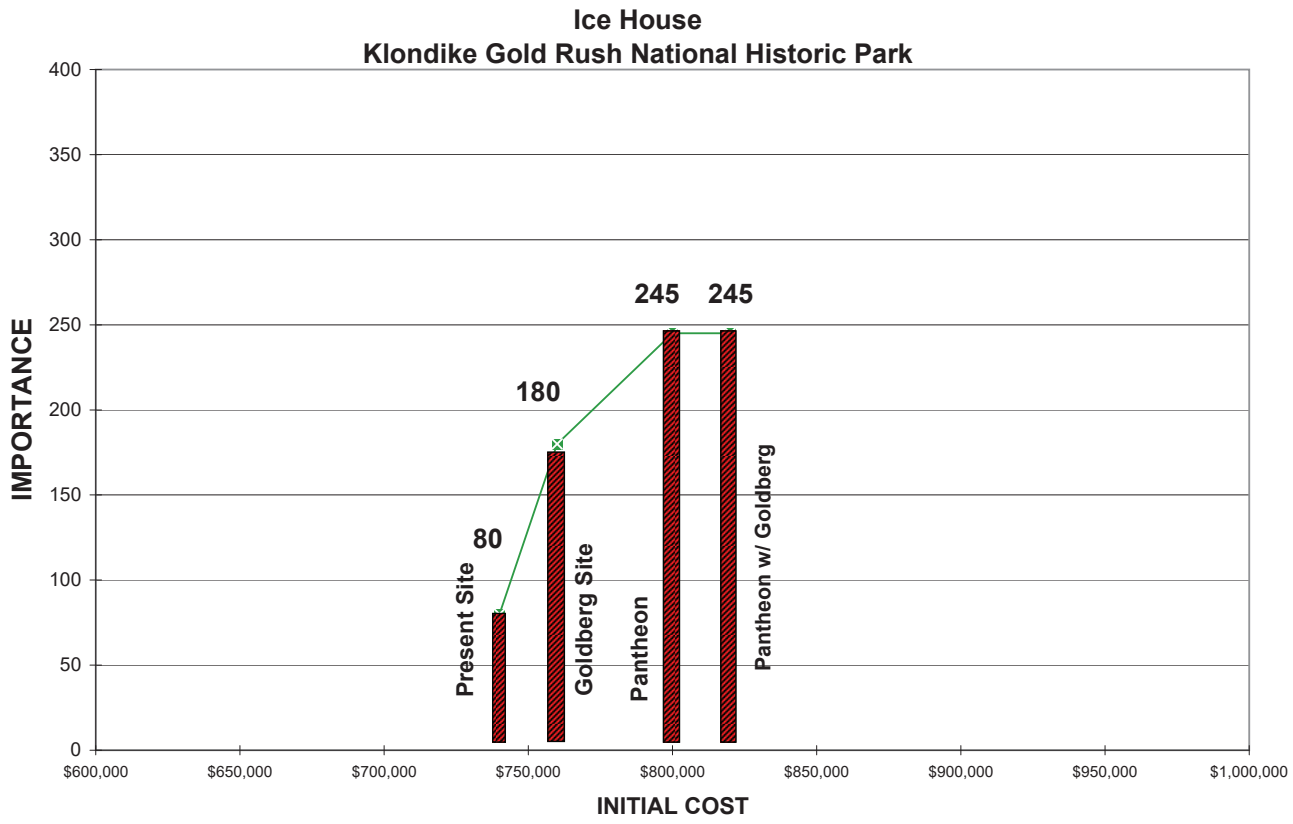
ANALYSIS

The study team evaluated the benefit or importance of the advantage*s* to be realized from location alternatives, as well as the estimated initial costs. The results were graphed with importance or benefit on the vertical scale and cost on the horizontal scale. The result is summarized on the following chart. The team assumed that it is reasonable to expect that that there would be an equal amount of impact to archeological resources at any of the location alternatives.

The positive slope of the increments from Goldberg site to the Pantheon site indicates good value for the additional capital investment. The Pantheon site with the Goldberg Cigar Salon was not evaluated as a separate alternative, but the additional cost to permanently relocate the Goldberg to the Pantheon site was estimated. This is graphed as well. It is likely that the benefits or importance of advantages would be greater in this alternative, so there would be a positive slope again indicating good value for the additional investment for the move.

Both Pantheon alternatives require greater capital investment, but also provide the greatest advantages and the highest importance to cost ratios. Either Pantheon alternative provides the best value solution.

Import-IC$ Graph



PHASE IV - IMPLEMENTATION

Implementation of the value study recommendations will rest with the park and regional staff. Funding proposals and basic stabilization strategies will need to be developed. Additional value analysis studies (mini-VA's) may be appropriate to evaluate specific project components such as level of treatment, contracting or day labor construction options, fire protection systems and utility systems. The park anticipates that pre-construction archeological data recovery to be conducted by park staff or by contract.

APPENDIX

- Value Study Agenda
- Budgetary Cost Estimate

Ice House/McDermott Cabin
Klondike Gold Rush National Historical Park
July 11 & 12, 2006 Value Analysis Work Plan
(as of 7/06/06)

Participants:

NPS
Brad Richie, NPS-AKRO, Facilitator (Architect)
Unless otherwise noted Richie will facilitate discussion of the work plan items
Steve Peterson, NPS-AKRO, Historic Architect
Grant Crosby, NPS-AKRO, Historic Architect
Jim Corless, NPS-KLGO, Superintendent
Theresa Thibault, NPS-KLGO, Chief of Resources Management
Tim Steidel, NPS-KLGO, (Acting) Chief Ranger
Reed McCluskey, NPS-KLGO, (Acting) Chief of Business Management
Sandy Snell-Dobert, NPS-KLGO, Chief of Interpretation and Education
Ray Moore, NPS-KLGO, Facility Manager

Community Participants
Lisa Cassidy (invited), Skagway City Council
Casey McBride, Chair, Skagway Historic District Commission
Virginia Long, Skagway Historic District Commission
Judy Bittner (invited), State Historic Preservation Officer

Adjacent Landowners
Tuesday 10:00 – 11:00
Mark Van Houten (invited), Eagles
Karl Klupar

Wednesday 10:00 – 11:00
Lorna Mc Dermott

Location:
NPS Headquarters Building, KLGO

Tuesday, July 11, 2006

Ice House Workshop

8:30 – 10:00 **Phase I: Introduction/Information**
View Ice House Interior
Introductions
Value Analysis Process Overview

10:00-12:00 **Phase I (continued**)
Objectives of Study
- Facility Location
- Use
- Preservation Strategy

Summary of Building History *Thibault/Peterson*
Summary of Historic District Context (Secretary's Standards, park design guidelines, etc.) *Thibault/Crosby*

Phase II: Speculation/Creativity
Location Alternatives
Presentation of Site Alternatives *Crosby*
Brainstorm other Site Alternatives
Adjacent Landowner Perspectives

Best Site Features
Weakest Site Features
Ideas to Enhance Alternatives
Identify High Cost Elements for Value Enhancement
Modify and Combine Ideas and Alternatives

Use
Brainstorm Uses for Ice House

Risk Model??

Lunch

1:00-2:45 **Phase III: Analysis/Evaluation**
Review of Standards, Criteria, and Regulatory Requirements
Discuss Order of Magnitude Cost Projections *Peterson/Crosby/Moore*

Evaluation of Alternatives (Choosing By Advantages)
- Develop/Review Evaluation Factors
- List Attributes
- List Advantages
- Decide Importance
- Determine Total Importance

Identification/Confirmation of Best Value Alternative

3:00-5:00 **Phase IV: Development/Implementation**
Development/Confirmation of Best Value Alternative
Develop/Rank Ideas for Preservation Treatment (Mini-VA's??)
- Treatment Alternatives *Peterson*
- Funding Strategies
- Implementation Process

Wrap Up

Close for the day: approximately 5:00p

Wednesday, July 12, 2006

8:30-9:45 Contingency time for Ice House Workshop

McDermott Cabin Workshop

10:00 – 11:00 **Phase I: Introduction/Information**
Introductions
Objectives of Workshop
- Cabin Location
- Use
- Preservation Strategy

Summary of Building History/Donation *Thibault/Lorna McDermott*
Summary of Context (LRIP, Dyea Management Plan, etc.) *Thibault/Corless*

11:00-12:00 **Phase II: Speculation/Creativity**
Location/Uses
Discussion of Proposed Site/Use Alternatives
Brainstorm other Site/Use Alternatives

Lunch

1:00-2:30 Best Site/Use Features
Weakest/Use Site Features
Ideas to Enhance Alternatives
Modify and Combine Ideas and Alternatives

2:45- 4:00 **Phase III: Analysis/Development**
Discussion of Standards, Criteria, and Regulatory Requirements
Discuss Order of Magnitude Cost Projections *Peterson/Crosby/Moore*

Develop/Review Site/Use Evaluation Factors
Develop Ideas for Preservation Strategy (Mini-VA's)
- Treatment Alternatives *Peterson*
- Funding Strategies
- Implementation Process

Wrap Up

Close for the day: approximately 4:00p

Cost Estimate

	Present Site	Goldberg Site	Pantheon Site	Pantheon w/Goldberg
move Ice House	40000	40000	80000	80000
Ice House foundation	100000	100000	100000	100000
move Goldberg		20000	20000	40000
exterior restoration	500000	500000	500000	500000
utilities	100000	100000	100000	100000
Goldberg foundation				
Goldberg interior restoration				
total	740000	760000	800000	820000

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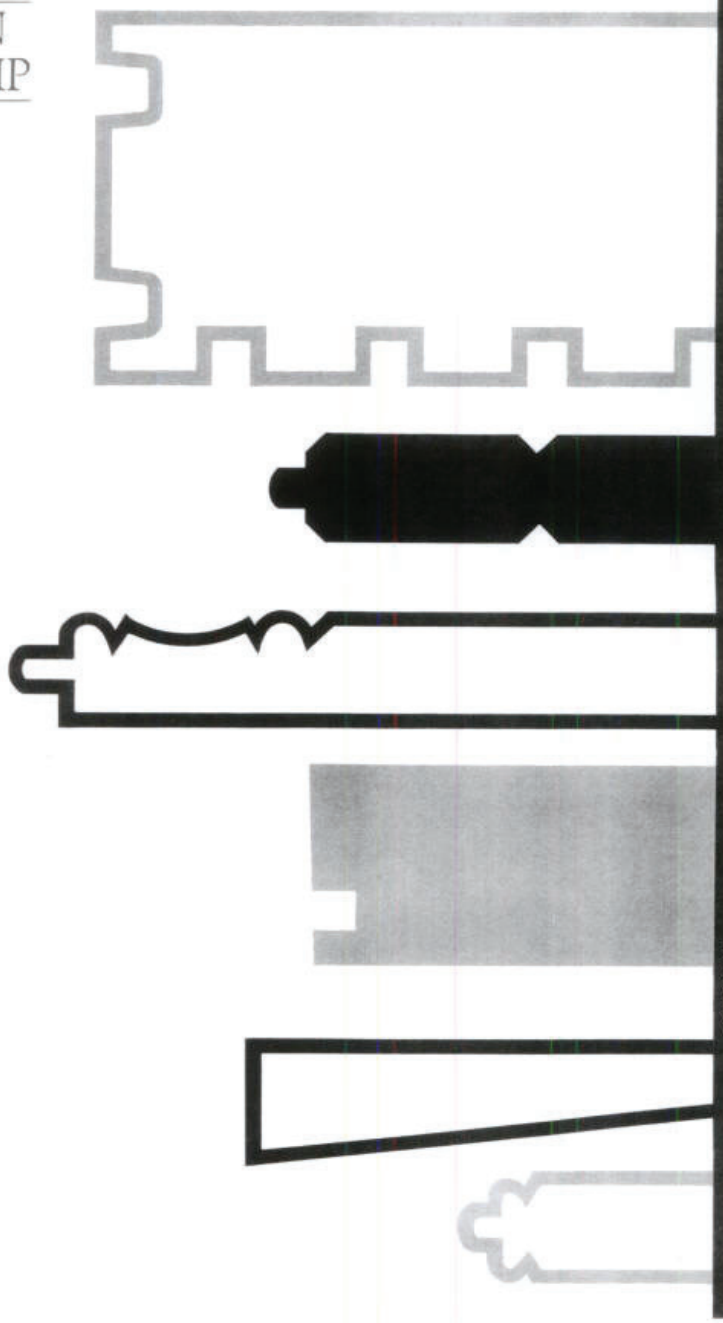
APPENDIX G: WESTERN WOODS STANDARDS PATTERNS

standard patterns

25th YEAR

A TRADITION
OF LEADERSHIP

Western Wood Products 6 Finish Carpentry Standard Product Patterns

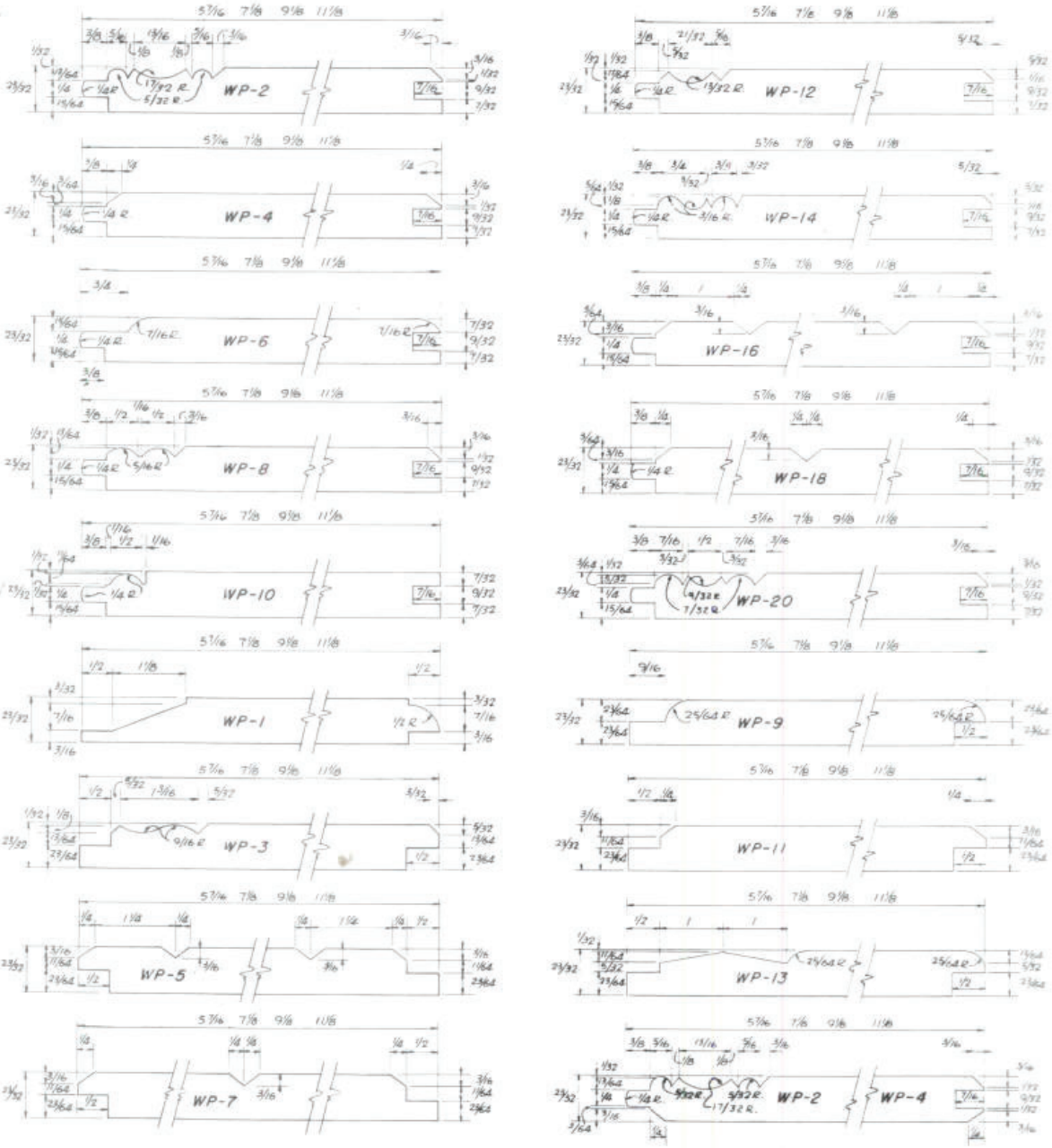


Western Wood Products 6 Finish Carpentry Standard Product Patterns

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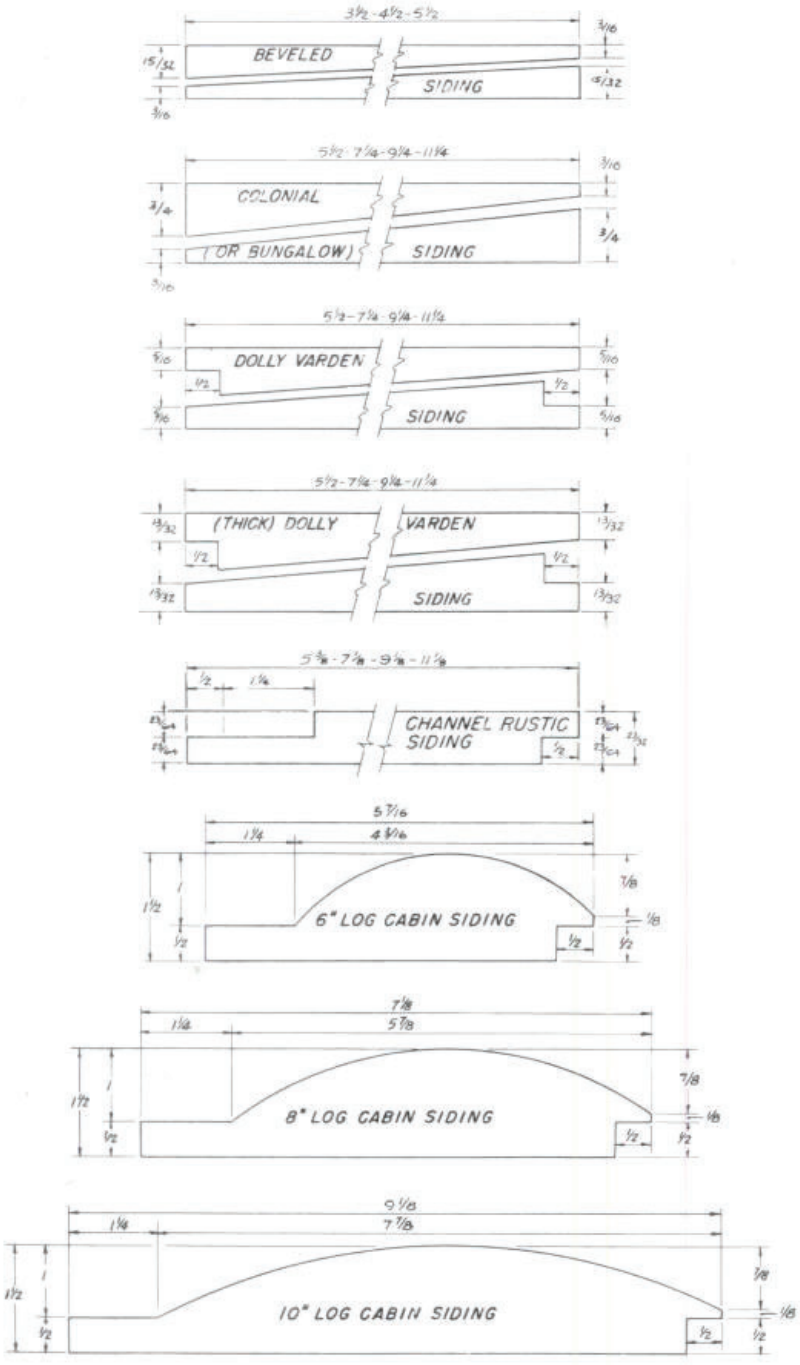
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PANELING AND SIDING



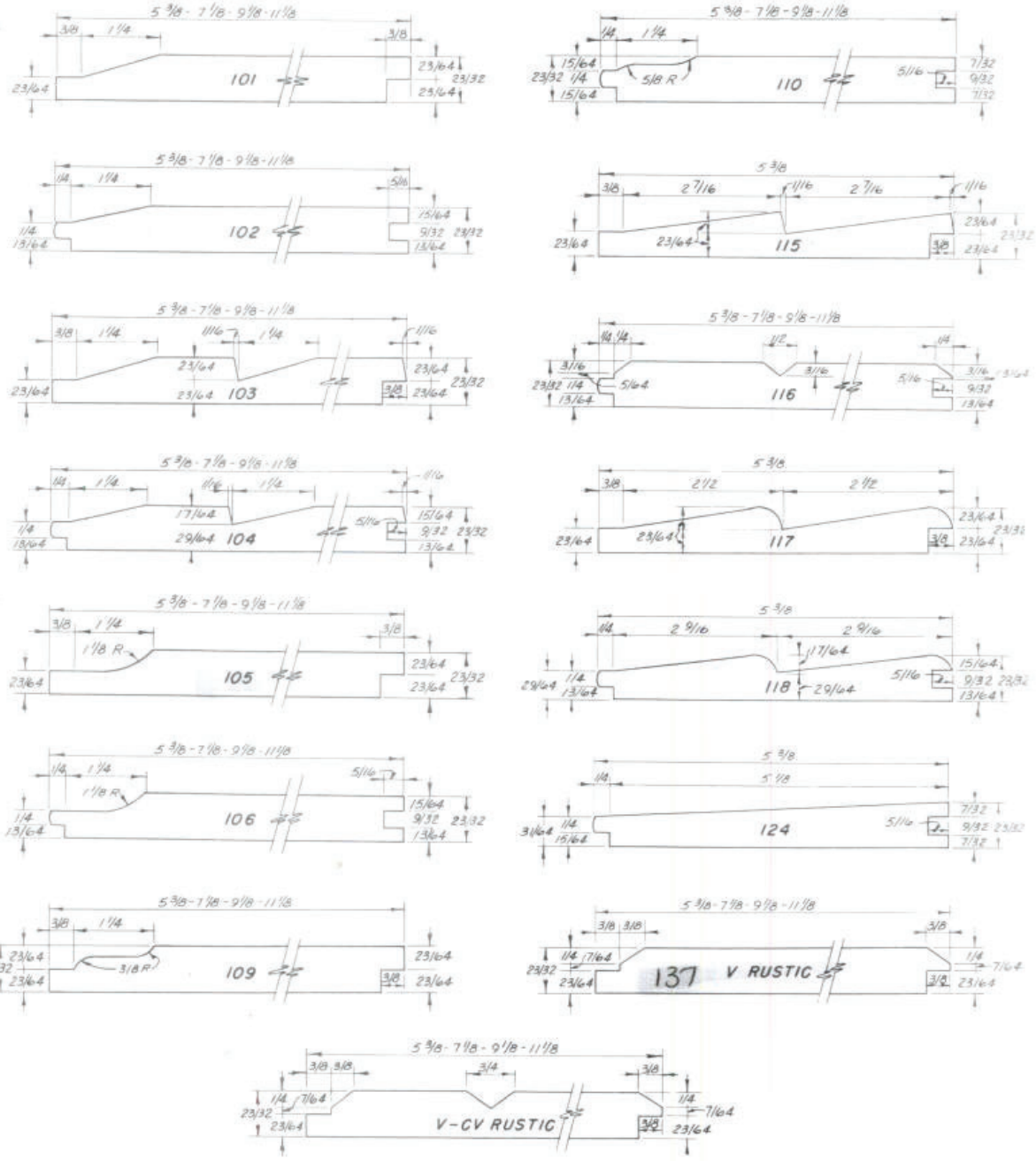
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SIDING
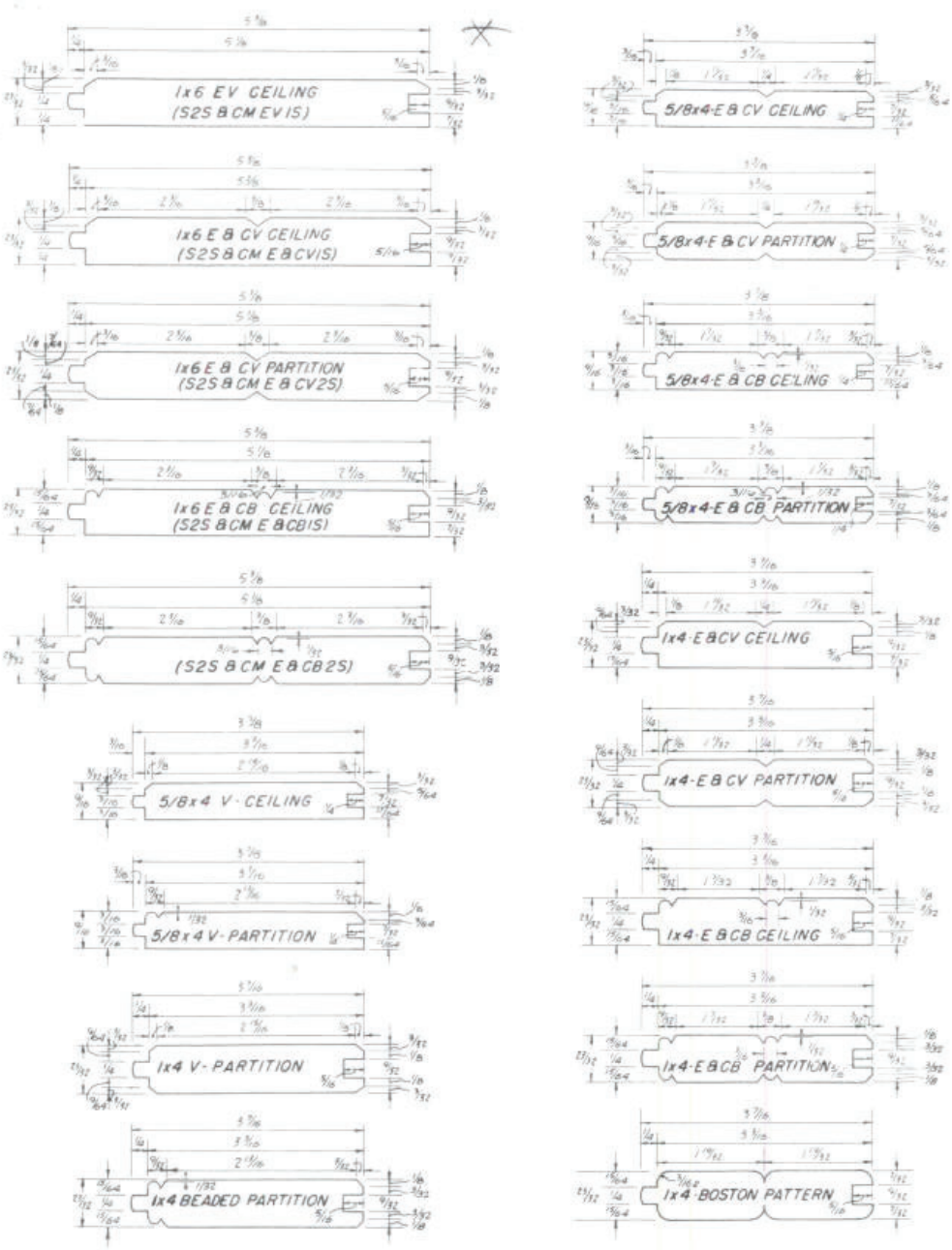

3½-4½-5½
BEVELED
SIDING
5½-7¼-9¼-11¼
COLONIAL
(OR BUNGALOW)
SIDING
DOLLY VARDEN
SIDING
(THICK) DOLLY
VARDEN
SIDING
CHANNEL RUSTIC
SIDING
5 7/16
4 3/16
6" LOG CABIN SIDING
7 1/8
5 7/8
8" LOG CABIN SIDING
9 1/8
7 7/8
10" LOG CABIN SIDING

4

SIDING

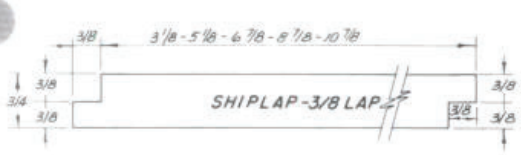

5 3/8 - 7 1/8 - 9 1/8 - 11 1/8
101
110
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102
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124
109
137 V RUSTIC
V-CV RUSTIC

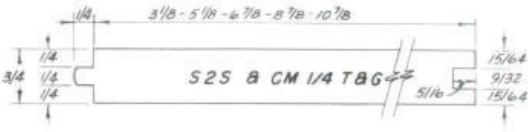
CEILING AND PARTITION

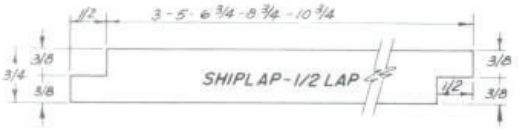


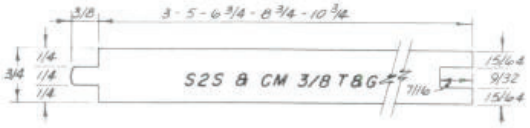
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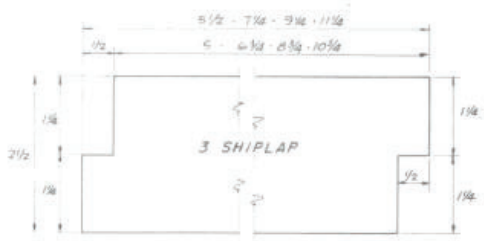
SHIPLAP, T&G, DECKING

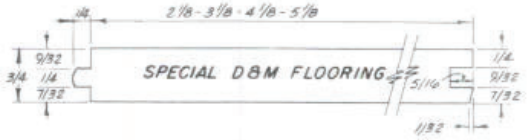


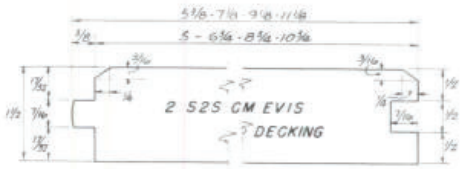


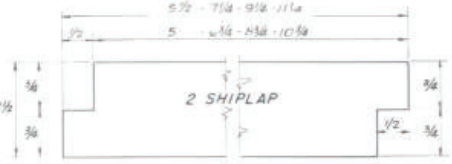


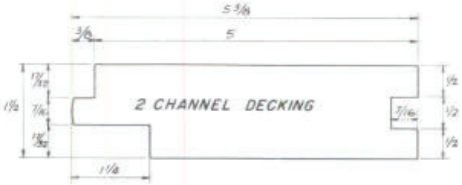


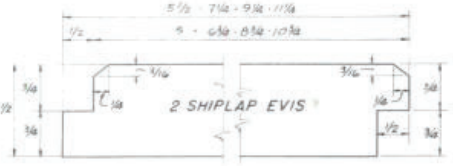










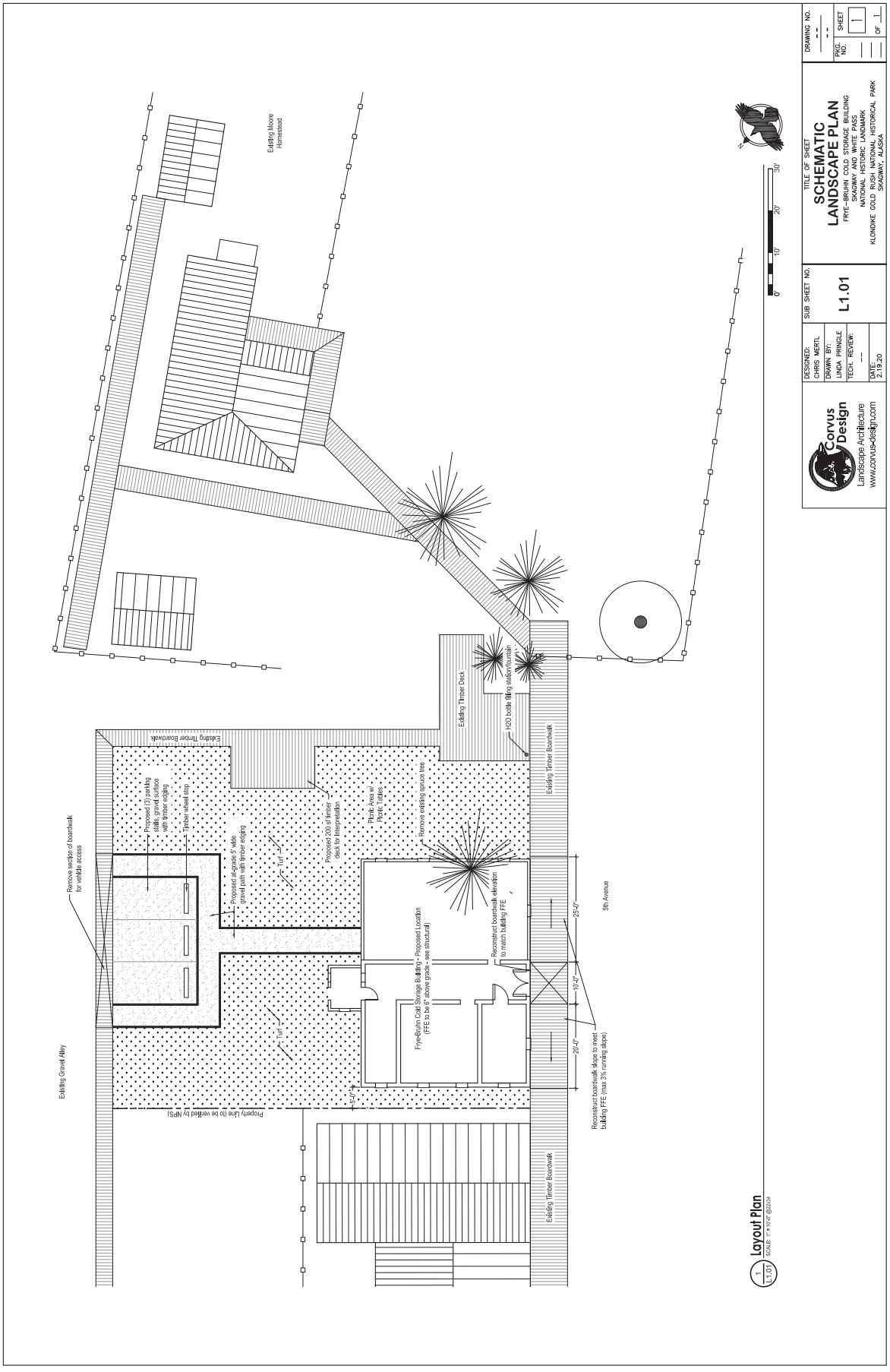


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APPENDIX H: SCHEMATIC LANDSCAPE PLAN


Existing Moore Homestead
Existing Timber Boardwalk
Existing Timber Deck
H2O bottle filling station (Potable)
Existing Timber Boardwalk
Remove section of boardwalk for vehicle access
Proposed (3) parking stalls, gravel surface with timber edging
Timber wheel stop
Proposed 4'-grade 3' wide gravel path with timber edging
Turf
Proposed 200 sf timber deck for interpretation
Picnic Area w/ Picnic Tables
Remove existing spruce tree
Reconstruct boardwalk elevation to match building FFE
Frye-Bruhn Cold Storage Building - Proposed Location (FFE to be 8" above grade - see structural)
5th Avenue
25'-0"
10'-0"
20'-0"
6'-0"
Turf
Existing Gravel Alley
Property Line (to be verified by NPS)
Reconstruct boardwalk slope to meet building FFE (max 3% running slope)
Existing Timber Boardwalk
0'
10'
20'
30'
1 L1.01 Layout Plan
SCALE: 1" = 10'-0" @22x34
Corvus Design
Landscape Architecture
www.corvus-design.com
DESIGNED: CHRIS HEPTL
DRAWN BY: LINDA PRINGLE
TECH. REVIEW: --
DATE: 2.19.20
SUB SHEET NO.
L1.01
TITLE OF SHEET
SCHEMATIC LANDSCAPE PLAN
FRYE-BRUHN COLD STORAGE BUILDING
SKAGWAY AND WHITE PASS
NATIONAL HISTORIC LANDMARK
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY, ALASKA
DRAWING NO. -- -- --
PKG. NO. --
SHEET 1
OF 1

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APPENDIX I: CULTURAL RESOURCES STUDY

CULTURAL RESOURCE STUDY: RELOCATION OF FRYE-BRUHN COMPANY REFRIGERATED WAREHOUSE BUILDING

Submitted By
Doreen C. Cooper
R & D Consulting
P. O. Box 594
Skagway, AK 99840

In Fulfillment of
P.O. No. P9825080986

March 2, 2009

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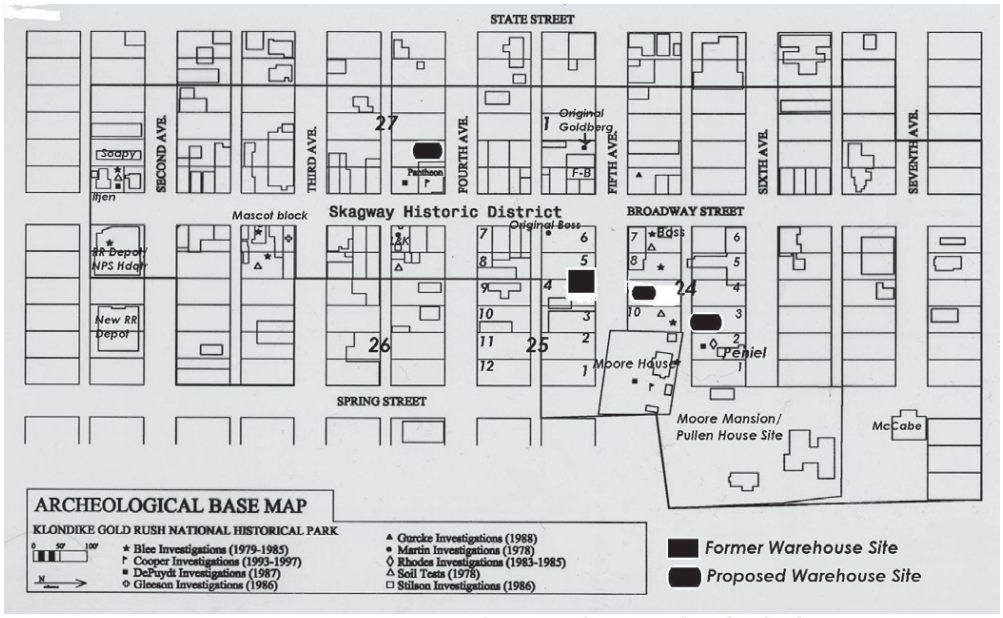


Figure 1—Skagway Historic District

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CULTURAL RESOURCE STUDY:
RELOCATION OF FRYE-BRUHN CO. WAREHOUSE BUILDING

Management Summary

Background

The Klondike Gold Rush National Historical Park (KLGO) has acquired a ca. 1900 refrigerated warehouse building. It was temporarily moved to land owned by the National Park Service (NPS) in 2004. This building is listed as a contributing structure on Skagway's National Register nomination, and is located within the Skagway Historic District, which is part of a National Historic Landmark. All the potential sites for the permanent home of the refrigerated warehouse have an Area of Potential Effect on recognized National Register historic sites. A Determination of Effect will have to be prepared by KLGO and submitted to the State Historic Preservation Officer(SHPO) prior to beginning any construction related to a permanent home for the warehouse. This report will facilitate the preparation of that documentation, and the planning of the archeological testing that will be necessary before any construction can take place.

In July 2006 a Value Analysis (VA) study was conducted to determine where the building should be permanently located. A key element of that study was a belief that the warehouse had been used as an "ice house," a type of refrigerated storage often historically associated with saloons. In 2008, during background research for the Historic Structure Report, it was learned that the building had in actuality originated as a refrigerated warehouse for the Frye-Bruhn Meat Company. Originally located closer to the waterfront, it was moved to its location on 5th Avenue ca. 1902-1903. Since the change in the building's origin has the potential to change the results of the VA study, additional information is being sought by the NPS for a more comprehensive look at potential building sites.

The former location of the warehouse and the potential relocation sites can be seen in Figure 1. They are: Block 27, Lot 2 (on the south side of Fourth Avenue, between Broadway and State Streets); Block 24, Lot 3 (on the north side of the alley between Fifth and Sixth Avenues, on the east side of Broadway); and Block 24, Lot 9 (to the west of the Moore House on the north side of Fifth Avenue west of Broadway). The warehouse was originally located across the street from its current location, on the south side of Fifth Avenue. The pinpoint relocation site within each lot is yet to be determined, so the proposed building placements are representations only.

Site-Specific Recommendations Summary

- Block 27, Lot 2 (west of the Pantheon Saloon building). A large building was erected on this site by the fall of 1897. First used as a hotel, in 1911 it began to be used as liquor storage for the Pantheon Saloon. The period of significance for the Pantheon Saloon extends from 1903 until 1916, a time when the area was populated by skilled tradesmen who relaxed in the saloon. The original building on Lot 2 probably continued to be used for storage until World War II, when it was demolished. Since then, the lot has largely been vacant. Archeologists have excavated along the eastern margin of the lot, and elsewhere dug several random testing holes and conducted soil chemistry analyses. Results indicate little disturbance to the site, and a lack of artifacts in the northern half of the lot. Potentially significant midden or privy deposits were found in the southern one-third of the lot, especially close to the alley. Another potentially significant midden deposit was found along the northeastern margin of Lot 2. To fulfill the mandates of Section 106 of the National Historic Preservation Act, it will be necessary to dig five to six full-size excavation units in several areas of the building's footprint to determine if intact archeological deposits are present. Additional excavation units must be dug along any utility line corridor that would run from the building site to the alley.

- Block 24, Lot 3 (site of the Peniel Mission Garage). There were two buildings, a residence and a boarding house, located on Lot 3 by the beginning of 1898. In the area of the current garage were at least two outbuildings, one of which may have been a privy. All the buildings were gone by 1911. After the NPS acquired the site in the 1970s it built a garage which still stands. Extensive archeological testing occurred on Lot 2, the site of the Peniel Mission building, but very little of Lot 3 has been surveyed or tested. The two shovel tests that came near the garage did not contain any significant deposits. However, the site is an archeological unknown. Since privy deposits have the potential to yield much information that can illuminate the historical past, archeological testing would need to occur across the entire area where the building would be placed. First, the garage would have to be removed. Then, a series of preliminary test holes would be placed to determine if building demolition and later construction impacted the original cultural remains. Any intact deposits would have to be further tested to determine their significance and extent. Significant remains would have to be archeologically excavated to mitigate the negative impacts of construction.

- Block 24, Lot 9 (the current location of the Goldberg Cigar Store). If there is an epicenter for the beginning of the history of Skagway, it would fall across this lot. Lying just north of the Gold Rush tideline, the original White Pass Trail crossed it. In 1897 a large building was erected, operated as an outfitting store run by the Seattle-based Goldberg Brothers. They vacated the store sometime in early 1898, and in 1899 it was purchased by the Roman Catholic church, and remodeled into St. Mark's. Sometime between 1914 and 1948 the church building was moved about north and east to align with the manse located on Lot 10. Both buildings stood until the 1950s, when they were demolished. The lot has been vacant since then until the NPS moved the Goldberg Cigar Store building here. For the warehouse to be placed here, the cigar store would have to be relocated. A series of archeological shovel tests were dug across the lot during the 1980s. The results found a potentially significant deposit in the middle of Lot 9. A series of archeological test units will be required if the warehouse is permanently located here. Based on results of the preliminary testing that indicated a limited number of significant artifact deposits closer to Fifth Avenue, negative impacts may be ameliorated somewhat it the building is placed along Fifth Avenue, and if utility lines do not connect to the alley. A positive location for the original White Pass Trail was not found during the shovel testing, and its remains may be difficult to discern. That doesn't mean, however, that it is not there. The convenience of keeping the building close to its current location must be weighed against the potential for disturbing an irreplaceable resource such as the White Pass Trail.

- Goldberg Cigar Store. This building is an example of the earliest type of structure erected in Skagway, and few survived the boom of the gold rush era. Its potential relocation is only a footnote to this report. If it remains on Block 24, however, the site that would require the least amount of archeological testing would be along Broadway, on the northern portion of Block 7. Test trenches and shovel tests have been dug in that location, and the area was found to be highly disturbed from a large building that stood here until the 1960s. Limited archeological testing would need to take place along the northern margin of the building's footprint.

Historical Resource Report—The Refrigerated Warehouse Building

Summary

The Frye-Bruhn Meat Company of Seattle became a successful international business based on its expansion into Alaska during the Klondike Gold Rush boom. Owner Charles Frye became one of Seattle's wealthy elite, and after his death established a small art museum that is still among Seattle's finest. Frye-Bruhn was established as a meat market catering to Skagway's Gold Rush stampeders by early 1898. Dissolving that partnership in 1899, they continued to operate a local butcher store in Skagway until the mid-1930s. The refrigerated warehouse now owned by the NPS was built in 1900, and moved to Fifth Avenue in 1902. Its refrigeration units may not have operated for too many years, and in 1914 the warehouse was listed as storage only. In 1919 the building was sold to local merchant Anthony Dortero, who continued to use it for storage, as did its later owners.

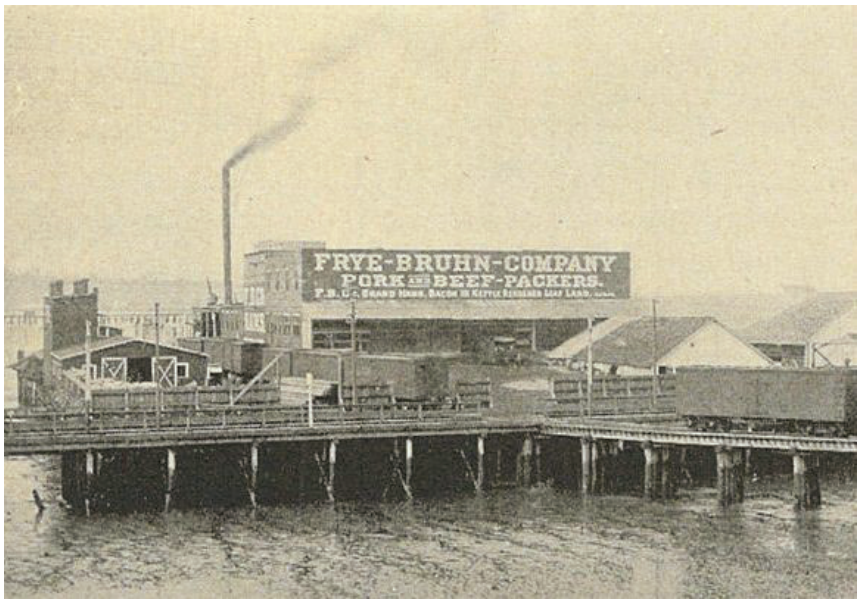


Figure 2—the Frye-Bruhn-Company complex in Elliott Bay, Seattle ca. 1900[1]

Frye-Bruhn Company History

Charles Frye was born in Iowa to German immigrants. Like many others, he gradually moved west, working on cattle ranches and in a meat market in Helena, Montana. By 1887, he and his new wife, Emma, settled in Seattle. In 1891 he and his brother, Frank, joined with their friend, Charles Bruhn, and incorporated the Frye-Bruhn Meat Packing Company.

The company undoubtedly would have stayed small if not for the advent of the Klondike Gold Rush. "The business expanded to include cattle, sheep, hog, and chicken ranching in several western states, with retail sales outlets stretching from Alaska to California."[2] In addition to their operation in Skagway, Frye-Bruhn had stores in Haines, Juneau, Valdez and Seward. Their cattle ranch in Katmai was buried in ash when the volcano exploded in 1912.[3]

In September 1899, their Seattle facility was destroyed by fire. An improved and enlarged facility was built on the tidal flats of Elliott Bay (Figure 2), close to where the current Seattle Seahawk football stadium is located. The new building was about three acres in size, and included a boiler, an engine room, and ice freezing machinery. During 1899, they produced 2,400,000 pounds of ham, 1,600,000 pounds of bacon, and 1,260,000 pounds of lard. They slaughtered 8,900 cattle, and had sales of over $1,500,000.[4] Eventually, Frye-Bruhn expanded their business to "the Orient."

Charles Frye became one of the wealthy elite, not only from his meat business, but also from investments in real estate, gold mining, and oil wells. He began to specialize in building refrigerated warehouses, and built one for the Frigidaire Company. Like many industrialists of his era, Charles Frye began collecting works of European art, specializing in artwork that was realistic. Childless, the Fryes directed that their art holdings and their estate (Emma died in 1937, Charles in 1940) be used to establish an art museum that would be free to the public. The Frye Art Museum opened in February 1952. Early on, the museum's art purchases expanded to include artists from the Northwest and Alaska. Expanded and renovated in 2002, the Frye is once again open to the public, free of charge.

Frye-Bruhn Company in Skagway

During the early gold rush years in Skagway, there were at least two butcher shops in Skagway which provided retail and wholesale meat to the stampeders and commercial clients[5]. Frye-Bruhn was the silent partner with butcher and entrepreneur Herman Meyer. That marriage came to an end by February 1899 when a legal notice was placed in the *Skaguay News* (February 24, 1899, p. 2):

> Notice is hereby given to the public .. that Herman Meyer, the former manager for Frye-Bruhn & Company, conducting and operating the Skaguay Market, has no longer any connection in any manner with said business, and all persons are hereby notified to have no further dealings with said Herman Meyer.
>
> The business that has been formerly conducted in Skaguay, Alaska, and known as the Skaguay Market, and owned by Frye-Bruhn & Co., will be hereafter conducted by and in the name of THE FRYE-BRUHN COMPANY….
>
> Dated at Skaguay, Alaska, this 23rd day of February, 1899.
>
> THE FRYE-BRUHN COMPANY
> By Frank F. Frye, Vice-President

Not only did they want to dissolve their partnership, they also wanted to gain clear title to Meyer's Skagway real estate holdings. [6] That included: Block 37, Lot 1 (the southwest corner of 2nd & Broadway, across from the White Pass RR Depot); Block 1, east ½ of Lot 2 (on the south side of 5th Avenue, west of Broadway, and just west of the Burkhard building); **Block 25, east ½ of Lot 5 (east of Broadway)—eventual site of the warehouse building**; Block 24, Lot 10 (next to the Moore House on the north side of 5th); and Block 10, Lot 10 (north side of 5th, west of Main Street).[7]



Although it is not known exactly when the company took over the retail outlet on Fifth Avenue (Block 1, east ½ of lot 2), they were definitely there by February 16, 1900: "The Frye-Bruhn Company's meat market in the Burkhard building on Fifth avenue is the pioneer in Skagway. … [T]hough the opposition is now keen, their business is greater than ever"[8]

Figure 3—Advertisement from *Daily Alaskan*, February 16, 1900

Note that there was no refrigerated warehouse at that time. But on May 16, 1900 the first advertisement appeared in the *Daily Alaskan* for refrigerated meat.



Figure 4—Advertisement from *Daily Alaskan*, May 16, 1900

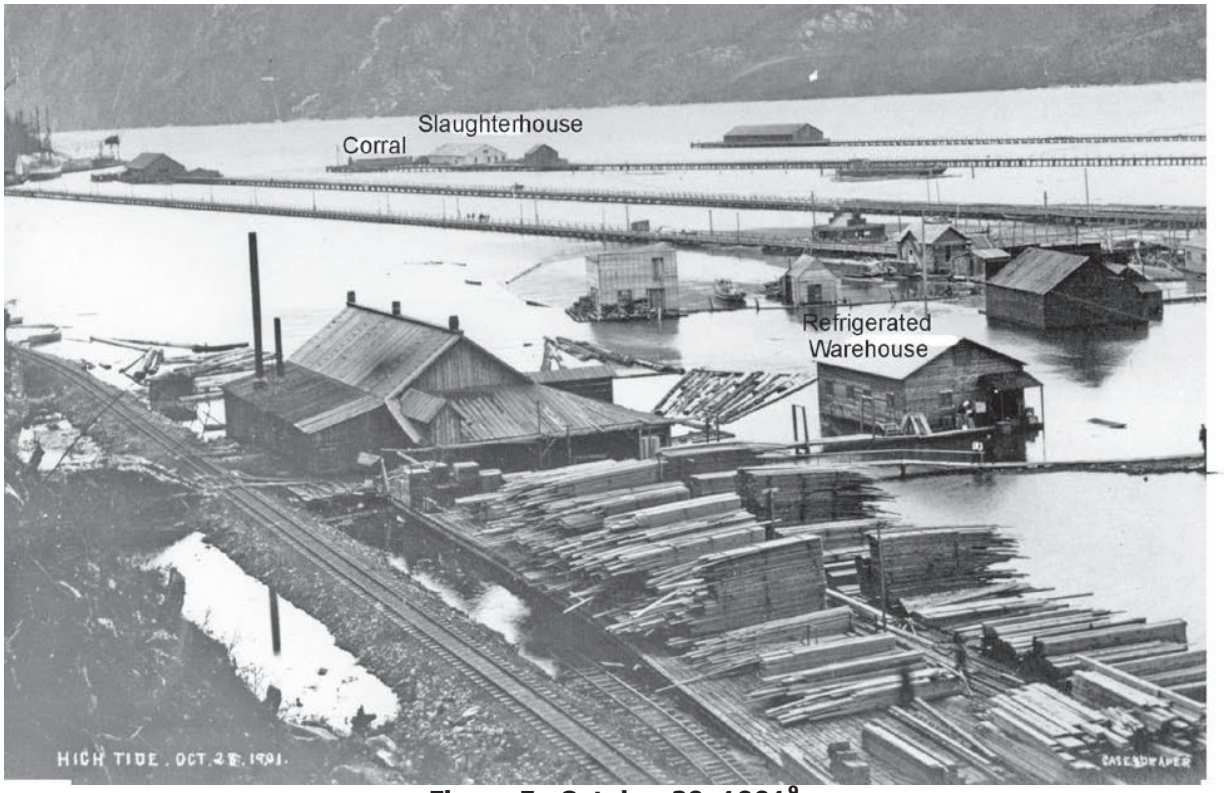


Figure 5—October 29, 1901[9]

Figure 5 shows the original location of the refrigerated warehouse now owned by the National Park Service. Frye-Bruhn Company continued to expand its Skagway operations by building a slaughterhouse and associated corral on the Sylvester wharf in August 1900 (possible location annotated in Figure 5). The new slaughterhouse was "so arranged as to be convenient for the landing of stock direct from the ships and can be kept fresh and clean by the use of sea water. The building is 30 x 40 feet and one story high."[10] In November of 1900, they built a "commodious barn" at the rear of their market on Fifth Avenue.[11] In the newspaper's annual New Year's Day Skagway promotion issue, the Frye-Bruhn Meat Market was featured prominently. The paper noted that "it was one of the first to build a substantial store here and put in refrigerators and all the adjuncts and appliances necessary to a large business" and that it had grown to be "in a sense, an independent establishment, having been fitted up with all modern arrangements for carrying on a large business."[12]

It is not known exactly how the refrigerated warehouse was operated. Figure 6 shows the company's beef room at their plant in Seattle.[13] Unfortunately the photo is not clear enough to tell if there are refrigeration coils, similar to the ones in the Skagway warehouse, against the rear wall. But a description of the meat slaughtering process at their Seattle plant is illuminating. First the cattle were killed with a blow to the head, and the carcass dropped to a room below where:

> it is hoisted by the hind feet with a friction hoist, the blood drained, the head cut off and the carcass skinned, dressed and quartered and sent on the way by overhead track and hanging wheel to the chill room, the various processes probably occupying ten minutes and requiring four men. Carcasses are left in the chill room (33 degrees above zero temperature) forty-eight hours when they are ready for shipment or the market. Where shipped any distance, the meat goes by refrigerator cars, or, if on the water, in refrigerator tanks.

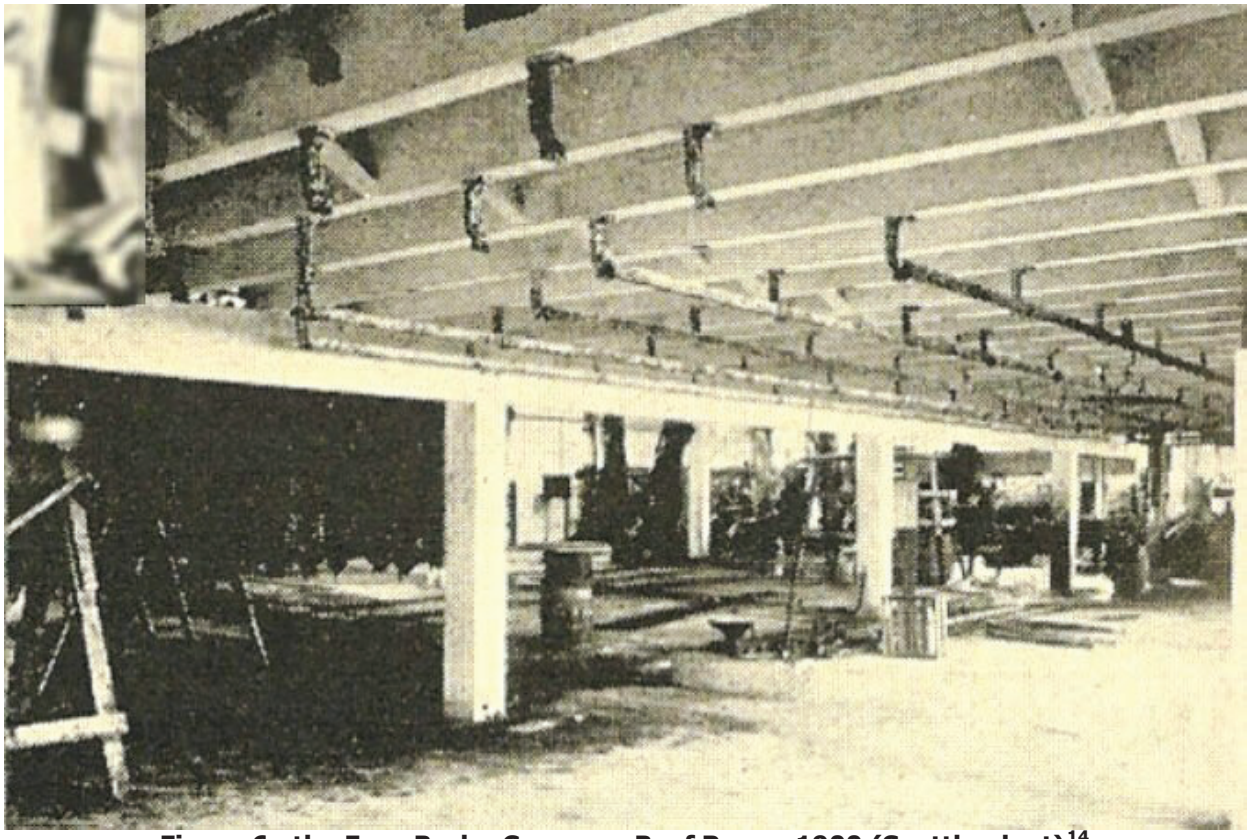


Figure 6—the Frye-Bruhn Company Beef Room, 1900 (Seattle plant)[14]

Hogs and sheep were killed with a knife, but the rest of the process was the same. In Skagway, if the newspaper accounts are correct, animals were butchered at the warehouse on the wharf, and then brought to the refrigerated warehouse for chilling.

In 1902, Frye-Bruhn expanded their real estate holdings on Block 25 by purchasing the northern half of the West ½ of Lot 4 in Block 25 (Deed Book 5, pp. 382-383, October 18, 1902). On November 9, 1902, the *Daily Alaskan* noted that "Frye-Bruhn Co. has decided to remove its cold storeage [sic] plant from the present location near the old sawmill site to Fifth avenue, opposite the New Home restaurant."[15] This is where the building stood until moved in 2004.

It is not known how long the refrigeration units in the warehouse were operable. Commercial refrigeration was introduced in the United States in 1856. However, the ice industry had become well-established, and its relative simplicity compared to commercial refrigeration kept it dominant until the 1890s when problems with ice from polluted rivers and lakes forced breweries and meat packers to take a closer look at commercial refrigeration. These early commercial refrigeration units, such as the one probably used at the Frye-Bruhn refrigerated warehouse in Skagway, used either gaseous ammonia, methyl chloride or sulfur dioxide as refrigerants. Leakages often had fatal results for those nearby when the leakage occurred. It wasn't until the 1920s that chlorofluorocarbons for cooling were developed by Frigidaire.[16] The 1914 Sanborn map of Skagway simply shows the building as a warehouse.[17]

The Skagway Frye-Bruhn Company business was listed in the Skagway directories through the 1934-1935 Gazetteer, but in 1919 they sold the warehouse to Skagway pioneer Anthony Dortero[18]. The warehouse was located directly behind the store (Figure 1). During his mercantile career in Skagway, Dortero sold fruits, nuts and cigars, and later became its haberdasher. The 1915-1916 business directory lists

Dortero's original business, while the 1917-1918 lists he and his son Vincent as "Exclusive Clothiers to Men."[19]

Dortero died in Skagway, on January 6, 1920. According to tax records, his widow, Sabina Dortero, continued to pay taxes on the warehouse until at least 1945. From 1955 until 1965 taxes were paid by Louis Rapuzzi and L. T. McGuane, and it is assumed that they bought the warehouse from the Dortero estate, but no search has been made for the deed. No documents have been found that might shed light on what was stored in the warehouse during those years. In 1966 Malcolm Moe began paying taxes on all of Lot 5, Block 25, and it is assumed that he purchased the building then. Although still functional, the building had deteriorated and the wood on its east side was scorched and blistered from exposure to a fire (Figure 7). When the NPS acquired the building, it was still being used for non-refrigerated storage of miscellaneous items.



Figure 7—Frye-Bruhn warehouse, 1970[20]

Site No. 1: Block 27, Lot 2—Pantheon Saloon Site

The Park Service owns all of Lots 1 and 2 on Block 27. Lot 2, currently an open area, was the site chosen as the new home for the warehouse by the participants in the 2006 VA study. The projected placement of the building is to face 4th Avenue, and be placed behind the Pantheon and Red Front buildings (Figure 8) (the footprint is speculative and assumes that the architects will want to leave a space between it and the rear of the Pantheon building, and that the front façade will be close to 4th Avenue for greater visibility). The site is one of the earliest in Skagway to contain permanent buildings, and its significance is tied to the possibility that intact cultural remains from those early days may still remain.

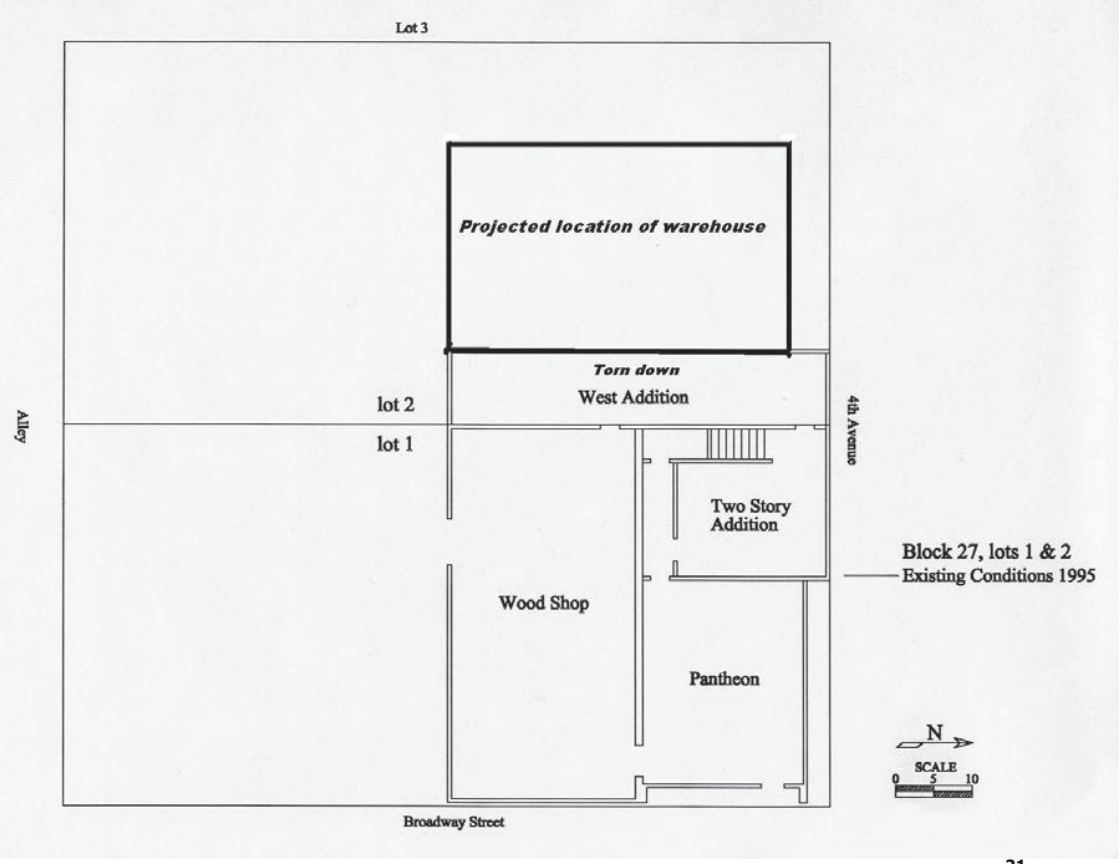


Figure 8—Pantheon site, projected new location for warehouse[21]

Historical Background

A complete and detailed history of the buildings and businesses that were located on Lot 2 can be found in the archeological study of the site[22]. The period of significance that has been established for the Pantheon Saloon building on Lot 1 extends from 1903 to 1916, when prohibition closed down Skagway's saloons. However, prior to 1903 this area was one of the first to contain permanent buildings, and was a business hub of early Gold Rush Skagway. Figure 9 shows the new commercial buildings that lined Fourth Avenue during the winter of 1897-1898. Two buildings were on Lot 2, a one-story directly behind Clayson's Clothier, and the two-story Hotel Seattle. The placement of these buildings in regard to the possible move of the warehouse can be better seen in Figure 10. The short building on Lot 2 between the rear of the hardware and the Hotel Seattle was either removed or enlarged so that it matched the length of the hotel building (Figure 11).

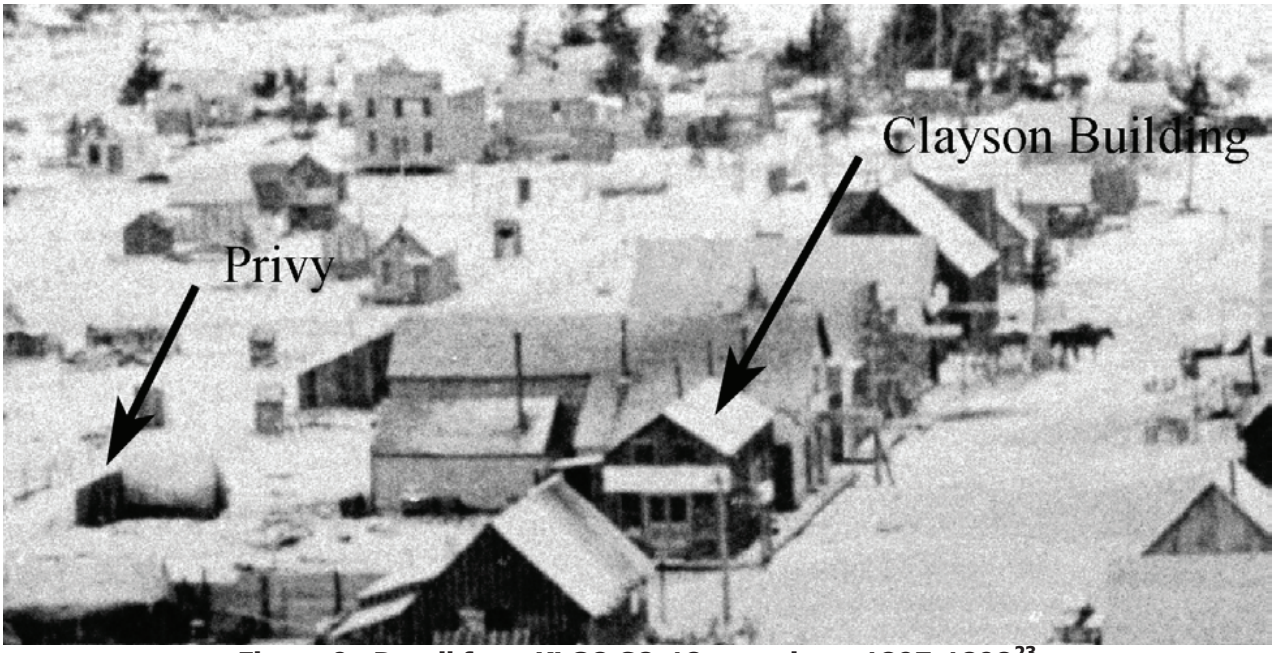


Figure 9—Detail from KLGO SO-18, ca. winter 1897-1898[23]

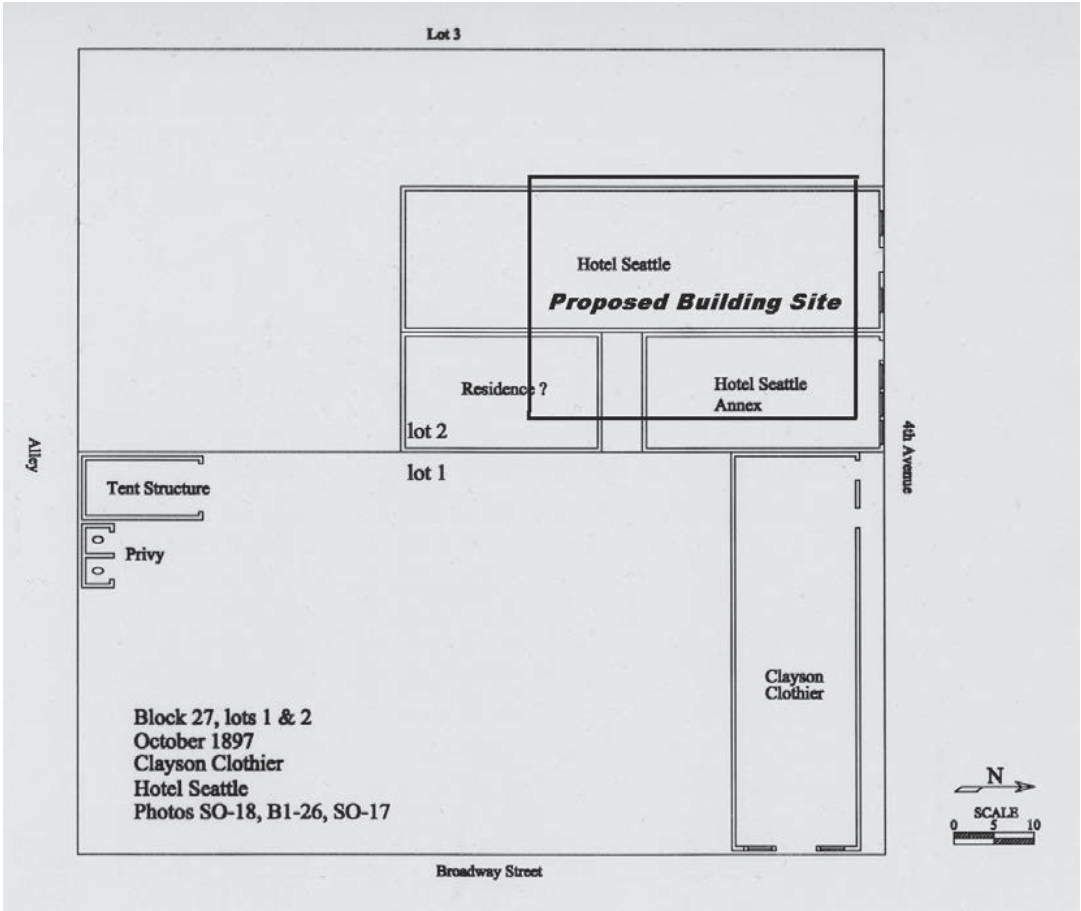


Figure 10—1897 Buildings on Lots 1 and 2[24]

In 1898, D. C. Brownell bought Clayson's building, and his hardware store anchored the southwest corner of Fourth and Broadway until 1903. The configuration of buildings on Lots 1 and 2 can be seen in Figure 11. The 1898 streetscape along Fourth Avenue was varied and extremely busy (Figure 12). Some of the businesses lining 4th during 1898 were short-lived, and deed records show that to also be true for Lot 2 which changed owners four times in 1898. The final transfer took place in June 1898 when James Gass sold the land and building to Charles Moody for $1,200.[25] The exact businesses that took over the Hotel Seattle building are not known,[26] but the 1899 directory lists a mixed bag of entrepreneurs.[27] (The smaller the numbered address, the closer the business is to Broadway.)

Table 1—Businesses on south side of 4th Avenue, Block 27, 1899 Directory

No	BUSINESS	Other ID
311	L. W. Wynkoop	Plumber
317	Sterilized Milk Co	Food-dairy
319	Joseph Morgan	Clothing
321	Phil Abrahams	Real estate
323	Alaska Steam Laundry	Laundry
331	James A Carroll	Footwear, outfitter
333	The Puget Sound	Restaurant
335	Skagway Light & Water	Electricity/water
337-339	C W Everest	Dry goods, footwear, groceries

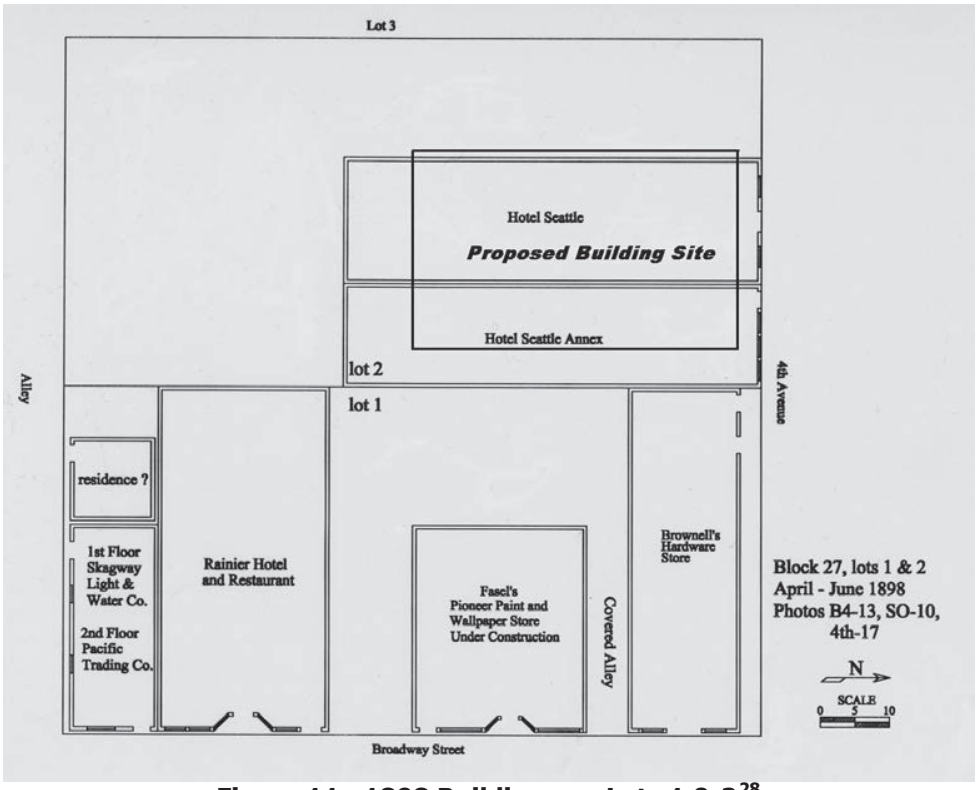


Figure 11—1898 Buildings on Lots 1 & 2[28]



Figure 12—4th Avenue Street Scene, ca. early 1898



Figure 13—Corner of 4th & Broadway, ca. winter of 1898-1899[29]

The best view of the 1898 appearance of the buildings on Lot 2 can be seen in Figure 13. In 1902, Brownell sold his hardware store and moved to Valdez. It was bought by J. A. Anderson in 1903 who converted it into the Pantheon saloon. In 1904, Katherine Moyer bought Lot 2 and its buildings. No improvements or changes are shown in the tax records. In 1911, Anderson, owner of the Pantheon Saloon, purchased the land and buildings on Lot 2. He used the Lot 2 buildings as storage for beer and liquor.[30]

In the 1903 and 1907 Skagway business directories it is still possible to discern the types of businesses in the Block 27 area. The ones that are known to be located on 4th Avenue are shown in Table 2.

Table 2—Businesses along 4th Avenue, 1903-1907

1903	Abrams & Olson	Hotel	Lodging house
1903	Golden North Hotel	Hotel	Lodging house
1903	Carrie Butler	Mercantile	Bakery
1903	Patrick Saville	Mercantile	Second-hand shop
1903	White Pass Athletic Club	Professional	Fraternal
1903	White Pass Lodge No. 113	Professional	Fraternal
1903	Phil Abrahams	Professional	Real estate
1903	Skagway Townsite Co.	Professional	Real estate
1903	Cascade Steam Laundry	Service industry	Laundry
1903	Pantheon	Service industry	Saloon
1903	Remick & McLean	Skilled	Blacksmith
1903	C Everest	Skilled	Contractor
1907	Edward J Liddicoat	Skilled	Contractor
1903	Nettles & Ford	Skilled	Tinsmiths

The 1914 Sanborn map also shows business trends along 4th Avenue. Most of the businesses that now lined 4th Avenue between Broadway and State Streets were blue-collar: the Nettles & Ford plumbing, hardware and tin shop; a stove and hardware store; a picture framing store; and a carpenter shop and lumber storage facility. To the west of the Lot 2 liquor storage building was a small residence. Between the former hotel and the rear of the former Red Front hardware was a wood shed that extended onto Lot 2, along with some small sheds or lean-tos attached to the rear of the buildings. These can be seen in Figure 14, along with the speculative potential location of the warehouse.

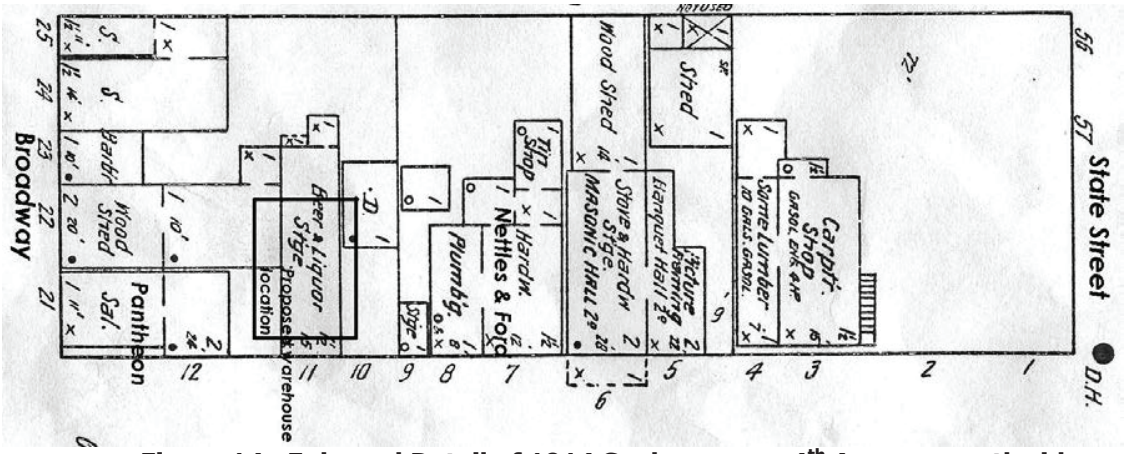


Figure 14—Enlarged Detail of 1914 Sanborn map, 4th Avenue, south side

Skagway's enactment of Prohibition closed down the Pantheon saloon in the summer of 1916, but in November Anderson was still trying to operate the saloon when he was arrested for selling liquor without a license. After unsuccessful efforts to convert his business to a purely retail venture, Anderson rented his properties to Louis Rapuzzi, who operated the corner building as a seasonal tourist museum.

In 1936, tax records indicate that the old Hotel Seattle building was removed from Lot 2, and thereafter no improvements are shown for that property. However, during World War II Skagway was home to

hundreds of soldiers, stationed here to take over operation of the port and the railroad. In 1943, Anderson finally sold his former saloon building to Louis Rapuzzi, who then leased it to a Juneau saloon operator who obtained a liquor license and again operated the Pantheon as a saloon. Figure 15, taken on October 6, 1943, clearly shows the narrow shed added to the rear of the Pantheon under construction, and building materials stored on the rest of Lot 2. The lean-to shed lay on the eastern margin of Lot 2.



Figure 15—4th Avenue, looking west from Broadway, October 6, 1943[31]

Since World War II, there have really been no changes to Lot 2. Skagway tax records confirm that no new buildings were erected. However, in 1978 the Klondike Gold Rush National Historical Park moved a singlewide residential trailer onto the property to provide housing for seasonal employees. It was removed in late 1980.[32] It is assumed that water and sewer connections would have been cut across Lot 2, but no records survive that show where those trenches would have been dug.

Historical Context

The Pantheon Saloon building has been rehabilitated to a period of significance that extends from 1903 to 1916, when Prohibition closed down Skagway's saloons. In Table 2 it is apparent that Block 27 was a largely blue-collar skilled trade hub, anchored by a blue-collar saloon, the Pantheon. Figure 16 shows what the streetscape looked like sometime between 1903 and 1914. This quiet street is very different than that seen during the earlier years of the gold rush (Figure 12). In general, this was a street where people went for business rather than pleasure. And it would have been more men than women visiting these businesses because of the dominance of labor-oriented services offered.

The saloon used the building on Lot 2 for storage. By 1914, the Frye-Bruhn warehouse's refrigeration units had very likely fallen into disrepair, and the building was being used solely for storage. There is one other storage building on 4th between Broadway and State Streets, and at least one more located farther away, shown on the 1914 Sanborn map. But, in general, it is not a "warehouse" type of area. The participants in the VA study believed that the context of an "ice house" warehouse was compatible with the function of saloon storage, since ice houses were often connected with breweries or saloons. The

context of the building to be moved, refrigerated and later dry storage, is still compatible with the site since by 1914 the Frye-Bruhn building was also being used for dry storage. However, the period of significance must then be tied to the second decade of the twentieth century rather than the first. And because the building will be quite a bit removed from its original location, it will not be immediately apparent to the casual visitor to the site why exactly the building is there. If the building is moved here, one of the possibilities for interpretation would be to focus on the specific context of a pre-Prohibition saloon business rather than the history of the Frye-Bruhn refrigerated warehouse building itself.



Figure 16—4th Street looking east, Pantheon Saloon era[33]

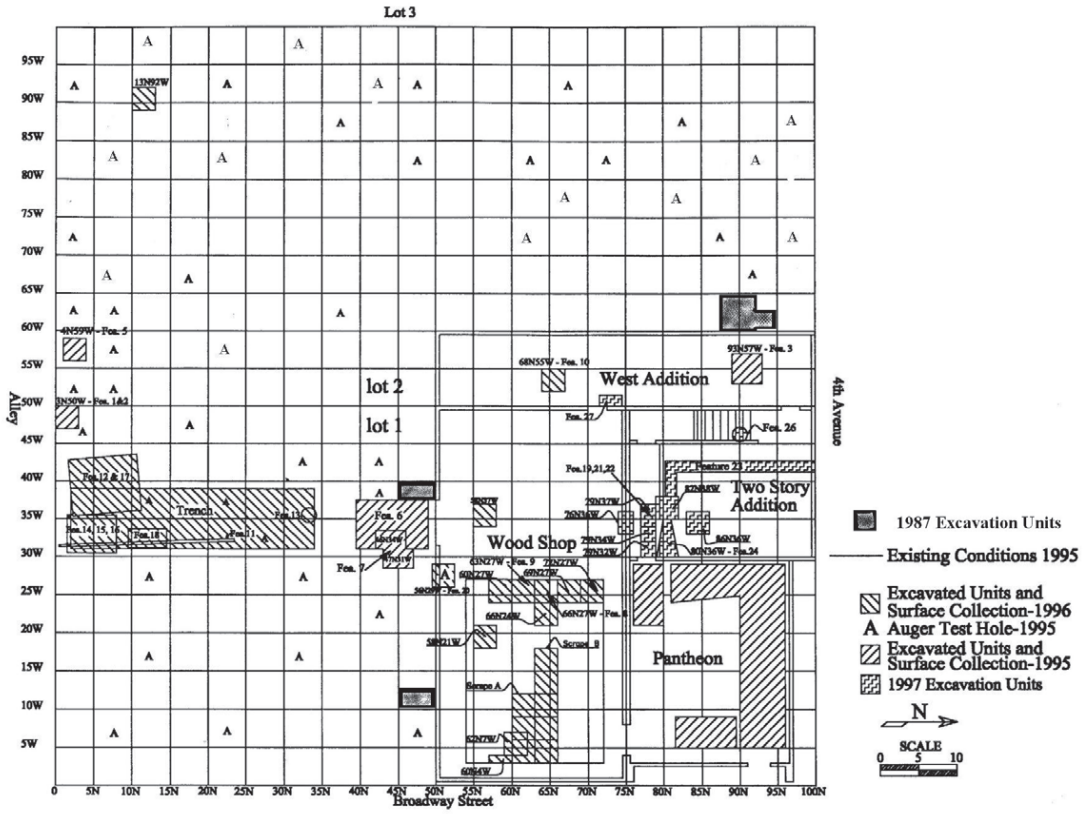


Figure 17—Drawing of Archeological Excavations at the Pantheon Site, 1987-1997[34]

19

Summary of Archeological Testing

The planned rehabilitation of the Pantheon building anticipated little impact to Lot 2, and therefore only limited Phase I archeological testing took place there. All archeological testing was concentrated in the areas in and around the standing buildings, and the planned utility line corridor. The locations of archeological testing can be seen in Figure 17. Testing began in 1987 under the direction of archeologist Ray DePuydt. The second testing phase began in 1995 under the supervision of Project Archeologist Doreen Cooper. Testing was completed in 1996, and monitoring of construction activities took place in 1997. All of that archeological testing has been summarized in a final report.[35]

Results of the limited soil chemistry analyses, soil coring, and test excavations all indicate that there is a high probability that potentially significant cultural remains will be found on the southern half of the lot, especially within ten feet of the alley. The probability of finding intact, potentially significant cultural remains is much diminished on the northern half of Lot 2, except along its eastern margin.

Possible privy on east side of Lot 2

In 1987, archeologists initiated a limited excavation to investigate a depression found at the rear of a the World War II shed attached to the rear of the two-story building. Although they believed they had found wood cribbing for a privy, they also exposed one .75" diameter water pipe and at least one concrete sewer pipe running through most of a seven and a half foot wide area. Gold Rush era artifacts and part of an old cast-iron stove were found in these units, but their significance was diminished because of their context in or adjacent to these utility line trenches. It is possible that these artifacts were placed here when the Lot 2 buildings were demolished in the 1930s. A profile drawing of one of the excavation units shows the placement of the stove parts in relation to the wood cribbing and the utility pipe (Figure 18).

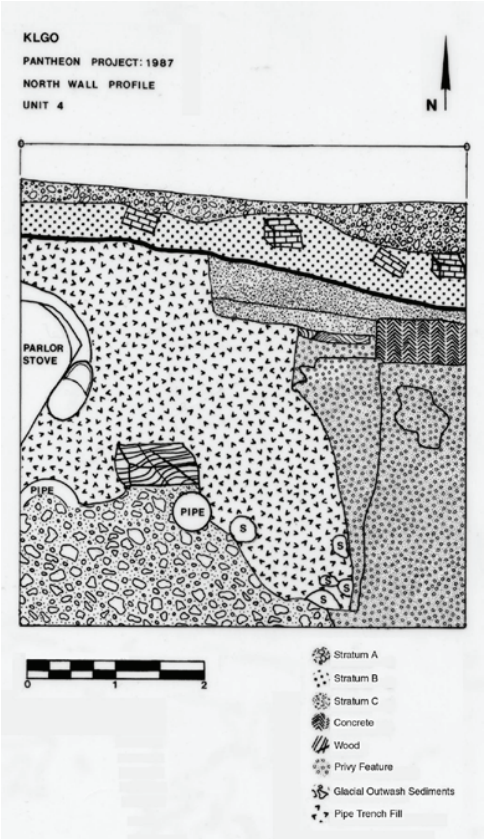


Figure 18—Profile Drawing of 1987 excavation unit[36]

In 1995, the World War II-era shed addition was removed from the rear (west side) of the Pantheon, allowing archeologists their first opportunity to explore the area. The depression seen in the ground outside the shed in 1987 was now seen to extend to this newly uncovered area. A four foot square excavation unit (93N57W) was placed in the depression, and near the location of the 1987 archeological units. What they found was a large, wood-lined cesspool, a type commonly found around Skagway. (A wood-lined cesspool, almost identical in construction, was also found in the utility line trench on the south side of Lot 1, and also during construction work at the Peniel Mission.) A plastic bag found near the base of the feature suggested a date from the late 1930s. However, shovel testing in the area during 1995 demonstrated that there are several locales of higher artifact counts where dateable artifacts also indicate a potential link to the Gold Rush era.

Even though the testing in this area showed considerable disturbance, a similar site excavated on the south side of Lot 1 demonstrated that utility lines can and did cut a narrow trench through a significant deposit, leaving intact remains on either side.

Other Testing on Lot 2

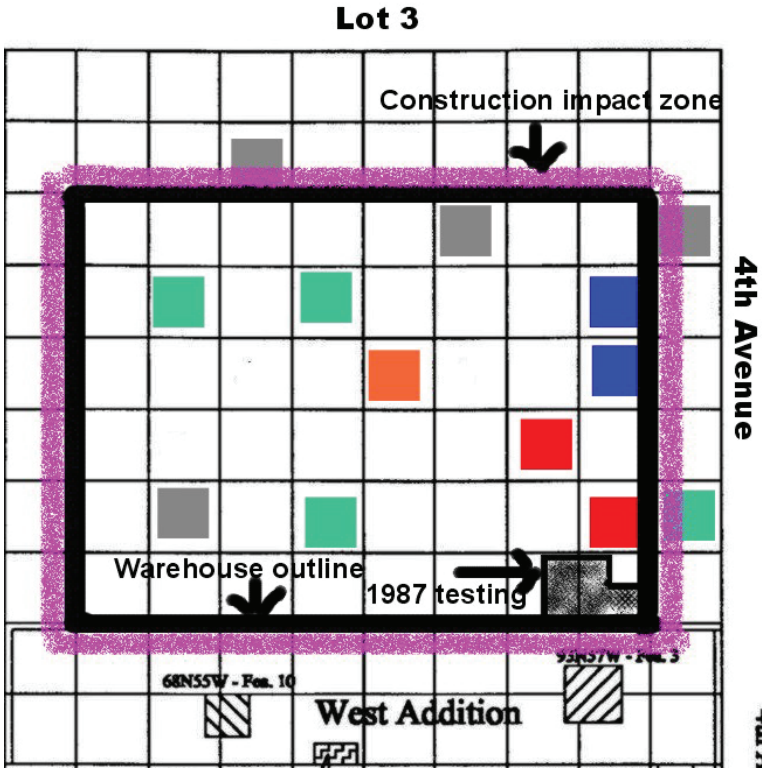


Figure 19—Artifact Densities of Test Holes on North Half of Lot 2, Block 27

Table 3—Key to Figure 19

Description	Color
Impact from foundation activities	Magenta
High artifact densities	Red
Medium artifact densities	Orange
Low artifact densities	Green
Very low artifact densities	Blue
No artifacts found in test hole	Grey

In 1995, fifty-one 1-2" diameter soil cores were drawn from random locations on Lot 2 of Block 27, twelve from the northern half. No possible feature areas were noted. Generally, artifact quantities were low, and some soil bores had no artifacts. A visual representation of the north half of Lot 2 showing the 1987 and 1995 excavation units, the sites of the soil cores, and the proposed building footprint (outlined in magenta) can be seen in Figure 19.

Other "hot spots" (based on high artifact quantities) were identified on the south side of Lot 2. Very close to the alley and the Lot 1/Lot 2 boundary excavation unit 3N50W exposed Feature 2, a gold rush era privy.[37] Feature 5, a gold rush era dump site, was found during excavation of unit 4N59W[38]. The locations of these units can be seen in Figure 17. Since these areas were not going to be impacted by construction activities, no further archeological work took place there, leaving some of these significant cultural resources in the ground.

Very little work has been done on soil chemistry testing in Alaska, and there are definitely some differences in high latitude versus southern soils. Limited soil chemistry analysis was conducted at this site in an effort to evaluate the method's usefulness in locating potential archeological deposits. Samples from some of the fifty-one test holes were tested for soil pH (using a digital pH soil tester), phosphorous, potassium, and calcium (using a LaMotte soil testing kit). The samples were obtained in June 1995, and tests were done in April 1996. Constraints on testing included available staff time and chemicals on-hand to process the soil samples.

The results of the soil testing demonstrate a link between elevated levels of phosphorous and potassium in the southern half of Lot 2, and the probable presence of trash middens of unknown origin. "Normal" soil pH readings were concentrated in the northern half of Lot 2. The levels of calcium found in the soil samples were widely varied, but the higher readings found in samples from the southern half of the lot do probably correlate with its more alkaline soil. At the Slack Farm in Delaware, archeologists found a positive correlation between elevated soil calcium concentrations and a ca. World War II building demolition that left chunks of mortar, bricks, etc. in the ground.[39]

Block 27, Lot 2—Research Design Summary

According to the VA study, the warehouse would face 4th Avenue. Since the warehouse is approximately 30 feet wide and 40 feet long, the area of potential affect is the north fifty feet of Lot 2. The most potentially sensitive area is a possible midden along the lot's eastern edge. The other areas of the northern half of Lot 2 are much less likely to yield significant cultural remains. The biggest challenge is not the building or its footprint, but the utility line trenches. Water for the building would come from the main water line that runs under 4th Avenue, and that is not expected to impact intact *in situ* archeological deposits. But a sewer line would have to come from the city sewer line that runs along the alley between 4th and 3rd Avenues. Testing in the southern half of the lot has confirmed the possibility of intact midden or privy deposits within twenty feet of the alley. During construction, all ground-disturbing work should be scheduled in advance with an archeologist so that it can be monitored if necessary. Cost estimates are summarized at the end of the report.

Research Design Details

Figure 20 is a rough schematic showing the placement of recommended excavation units in the northern half of Lot 2. The blue outline is the footprint of the two former buildings that once sat on Lot 2. The thick magenta outline is the approximate footprint of the warehouse, and the red squares are projected locations for archeological test excavation units. Two test excavation units (3' x 3') are recommended to be placed twenty feet to twenty-five feet west of the existing west side of the Pantheon building, and ten to fifteen feet south of 4th Avenue. By placing these units 20 to 25 feet west of the existing building, they should be clear of the area of ground disturbance from the Pantheon rehabilitation construction. These two closely-spaced excavation units should allow the archeologists to determine the origin of the high artifact concentration, and its potential significance. Two excavation units of identical size are further recommended, one to be placed anywhere along the building footprint's south side, and another

along the building's western margin. They should expose enough of the soil to understand the stratigraphy and to assess what remains from the Hotel Seattle building. Since the building was erected during the earliest days of the gold rush, it is believed that there is only sterile soil covered by a thin layer of sheet midden (trash) that accumulated after the building was demolished in the late 1930s. Certainly this was the case below the Pantheon complex of buildings. The soil below the front part of the Pantheon building (which was erected as the Hotel Rosalie by September 1897) was almost culturally sterile because it was covered by a building since the earliest days of the gold rush.

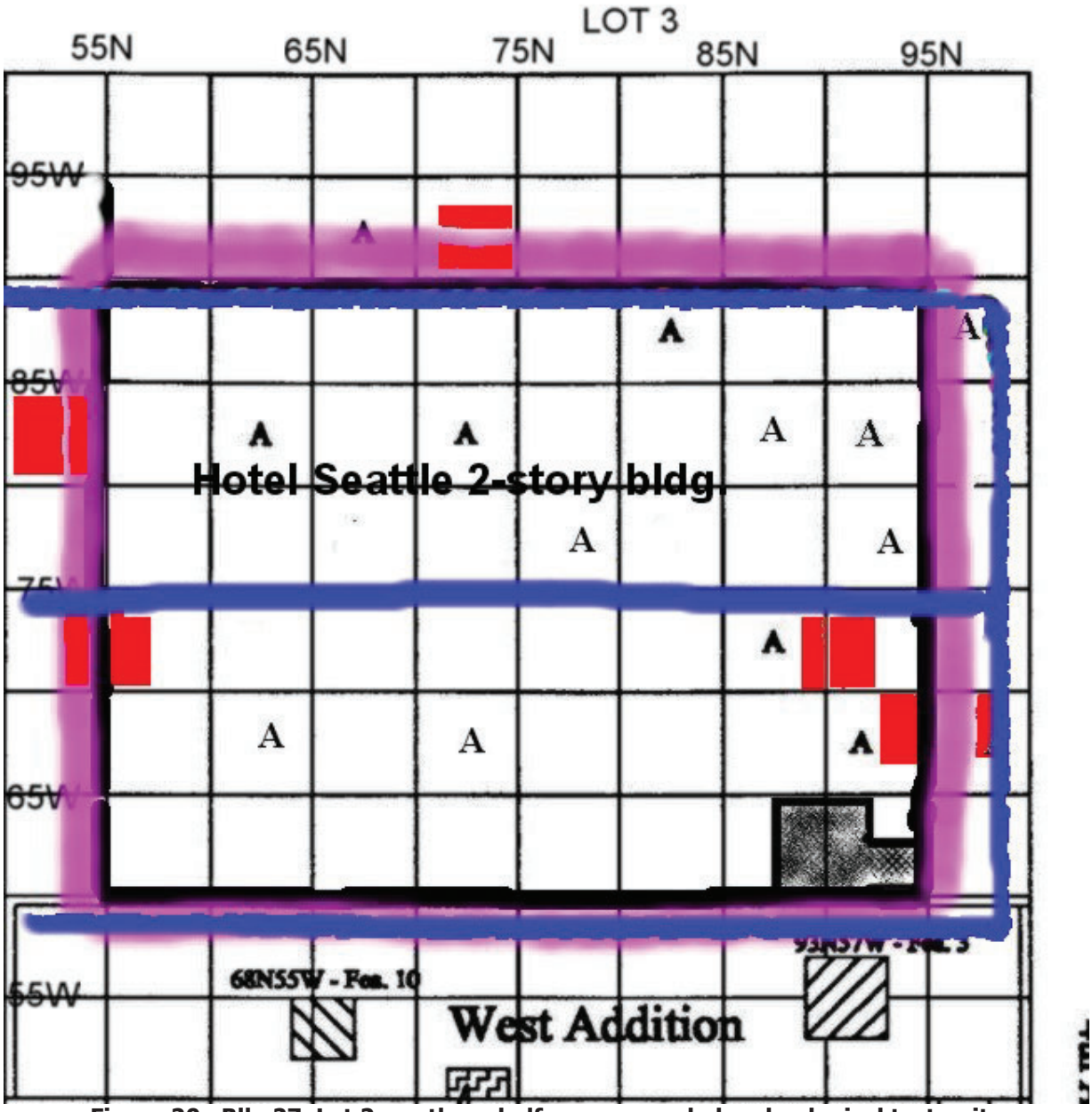


Figure 20—Blk. 27, Lot 2, northern half, recommended archeological test units

The focus of the archeological testing should be on the placement of a sewer line. If no sewer line is going to be installed, then no testing would be necessary in the southern half of the lot. But the installation of a sewer line will up the cost of archeological testing considerably. Before beginning

archeological testing, it is crucial to outline on the ground the placement of the sewer line, and then, during monitoring of the mechanical excavation, make sure the operator stays within those parameters. The usual width of a Skagway sewer line excavation is eight feet. For expediency, it is recommended that the top 6" of the southern part of the lot in the vicinity of any proposed sewer line be removed mechanically. That should eliminate the intrusive fill that has been brought to the site from other locations, and it was the method used during testing of the sewer line for the Pantheon in 1994. Four excavation units should be placed in the southern twenty feet of the sewer line trench. This is the area where a privy is seen in ca. 1897-1898 photographs, and is the area where a trash burning area was located during testing. Soil chemistry analysis indicates that the burn area does not extend over 25 feet north of the alley. Also, artifact quantities located in the testing tapered off away from the alley. Another unit should be placed between thirty-five feet and fifty feet north of the alley. An effort should be made to locate another excavation unit just south of where the rear wall of the Hotel Seattle building would have stood. It was found that the rear of the Rainer Hotel building on the south half of Lot 1 was an extensive trash midden that contained high quantities of butchered animal bones.

It will be important that all ground-disturbing work scheduled for the warehouse building at this site be scheduled in advance with the responsible archeologist so that competent monitoring can be provided. During the rehabilitation of the Pantheon, three intact, significant deposits were found during construction. They were in areas that were not exposed until the building walls were removed. Construction of the Maintenance Facility exposed four significant features during 1993-1994. Even though construction had been preceded by several phases of archeological testing, the site was large and not all the significant deposits were found in the testing phase. Because archeologists were monitoring the construction at both the Pantheon and the Maintenance Facility, these important deposits were successfully archeologically removed without disrupting the construction schedule. The archeologist monitoring the work should be adequately versed in both the history of the lot and the history of the archeological fieldwork so that he or she can immediately interpret the potential significance of any intact structural remains or deposits exposed during this phase of construction.

Block 24—General Historical Context

Figure 21 is a detail from the historic district base map of Skagway (Figure 1). Symbols are general representations of where archeological testing has occurred, while the large black square or oblongs are former or future sites for the warehouse building. Since an exact site for the building's placement on Lot 9 has not been chosen, the representation in the figure is not precise. The National Park Service currently owns a large part of Block 24. The J. Bernard Moore homestead occupies what would have been lots 11 and 12, and part of lot 10. However, that area was never platted as part of the Skagway townsite block and lot grid system. West of the Moore homestead, lots 9-10 are owned by Klondike Gold Rush National Historical Park. Also under Park ownership are the northern halves of Blocks 7 and 8. Along the Broadway Street frontage is the former Boss Bakery building, which was moved to this site by the NPS in 1979.[40] The northernmost strip of Lot 7, fronting Broadway, is currently vacant, and is a potential new home for the Goldberg Cigar Store. On the north side of Block 24, NPS owns Lots 2 and 3.

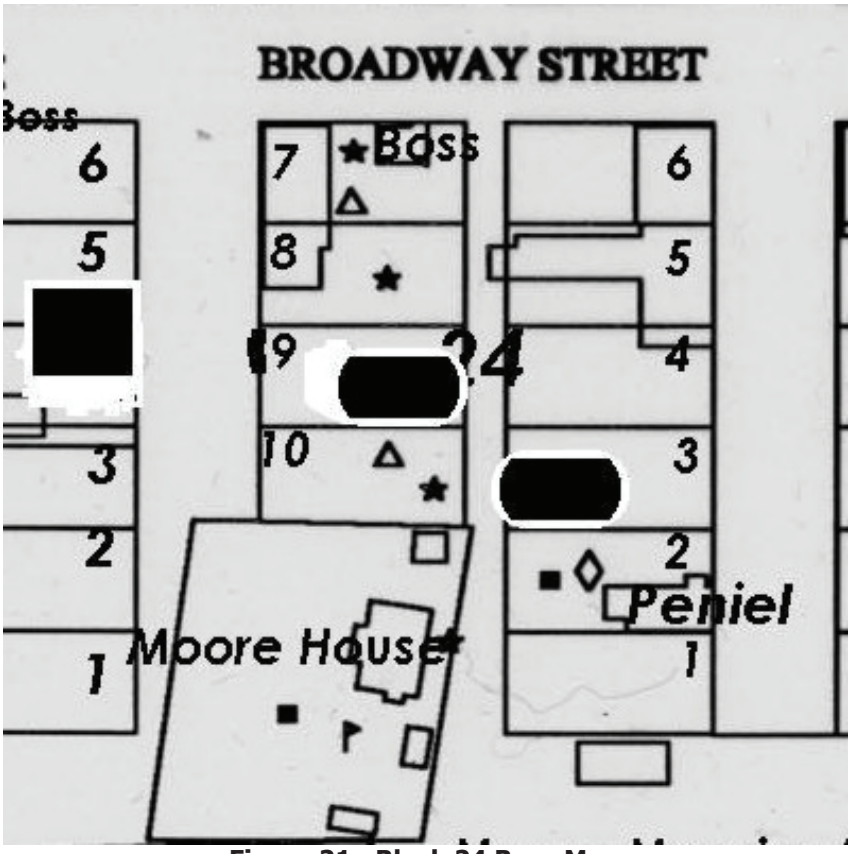


Figure 21—Block 24 Base Map

Pre-Gold Rush Block 24

If there is an epicenter for the beginning of the history of Skagway, it is on Block 24. Its proximity to the high tide line and the later-named Mill Creek, a salmon spawning stream, may have made it a favorite spot for Tlingit to beach their canoes, fish, and pick the abundant berries that line the bottom of the eastern hillside. In 1887, Captain William Moore and his son, J. Bernard Moore, staked a homestead claim for "Mooresville," laid the foundation for a cabin, and began laying cribbing for a wharf. Soon, Captain Moore began petitioning the Canadian government for funding to build a trail over the coastal mountains that surround Skagway to the vast Canadian northern wilderness. It was to lead through a pass at the head of Skagway's river known to the Tlingit for centuries, but little used by them as a

trading route. Captain Moore had named it the "White Pass," after Thomas White, the Canadian Minister of the Interior who had funded the 1887 William Ogilvie survey expedition, for which Captain Moore had been hired as a guide. Since he was not familiar with this area, having used the Chilkoot Pass in his prior trips, he hired "Skookum" Jim Mason, a First Nations man from Tagish, as his guide.[41]

Pre-Gold Rush Block 24—White Pass Trail

The Moores began improving what had been little more than an overgrown footpath during their seasonal visits to "Mooresville." The first prospectors traveled over the White Pass Trail in February 1895. In 1896 the Moores finally acquired outside financial backing and were able to hire a crew to build a twelve-foot wide wagon road. That same year, they hired surveyor Charles Garside to survey their homestead claim. He visited the site July 18-24, 1896. Figure 22 is a summary sketch of that map.[42] The drawing clearly shows that the Trail passed through Block 24, but its exact location on that block has been a question that has begged to be answered for many years. [43]

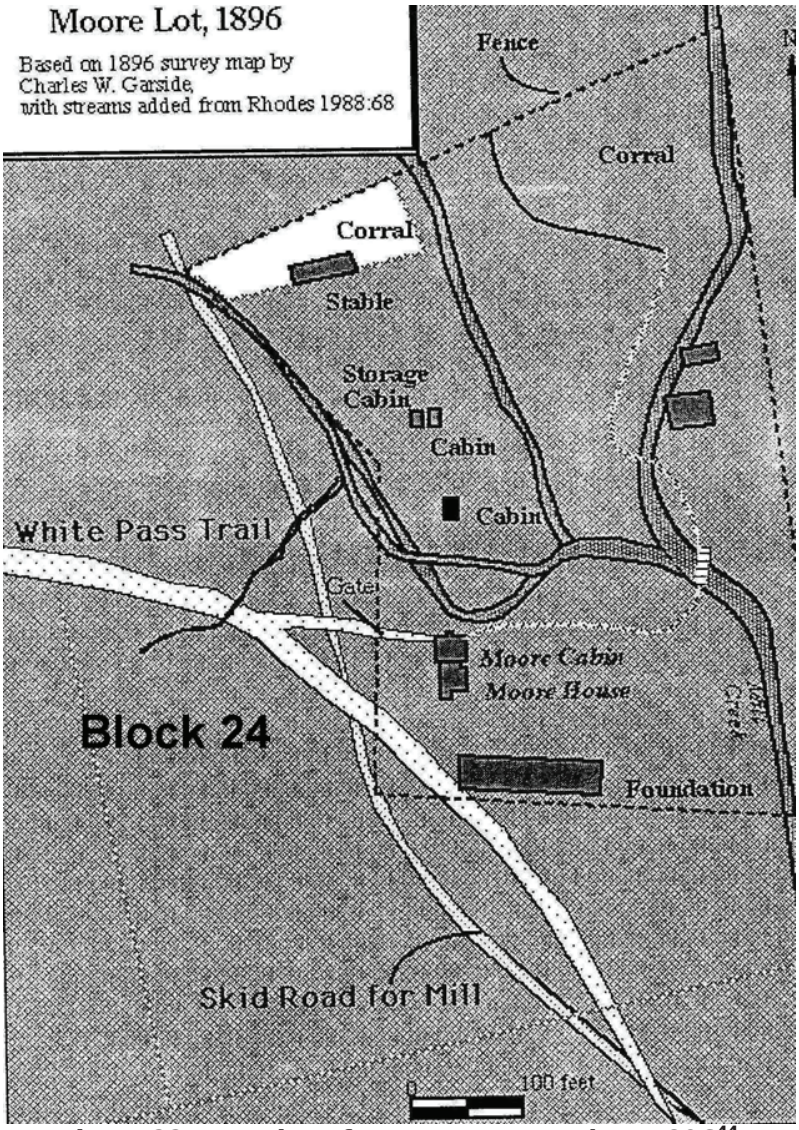


Figure 22—Drawing of Moore Homestead ca. 1896[44]

On July 16, 1897, Captain William Moore sent word to the press that the White Pass Trail was open for business.[45] Shortly thereafter, two ships carrying gold-laden miners from the Klondike docked in San Francisco and Seattle, and the rush was on. On July 29, 1897, when the *SS Queen* discharged the first men and women eager to seek their fortune in the goldfields, their horses were the first to trod the Trail across Block 24. A closer examination of Figure 23, one of the earliest dated photos taken of Skagway in 1897 (possibly late July 1897), is also warranted. In front of the cabin, and slightly to the right in the photo, are horses and a wagon down on the beach. Just slightly to the left of them is a man with a large, white pack on his back. This man is obviously walking up the Trail from the beach, and his feet are on a path that is clearly darker in the photograph. After crossing the southern portion of what is now Block 24, the Trail originally emerged onto what became Broadway Street. Just north of that point, across from Samson's Hotel, "was where the old trail switched off to the westward."[46] The rest of its route through Skagway is virtually untraceable until it crossed to the west side of the river at the northern edge of town.



Figure 23—Skagway waterfront, July-August 1897[47]

Block 24— the Moores vs. Skaguay

The new gold rush town of Skaguay was centered around the Moore Homestead. But they had to fight to retain ownership of their land, and that drama shaped the landscape of Block 24. At first, the only landing spot for steamers was to tie up at the log-cribbed moorage built by William and Bernard Moore. There were no wharves, so ships that did not tie up at the Moore dock (and pay their fees) began to anchor out in the bay to unload passengers and freight in small boats that pulled up all along the Skagway waterfront. This became more common when stampeders began to flood the site in August 1897. Some of the tents close to the Moore House seen in Figure 23 may have been there with the permission of the Moores, and may have been some of the few to pay fees to them.

On August 2, 1897, the first lots were staked by incipient entrepreneurs. They went on staking lots in spite of the warning by Reg Hill, manager of Moore's wharf, "that the property belonged to Captain Wm. Moore, and that none would be allowed to build on it."[48] Soon a series of miner's meetings were held in opposition to the Moore family. They decided to "lay the town out in blocks, twelve lots of 50x100 feet to the block, and streets to be 60 feet wide, with the exception of Broadway, which was to be 80 feet."[49] They hired a surveyor, Frank Reid, who began at what is now 5th Avenue and Broadway Street. The town's new residents located lots on this grid system, paying the U.S. Commissioner John Smith a $5 fee for that "pretense." Reid allowed the Moore family a five-acre parcel of land, just east of Block 24.

Block 24— the Shaping of the New Skagway

Up to the completion of the survey on October 5, 1897, businesses and streets were oriented to the location of the original White Pass Trail. Once the survey was completed, the appearance of the town began to change. Buildings that had been oriented to the Trail or Trail Street were moved so that their locations were on the new grid system. This is quite clear in Figure 24, a photo taken sometime in October 1897 that shows some buildings aligned with the new street grid, and others still aligned to the old Trail. In addition to the tents on Block 24, new buildings were built in close proximity to the Moore's homestead. The residential character of that area is in stark contrast to the busy landscape of the new Broadway Street that fronts Lot 7 of Block 24.

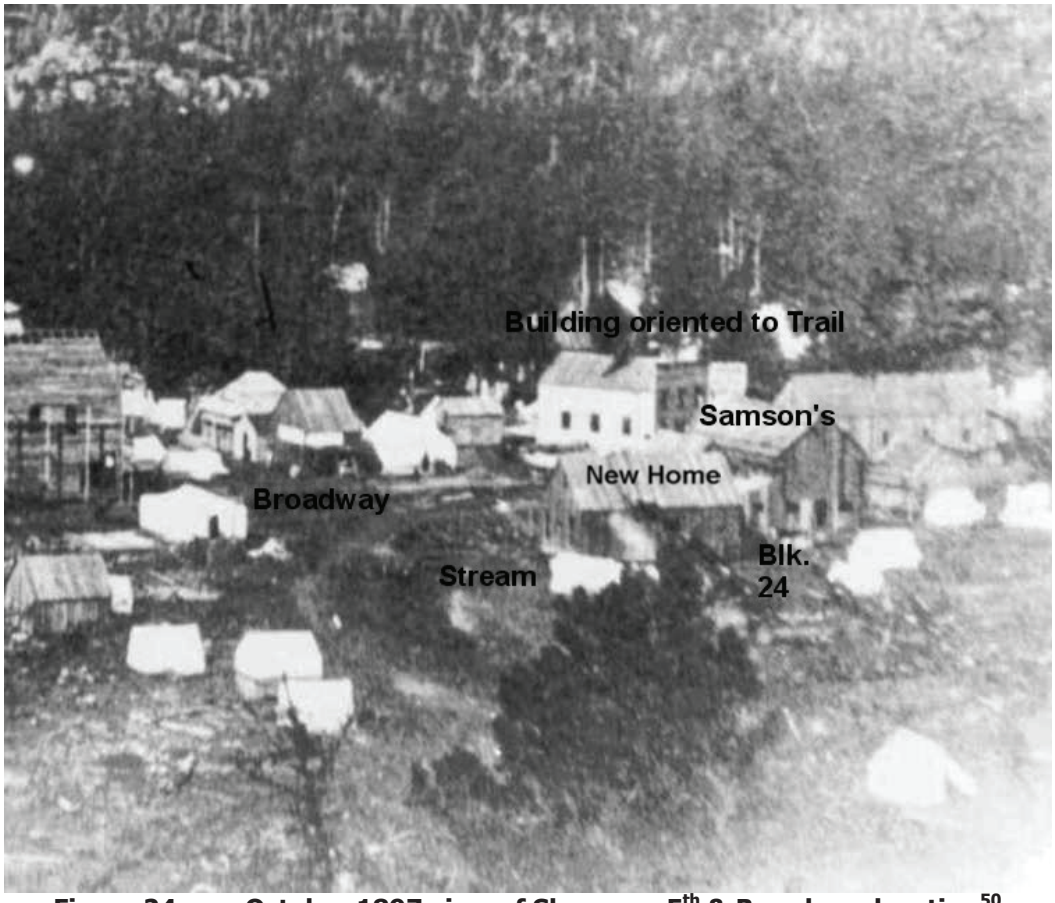


Figure 24—ca. October 1897 view of Skagway, 5th & Broadway location[50]



Figure 25—Broadway looking south to 5th Ave., ca. early 1898[51]

The acrimony between the Moores (the town locators) and the town founders cannot be understated, and it is very much reflected in the streetscape. Figure 25 is a photograph of Broadway, taken between the alley and 6th Avenue, looking south. It was shot sometime in early 1898. On the right-hand side is the large, two-story building that in Figure 24 was oriented to the Trail. On the left are Kelly & Co. Druggists and Samson's Hotel. Catherine Spude notes that David Samson was "a ringleader of the miners' committee."[52] It is undoubtedly no accident that he chose to locate his large, new building on Lot 7 of Block 24, thereby blocking the original entrance of the Trail onto Broadway. Also visible in Figure 25 is a continuous boardwalk between Kelly & Co. drugstore and Samson's Hotel. Across the street, there is a natural break in the boardwalk to allow passage of pedestrians, horses, and wagons along the alleyway between 5th and 6th Avenues. The continuous boardwalk along the east side of Broadway denied access to Block 24 and property owned by the Moore family. Even after Samson sold his hotel and left Skagway, the new owners continued to block the alley access.

Block 24— the Lot 7 Streetscape

The buildings on Lot 7 face Broadway Street, a commercial center of Gold Rush Skagway. Samson's original hotel was soon sold in February 1898, and the hotel's name was changed to the Occidental.[53] The building was enlarged and remodeled (Figure 29, taken in June 1898). Additional businesses in the hotel building were a restaurant, a saloon, an outfitter, and a barber shop. The Occidental Hotel was sold to the B. M. Behrend's Mercantile Company. The old Occidental Hotel building was torn down, and a new building erected. It opened June 23, 1904.[54] It is likely that there was a residence above the store. In spite of continued expressions of confidence in the Skagway economy, the store closed down in 1911. The retail location was taken over by Charles W. Ask's grocery store.

On the southern corner of Lot 7, in one of the busiest business locations in Skagway, there was no building during the early days of the gold rush. That was because there was an active stream there, clearly seen in Figure 24 and Figure 26. By 1900 the stream had been eliminated, and a large, two-story building became the anchor for commerce on Lot 7. Peter Kern's souvenir jewelry store was at the southern corner of Lot 7, and directly north of it was Smith & Co., Druggists. Herman Kirmse, Skagway's Pioneer Jeweler, acquired the building from Kern in 1904 for his thriving curio business.[55] Since that

time, the Kirmse store has remained a constant at the intersection of 5th Avenue & Broadway Street (Figure 26).



Figure 26—5th & Broadway winter of 1897-1898, looking west[56]

In the 1950s, the streetscape along Broadway and 5th began to decline. Businesses that remained open, like Kirmse's, were only open seasonally, and the buildings began to deteriorate. Ask operated his grocery business in the old Behrend's story until about 1950, when the building was vacated. It continued to stand until 1960.[57] The northern half of Lot 7 was sold several times until acquired by the NPS in 1979. The difference in the streetscapes becomes very clear when photos of the 5th and Broadway intersection in 1919 and in the 1960s are compared (Figure 27 and Figure 28).



Figure 27—5th & Broadway ca. 1919[58]



Figure 28—East side of Broadway at 5th, ca. 1950s-1960[59]

Blocks 24 and 25— the 5th Avenue Streetscape

The immediate area surrounding the Frye-Bruhn warehouse changed little since from the time it was moved to the site in 1902 until World War II. After that, some buildings were demolished or moved, and the occasional new or temporary one erected. The theme of the south side of Block 24 and the north side of Block 25 was one of businesses that fronted Broadway, with storage buildings to the rear. The exceptions were the New Home Restaurant and boarding house (Block 24, Lot 8) which remained in business until about 1915, and the Catholic church and its associated residence (Block 24, Lots 9 and 10) which remained on the site until the 1950s. The New Home building was converted to storage sometime after 1915.

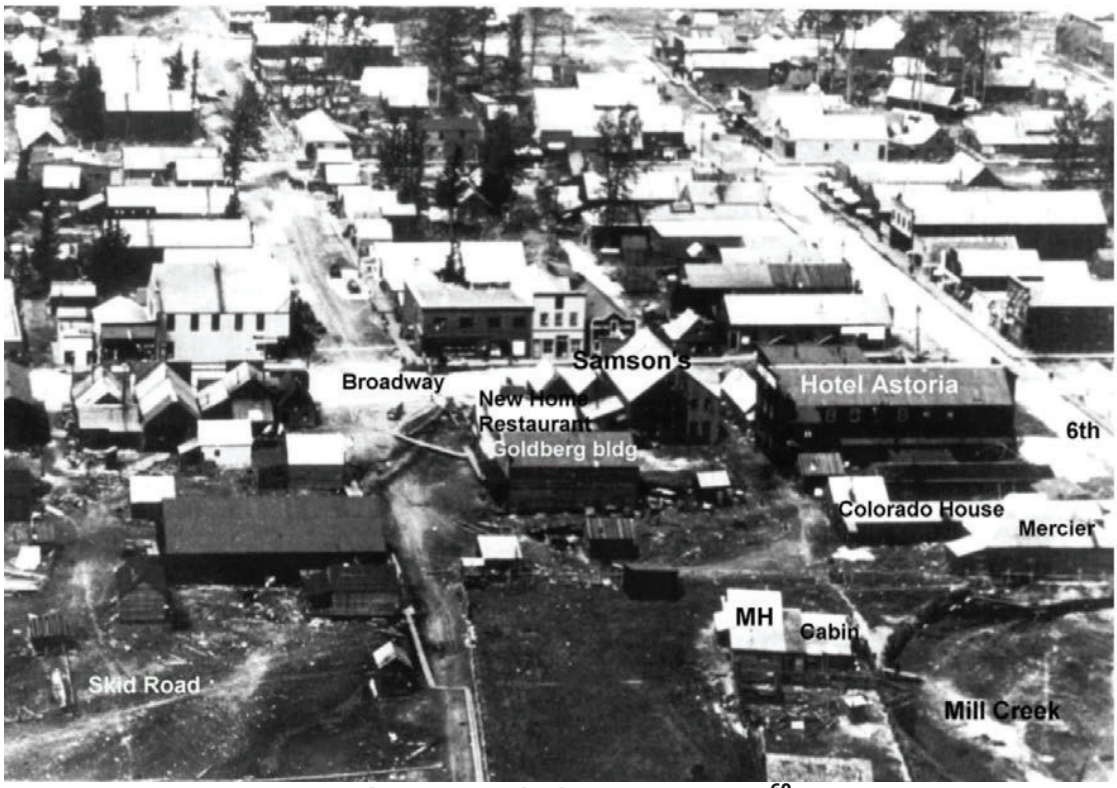


Figure 29—Block 24, June 1898[60]

The Fifth Avenue streetscape, east of Broadway, was a mixed use area during the early Gold Rush. The north side of the street was anchored on its east side by the large homestead of J. Bernard Moore. The houses and lot are situated at a different angle from the rest of the townsite (Figure 29), an artifact from the lingering land dispute between the Moores and the town leaders. A few small one-room buildings fill the empty lots between the Moore home and the commercial establishments. The south side of Fifth Avenue was dominated by the Burkard & Co.'s large warehouse (Figure 29). The tower next to it belonged to Skagway's Hook & Ladder company. By 1900, when Skagway's first taxes were collected, there was another storage building owned by Fred Ronkendorf, the Boss Baker.

The area continued to evolve. In 1902, it was a logical place for Frye-Bruhn to re-locate their refrigerated warehouse—close to their store on 5th, just west of Broadway, but removed from the actual place where business was conducted. Soon other small shacks were either built or moved to Block 25 to serve as storage for the businesses that fronted Broadway. On the east side of Block 25, lots 1 and 2—platted but never owned—was the site of a baseball diamond and spectator stands. East of that was the city's power plant and steam laundry, at the foot of 5th Avenue.

On the northern side of Fifth Avenue, the former Goldberg building was converted to a Roman Catholic church. In 1903 a two-story home was moved east of the church to become a home for the resident Catholic priest. As time went on, yards were fenced and gentrified (Figure 30).

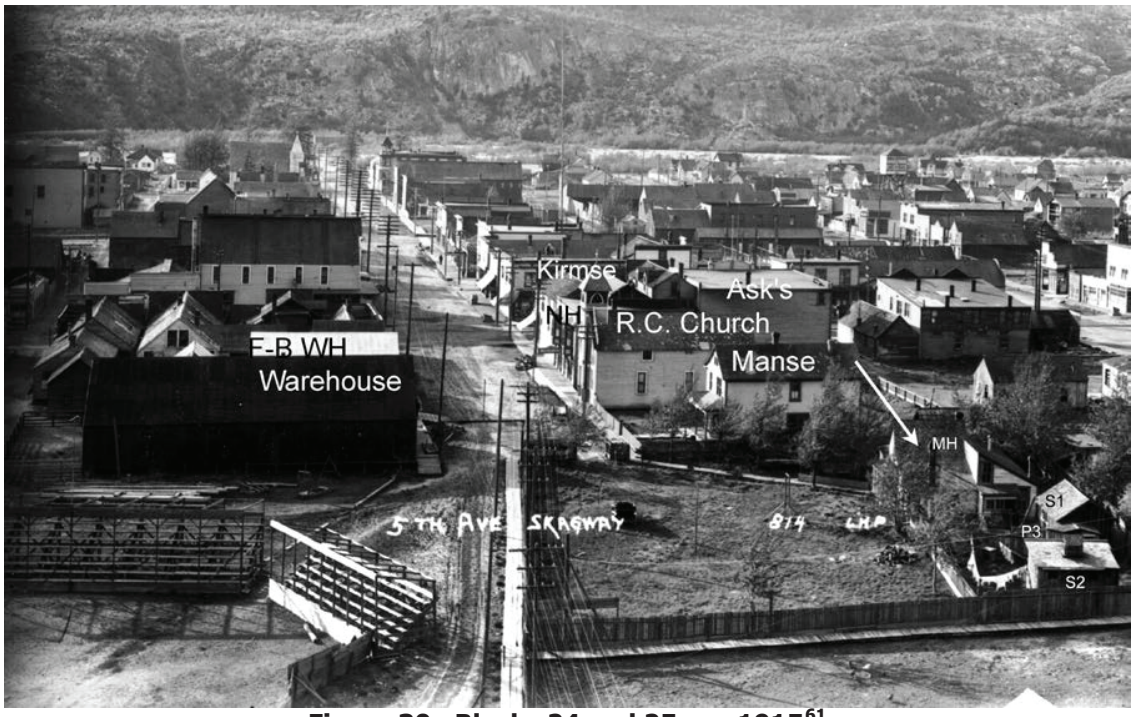


Figure 30—Blocks 24 and 25, ca. 1915[61]

As the town moved into the modern era, some of the Block 25 buildings that once fronted Broadway were removed, leaving a clear view of the Frye-Bruhn warehouse (Figure 31).

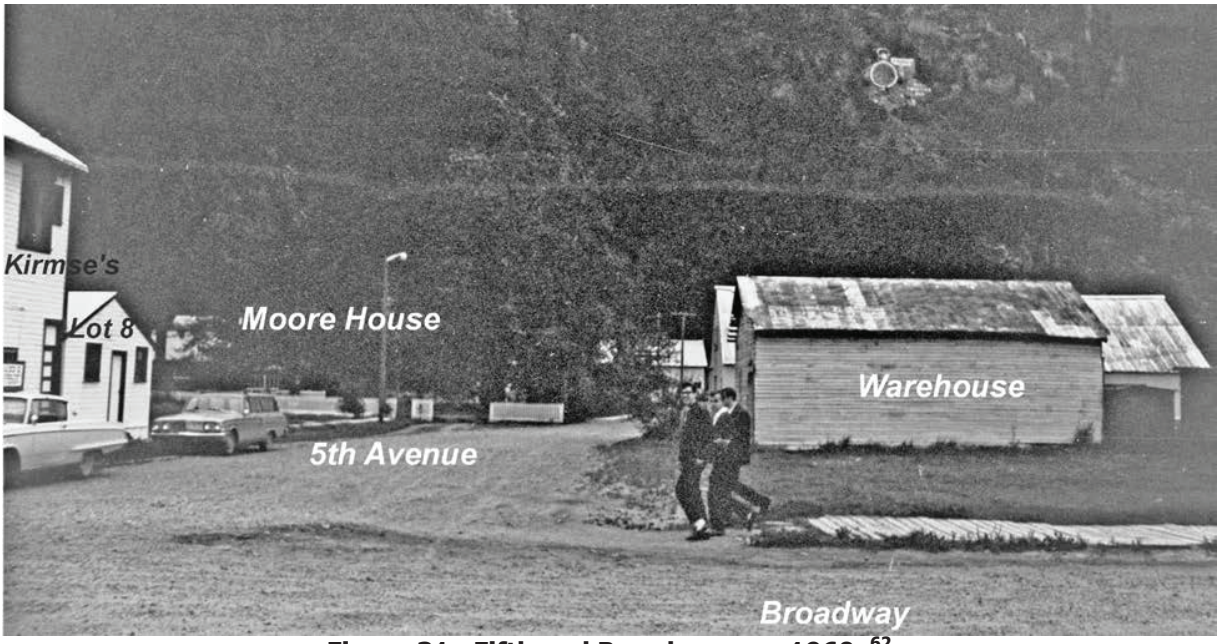


Figure 31—Fifth and Broadway, ca. 1960s[62]

Site No. 2: Block 24, Lot 3—Peniel Garage Site

The south side of Lot 3 is currently occupied by a garage, which is of modern construction. It is a non-contributing structure to the Skagway Historic District. At this time, there are no buildings on the north half of Lot 3. Its significance is tied to its use not only in the early days of the gold rush, but in the years before when it was visited seasonally by the Chilkoot Tlingit and by Captain William Moore and his son, J. Bernard, Skagway's original homesteaders.

Block 24, Lot 3—Historical Background

After Bernard Moore and his father staked their homestead claim, they visited the site seasonally, accompanied by Tlingit hunters who they hired to help with their construction activities. Moore recounts that ducks often swam in the creek behind the cabin (which they frequently were able to kill and cook for dinner), and they dined on the "salmon trout" that swam in the creek waters. Its path crossed Lot 3 at some point, and the hunters camped in tents probably on or close to Lot 3. In the summer of 1897, tents of the newly-arrived stampeders filled the area in and around Lot 3. Before snow fell, wooden frame buildings began to be erected.

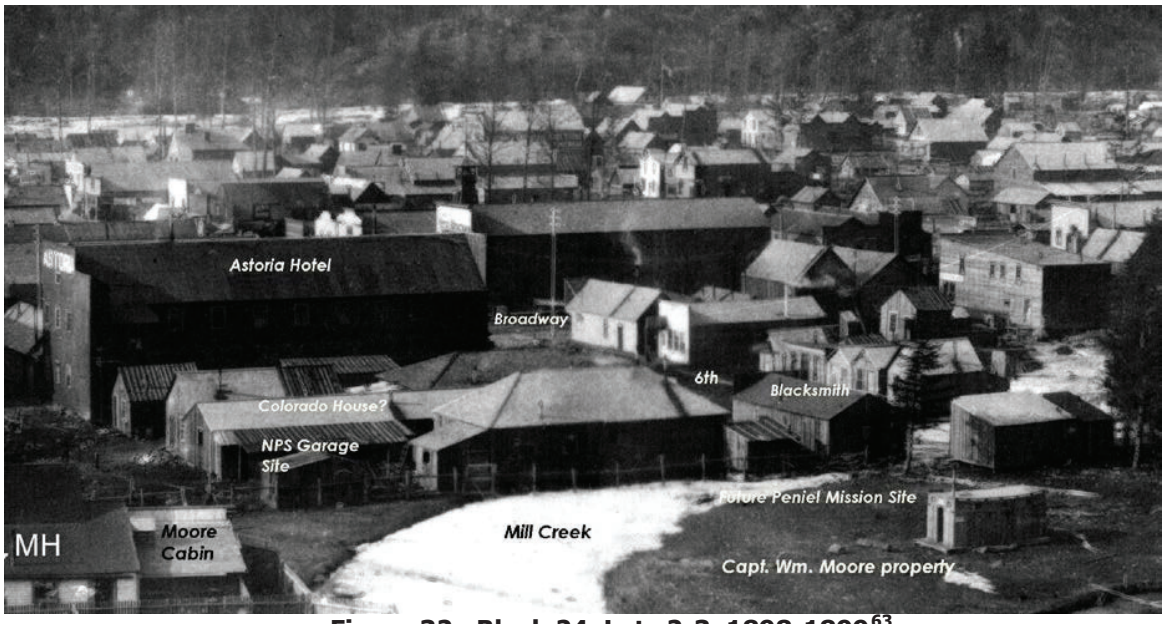


Figure 32—Block 24, Lots 2-3, 1898-1899[63]

By 1898, many buildings of various sizes filled lots 3-6 of Block 24 (Figure 32). Mill Creek, although still visible in this photo, was being filled up with trash and debris deposited there by residents of Block 24. The largest building (hipped roof style), directly west of Mill Creek, occupies the east ½ of Lot 3. Deed records for the east half of Lot 3 are unclear, but beginning in 1900 taxes on the hipped roof building were paid by Mr. and Mrs. J. Mercier. On the future site of the NPS garage building are one or two small outbuildings, one of which could be a privy. Figure 33 shows the configuration of the buildings on Block 24, Lots 2-3 (also the Moore property) ca. 1901. The possible location for the warehouse is annotated in the drawing, which is also the same general location of the current garage.

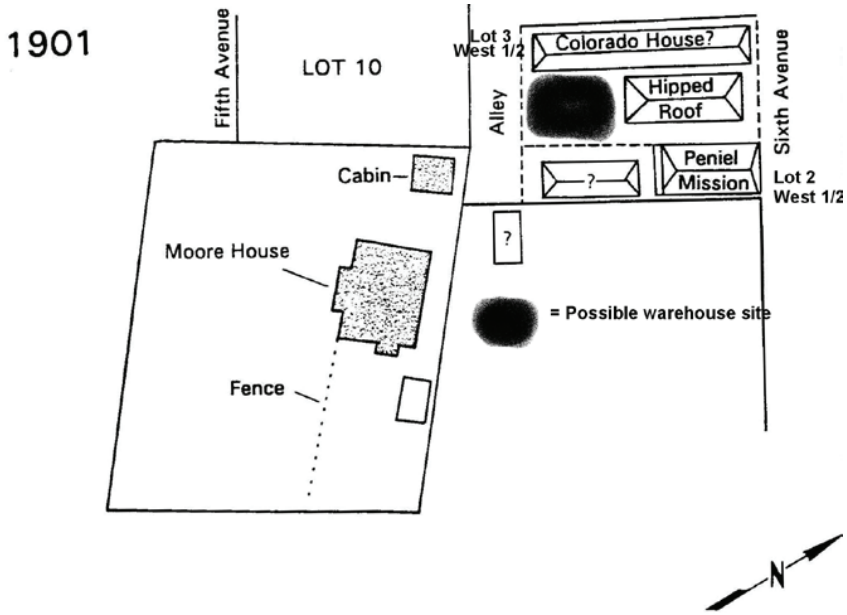


Figure 33—Drawing of Block 24, Lots 2-3 ca. 1901[64]

Photographs show that the Lot 3 buildings stood until at least 1910.[65] Beginning in 1911, the tax records show no improvements on Lot 3, which means that the buildings there were demolished or removed. Until the NPS built its garage, the southern half of Lot 3 was vacant. Over the years, the property was transferred several times until the southern half of Lot 3 was retained by the Roman Catholic church in 1929. Harry Ask, the local grocer, bought the northern half of Lot 3 in 1931. After World War II he put a small building, possibly a storage shed, on that property. It stood until around 1958. After that, Lot 3 was owned by the Fraternal Order of Eagles until it was transferred to the NPS in 1978.[66]

Summary of Archeological Testing

There has been no archeological testing at the site of the Peniel garage. Prior to rehabilitation of the Peniel Mission building, there was extensive testing done below and around the former mission. A few shovel tests intruded onto Lot 3 (Figure 34). What archeologists found at the Peniel Mission was an extensive dump site in the former Mill Creek streambed that contained tens of thousands of Gold Rush era artifacts. The artifacts decreased in quantity as the excavations moved west of the mission building. But there is no real comparative data for the northern half of Lot 3. The excavations took place in 1983, 1985, and 1987, and literally tens of thousands of artifacts were found. Two reports were published on the results of the archeological testing in 1983, 1985 and 1987.[67]

During rehabilitation of the Peniel Mission building, the entire building was moved five feet to the west because the adjacent landowner refused to allow NPS workers to access the building from her land during construction. It is important to keep that in mind when one is on-site and is trying to re-visualize where the old Mill Creek flowed. The approximate new west side footprint of the Peniel Mission building is marked in red in Figure 34.

The stratigraphy in the test holes closest to the garage (B-G) was straightforward, and contained few artifacts. Beginning about 10 feet away from the garage (Test Hole D), coal was routinely found in the test holes, usually indicating proximity to a fireplace or stove. In 1993, archeological monitoring of construction activities taking place in and around, and on the south side, of the Peniel Mission took place. The rough extent of that monitoring is outlined in green in Figure 34. Most of the artifacts found were close to or under the building itself. In June 1993, about twenty feet south of the house, a wooden cesspool (ca. 1910-1930s), similar to others found around Skagway, was found. No artifacts were associated with the structure, and it was re-covered and left in place.[68]

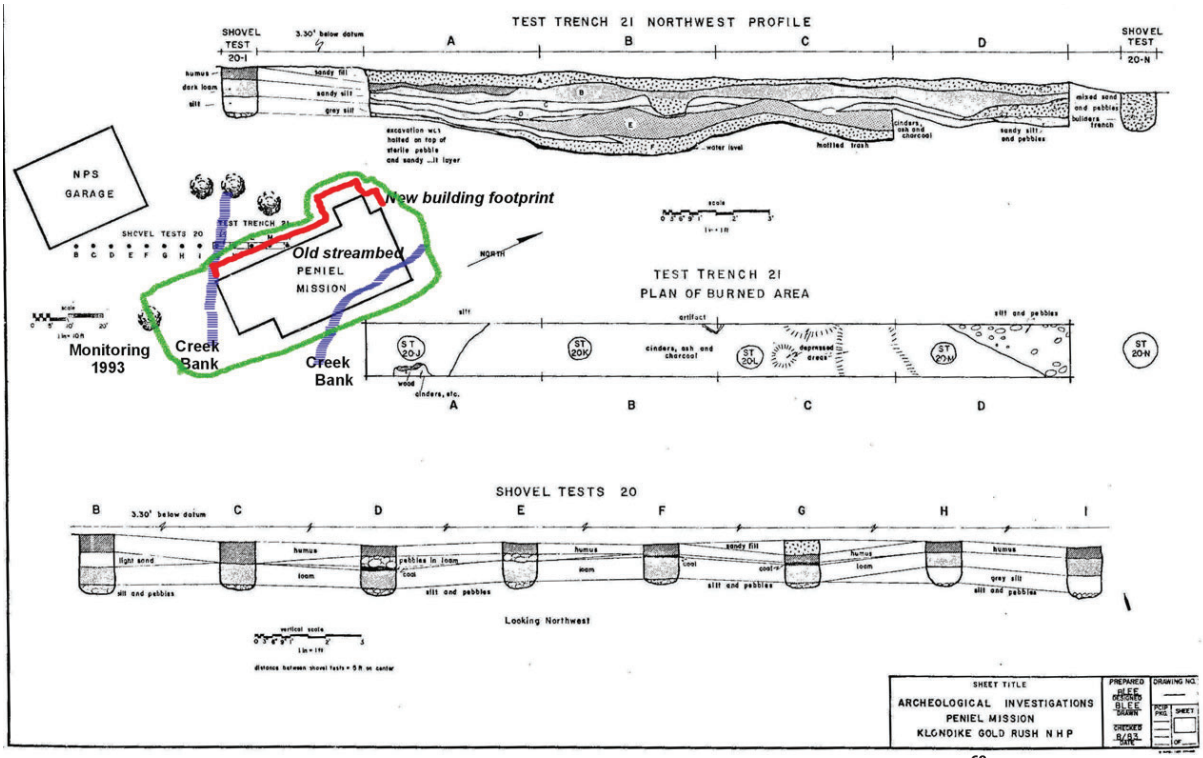


Figure 34—Drawing of archeological testing at Peniel Mission 1983[69]

Peniel Garage—Historic Context Summary

There is no real historic context for putting the warehouse building at this site. Its prime advantage is that it is not too far removed from its original location, and would not have to be moved far to reach its permanent home. It would also replace a non-historic building, the garage, with a historic building. The removal of the garage building was contemplated in Alternative 3 in the 1995 Cultural Landscape Report prepared for this area.[70] But the location is not especially conducive to interpreting the warehouse, or the mercantile life of Skagway. If it was moved to this site, interpretation could focus on other aspects of gold rush history. One logical theme would be the interpretation of the White Pass Trail, which was located just south of this site. Original site plans for the Boss Bakery envisioned a "future interpretive trail linking Moore House and Cabin, Goldberg and Broadway. Trail to approximate historic trail (exact alignment not known)."[71]

Archeological Research Design for Peniel Garage Site

Should the warehouse be moved to this site, the almost complete lack of archeological testing mandates Phase I testing that will probably lead to more extensive archeological excavation to mitigate the negative impacts of construction of a foundation on this site. It is recommended that no testing take place until the garage is demolished. Once the building has been removed, a series of test holes dug five feet apart is recommended to locate areas of high artifact concentration or architectural features that could possibly date to the gold rush (Figure 35). Full-sized excavation units should then be placed where any of these sensitive areas are found. If no artifact concentrations or features are found, then full-sized test units should still be located close to the alley and in the probable location of the small outbuildings that were located here during the gold rush to verify that no potentially significant deposits would be disturbed by the foundation construction.

The sewer line to the building would come from the alley, a short distance. Most of that line is on Municipality land, and is not part of the research design. The water line is located on 6th Avenue, and a line of shovel tests are recommended along its route from that street to the future site of the warehouse. Where intact deposits are encountered in the testing, then they should be followed by larger excavation units, or relocation of the water line.

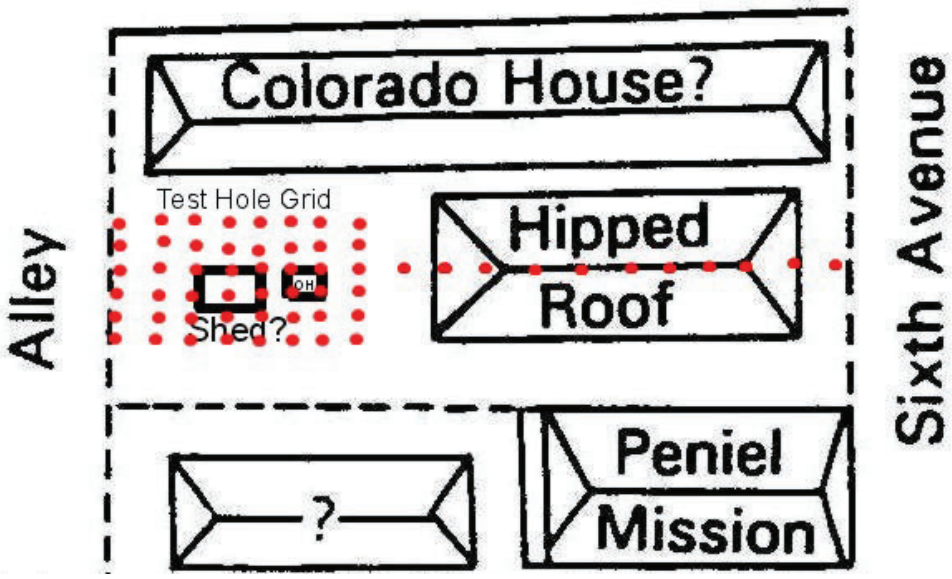


Figure 35—Archeological Research Design for Block 24, Lot 3

Site No. 3: Block 24, Lots 9 and 10

Summary

The significance of this potential site is its connection to the original White Pass Trail, its connection to the Moore family, the ephemeral early gold rush buildings, and to its many years of use as the site of Skagway's Roman Catholic church and its associated rectory. Most people who take a stroll across the park-like setting have no idea they are setting foot on the original White Pass Trail, or a site where the battle for the ownership of Skagway shaped the landscape. Phase I archeological testing has already been conducted on Lots 9 and 10, and future Section 106 testing is recommended in two areas—sites already identified as having potential significance that will be impacted by construction activities, and some additional full-sized test units once the construction footprint has been clearly identified.

Historical Background—Lots 9 and 10, pre-1900

Lot locator records were not found for Lots 9 or 10 of Block 24, possibly because of their proximity to the Moore's homestead. However, buildings were erected there during the early days of the gold rush. They are clearly seen in a photograph dating to 1899 (Figure 36).



Figure 36—Block 24, Lots 7-10 and Moore House, June 14, 1899[72]

A deed was recorded on February 28, 1898, when Lot 9 was sold from A. Stein to A. Goldberg, of the mercantile Goldberg Brothers located in Seattle. In the fall of 1897 (Figure 24) there is clearly no building on this lot, but by June of 1898 a two-story building is readily seen (Figure 29). This was the site of the Goldberg's outfitter store in 1897, but no listings for the business are found in the 1898 or 1899 business directories. The November 15, 1897 edition of the *Skaguay News* does have an advertisement for "Goldberg Brothers—Dealers in—General Merchandise." The last available advertisement for their Skagway business appears in the February 11, 1898 edition of the *Skaguay News*.[73] In May 1898 they abandoned their Skagway business operations.[74] In November 1898, the

storefront was the site of a fund-raising "old-fashioned New England Thanksgiving dinner" sponsored by the ladies of the local Methodist church.[75]

No documents have been found that show who owned or lived in the small buildings on Lot 10 prior to 1900. However, a 1903 news article discussing changes planned for Lot 10 noted that: "To make room for the new house it was necessary to tear down the old shack erected and occupied by the notorious "Soapy Smith" in the early days."[76] While we may never know for sure if this information is true, it is tantalizing to think that the home of Skagway's infamous outlaw sat on land now owned by the NPS, and that "Soapy once slept here."

Historical Background—the Catholic church in Skagway

Goldberg Brothers former store was purchased by Father Philibert Turnell in the summer of 1899 for the Catholic missions in Alaska. The paper noted that "the church lot was fenced in, the church proper was plastered and its front so improved that there is no longer any chance of its being mistaken for an old abandoned store."[77] Figure 37 dates to the construction of the Peniel Mission (right-hand side of photo), so it was probably shot sometime during the summer of 1900. The many changes made to the former Goldberg building are visible here—the modified false front, the addition of a steeple crowned by a cross, a round window below the steeple that was probably of stained glass, and two clerestory windows flanking the entrance. Windows were added to the building's east façade, and the door on the northeast corner of the building was retained. Inside, the changes were even more dramatic as can be seen in the photo of the new St. Mark's Catholic Church (Figure 38). The 1914 Sanborn drawing shows that the church had electric lights and was heated by a stove.

On both Lots 9 and 10 there were privies and other small buildings in various locations from 1898 until 1903. Often obscured in overview photos, the one behind the small house on Lot 10 is visible in Figure 39 (identified as "O.H." in the photo). By 1903, the Roman Catholic diocese owned Lots 9-10 on Block 24. In August 1903, a home for Skagway's resident priest, Father Philibert Turnell, was moved to the site from an unknown location in Skagway. To get the site ready, the small building that once housed perhaps Soapy Smith and, later, Herman Meyer, was destroyed.[78] Prior to World War I, it was usually Father Philibert Turnell who called Skagway home. The history of the Roman Catholic Church in Skagway, and the lives of their resident priests, is explored in greater depth in an archeological report by Catherine Spude.[79]



Figure 37—Block 24 area, ca. 1900[80]



Figure 38—Interior of St. Mark's Church, Skaguay, ca. 1899-1900[81]

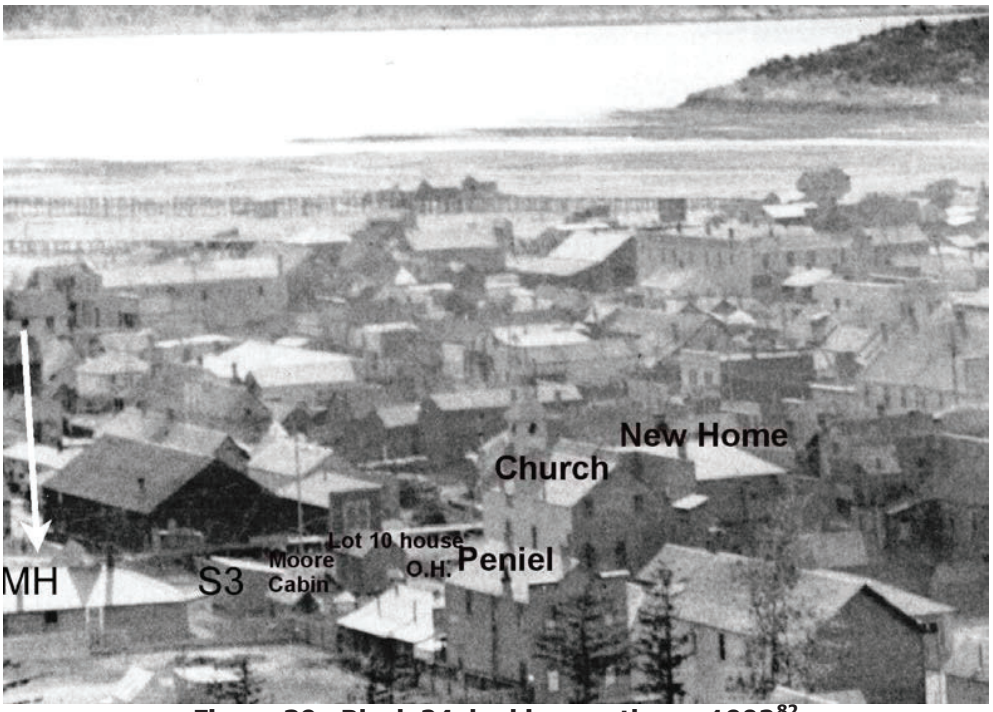


Figure 39—Block 24, looking south, ca. 1902[82]

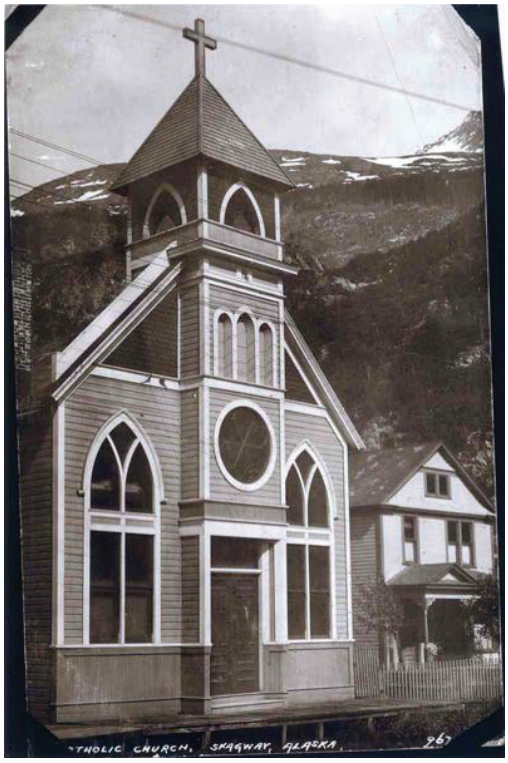


Figure 40—St. Mark's Church and Rectory ca. 1915[83]

One photograph does show the appearance of St. Mark's Catholic Church and its rectory in 1915 (Figure 40). Note that the church is flush with Fifth Avenue, while the rectory is set back from the street. At some point between 1914 and 1948, St. Mark's Catholic church was moved to the east and about fifteen-twenty feet north, and connected to the rectory by a breezeway (Figure 41).

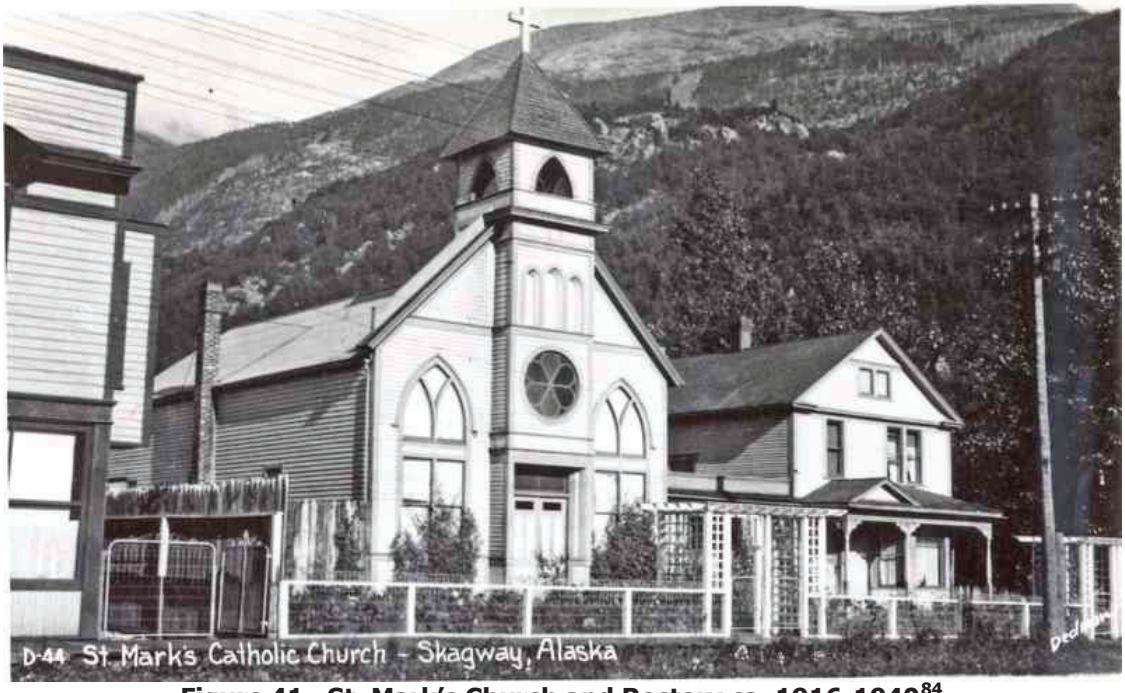


Figure 41—St. Mark's Church and Rectory ca. 1916-1940[84]

In the 1930s, the diocese opened the Pope Pius X Mission school in Skagway. At an unknown date they moved all church activities and the priest's residence to that mission. In 1948, lots 9 and 10 were deeded to the Catholic Society of Alaska. A 1952 photo of the church shows it, and the rectory, in a decrepit state, with many broken windows.[85] In 1959 the church and rectory were razed.[86] In 1967 the property was acquired by Jack Kirmse, who also owned the adjacent Moore house. He made no improvements on the property, and in 1980 sold it to the NPS. Today, it is a "green area" that is temporarily home to the former Frye-Bruhn refrigerated warehouse.

Summary of Archeological Testing

Archeological testing occurred in this area in several phases, beginning in 1978 and ending in 1985. The location of various buildings in relation to archeological testing on the southern half of Block 24 can be seen in Figure 42. Soils testing in 1978 (test holes 8 and 9), two test trenches in Lot 7 in 1979, and an excavation unit in 1985 (Op. 29) are all identified in red. Shovel tests dug across lots 8-10 in 1984 and 1985 are marked by square bullets. The location of the Boss Bakery, Kirmse's, and the Goldberg Cigar Store are all ca. 1991. A rough draft report summarizing all of the fieldwork has been submitted to the Klondike Gold Rush National Historical Park.[87]

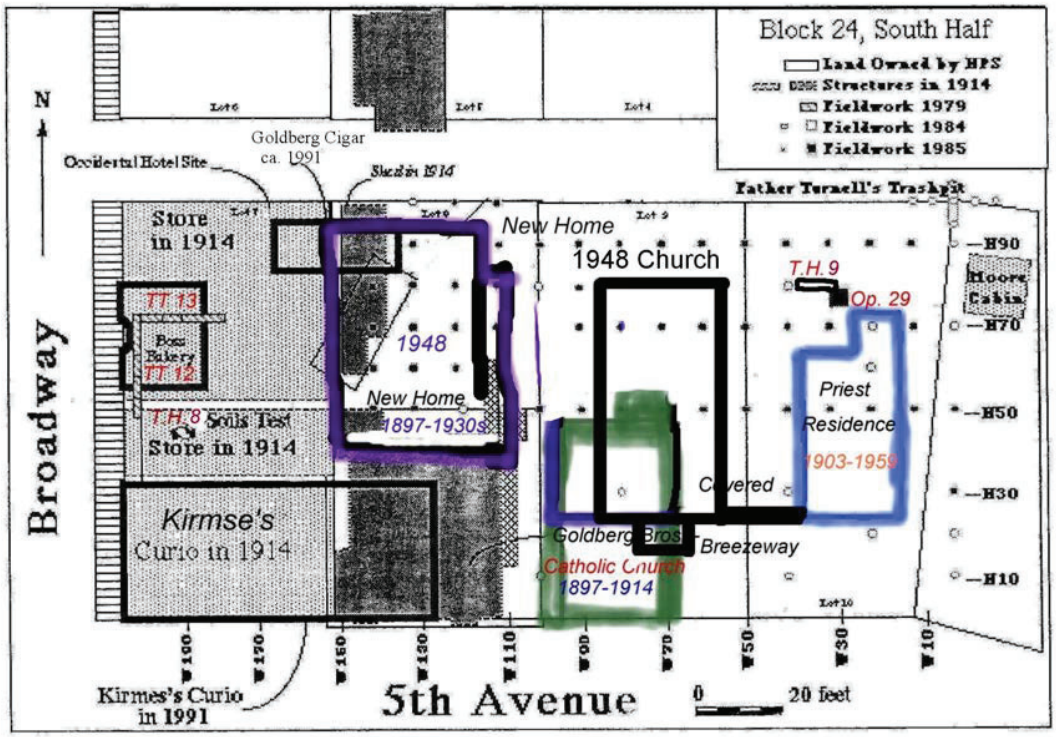


Figure 42—Buildings and archeological fieldwork on Bl. 24, southern half[88]

In 1984, NPS archeologists began digging a series of shovel tests, 9 ½"-1' in diameter, across NPS-owned property on lots 8-10. Their purpose was to obtain the maximum amount of information with the least amount of ground disturbance possible. This was a systemized series of test holes set on a grid. This grid is marked in Figure 42, and shovel test locations are marked by square bullets in the drawing. Twenty-six test holes were dug in 1984, and another 54 in 1985. All holes were dug by hand, and artifacts were collected, counted, and analyzed.[89] Testing on Lot 9 was limited to a series of shovel test holes, while two larger test holes were excavated on Lot 10.

Shovel Test General Results

Like all results from Phase I testing at archeological sites, the shovel tests provided a window into the below-ground deposits, but a very small window. Spude noted that: "It is abundantly clear that the 12-inch diameter shovel tests were insufficient to distinguish the difference between lenses, pockets, and true stratigraphic layers. Therefore, no large-scale stratigraphic analysis was possible."[90] However, it was possible to distinguish several areas that are probable gold rush era midden or privy deposits, several on the northern side of Lot 8, and one on Lot 9.

What she, and also archeologists working at the Moore House in the 1990s, also found was that fill was brought onto the site by NPS maintenance personnel sometime in the 1980s. It was placed over much of the southern portions of lots 8-10 and the Moore House to fill in low-lying areas to make the site more level for lawn mowing. It is believed this soil came from under the railroad building (currently, NPS headquarters building), and possibly from other NPS-owned buildings in Skagway. This fill contained artifacts, and it must be separated from artifacts naturally occurring on Block 24. In almost all areas, this fill can be distinguished from the original soil surface, but it is as much as 6" thick in some areas.

Shovel tests revealed that the water table across this entire area, including Lot 7 adjacent to Broadway, is shallow here. Water is sometimes hit at less than two feet below ground surface in some spots, while it can be found at three feet below the ground surface almost everywhere. This is because of an underground stream that still flows south from the northern half of Block 24. Water levels on Block 24 remain fairly constant from season to season.[91] Because of this high water table, there are no basements under any of the buildings in this area.

Shovel Test Results—Looking for the White Pass Trail

What would be the characteristics that would define the White Pass Trail in Block 24? Skagway's thin, sandy soil quickly turned into a muddy morass when it rained—something that occurs fairly regularly during the summer. Later, it would have dried into a very rutted surface. This passage eventually would have become hard-packed. It may have been at a slightly lower elevation than the surrounding terrain. What is not clear is whether the trail that once led across the southern half of Block 24 was used for a long enough period of time to leave a visible imprint in the ground that would survive to the modern era. Its remains could be very ephemeral, and if they are present, could be obliterated by the later construction or demolition of buildings across the lots.

Archeologists working in 1984 and 1985 observed a bit of a swale in certain areas of the lots, especially in lot 10. Elevations of the ground surface and the end of excavation, when the sterile subsoil was encountered, were recorded . Spude felt that shovel tests that encountered the sterile subsurface soil that underlays all of Skagway at a lower elevation than surrounding shovel tests, especially if they exhibited any kind of a pattern, may indicate the path of the original trail across the lots. In her final conclusions, she was doubtful that the shovel tests revealed such a pattern.[92] That may not necessarily be the case.

In Figure 43, black dots mark the locations of shovel tests that ended at elevations below 25' amsl. Most are clearly the result of human disturbance, such as the one at the southwestern edge of Lot 9 that is from the remnants from a posthole for a foundation post of the church. However, four other areas of lower elevations on or close to Lot 10 do not seem to be related to human disturbance. Based on the results of the shovel tests, several possible routes for the trail are traced in red in Figure 43. The routes are irregular, as was the probable path of the trail. A skid road to bring logs to the sawmill from north of the town also ran across what became Lot 10, and could have merged with the trail at some point.

What is clear from the results of the Phase I shovel testing is that remnants of the original White Pass Trail will not be easily located. Conventional methods for archeological testing—digging into the ground by hand or with mechanical equipment—are inadequate. All archeology is destructive, but it is a controlled destruction, conducted under scientific research principles and methods. That is acceptable

when the area under investigation involves structures of some kind that leave physical traces in the ground. In this case, the destruction may not be warranted because it will obliterate all traces of the very thing sought. This was anticipated by NPS historian Robert Spude many years ago: "The importance of additional work at the Moore Tract should be emphasized, it will insure protection of a valuable resource, the beginning of the White Pass Trail…."[93]

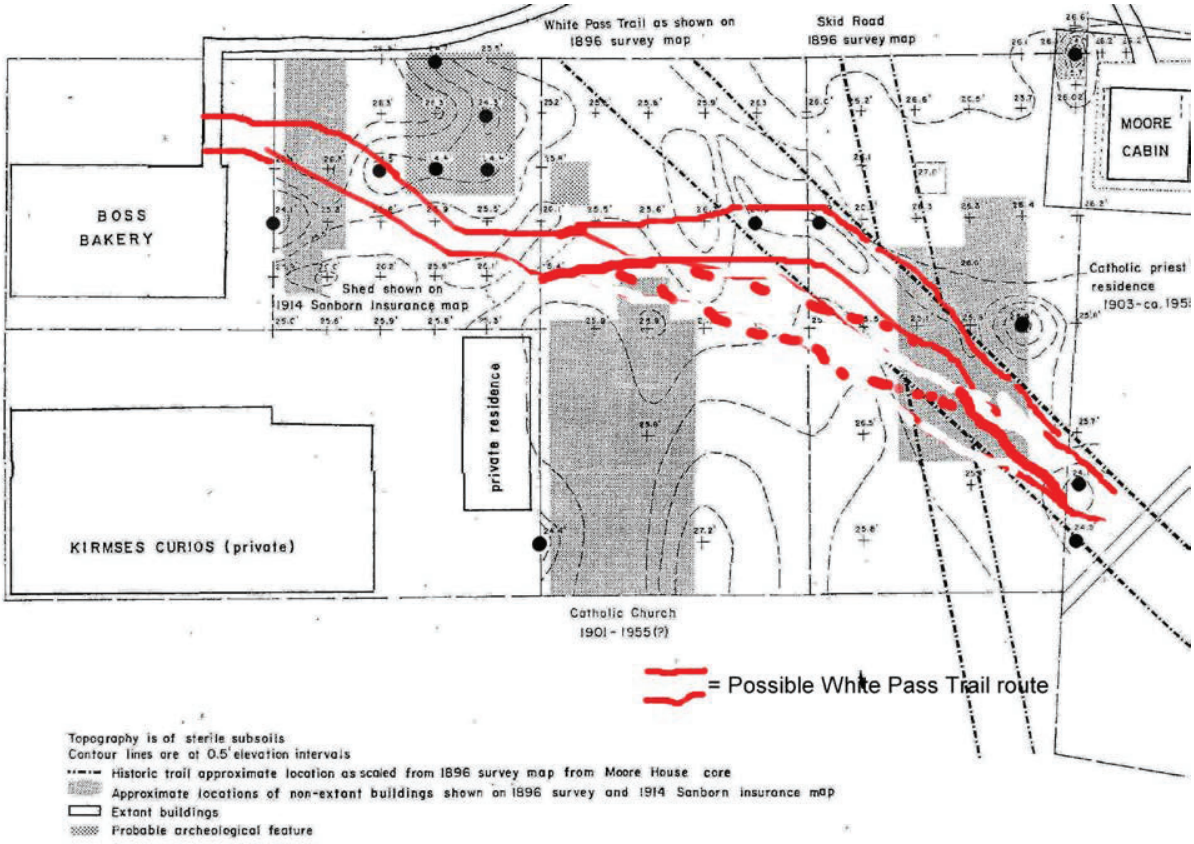


Figure 43—Shovel testing, possible White Pass Trail routes

Summary of Results from Phase I Testing, Block 24, Lot 9

Few artifacts were found in the shovel tests conducted on Lot 9, especially in the shovel tests in the southern fifty feet of the lot. The lone exception was the area around 75N95W, believed to be from a Gold Rush era privy. The base of the deposit was not reached because of blockage of the test hole by large objects. Spude also found that, based on an analysis of the nails, that it may have been filled by construction debris. The amount of burned materials found here was also quite high.

Higher concentrations of structural artifacts such as bricks were found in the northern half of the lot and are probably from first move of the church, and then its eventual demolition. There were no brick-sided buildings in Skagway during the gold rush. However, in 1900 an ordinance was passed mandating all buildings—both residential and commercial—to have brick chimneys. This was to cut down on the chance of poorly-vented woodstoves catching roofs on fire, a fairly common occurrence with wooden buildings. A line of brick remains that stretches across the middle portion of Lot 9 probably indicates the original location of the rear of the church, while twenty feet north another line of brick remains may show

where the rear of the building could be found after its alignment with the rectory on Lot 10. The concentration of brick remains found at the northern edge of lots 8 and 9 are from an unknown feature.

Summary of Results from Phase I Testing, Block 24, Lot 10

Figure 36, Figure 37, and Figure 39 all show the collection of small buildings and outbuildings that were on this lot prior to 1903. However, Spude found no evidence of them from the shovel tests. Artifact quantities recovered from the shovel tests in Lot 10 were uniformly low, except for the very northeastern corner where the remains of Father Turnell's privy were located. Spude believed that a shovel test at 50N10W would be a logical place to find the remains of a building, but found little there.[94] Another shovel test at 20N0W also failed to locate evidence of any of a gold rush privy. Based on excavations conducted in the western part of the Moore yard, soil layers are fairly thin here, artifacts are sparse, and deposits are shallow. However, there is the remains of a privy somewhere on the eastern side of lot 10. A cautionary tale should be taken from Spude's exploration of the area north of the Moore Cabin that was found to contain Father Turnell's trash pit (100N0W). There were hundreds and hundreds of artifacts found in that location, yet within five feet of any side of that deposit there were very few artifacts, or evidence of that privy deposit. Such is probably the case with the elusive, early gold rush privy that first stood on this lot—it would have been a very small hole, used by few people, it's location hastily covered over when the Catholic Church decided to buy the property and move a large building to the site. The small buildings that stood on Lot 10 prior to the arrival of the Catholic priest's residence in 1903 belonged to men living alone in Skagway (even if they were NOT Soapy Smith), here to make their fortune. To date, no archeological remains have been found that are directly attributable to these men, who actually dominated the population of Skagway in the earliest years of the gold rush. To find any intact remains from this very transient population would be highly significant, and would require a thorough archeological investigation prior to any ground-disturbing work in the area.

Archeological Research Design Summary—Block 24, Lot 9

Phase I testing demonstrated that potentially significant remains are located on Lot 9, and that further archeological testing will be required to mitigate negative impacts from the construction of a foundation for the warehouse. One caveat is that any ground-disturbing work, either conducted by archeologists or construction personnel, will most likely destroy any remnants of the original White Pass Trail in this location. The location of the Catholic church during the gold rush and its post-Gold Rush move, the rectory, the potential privy found during archeological testing on Lot 9, and the planned locations for further archeological testing are all shown in Figure 44. A series of full-sized test excavation units is recommended to be dug within the building's footprint, and along any sewer line connection to the alley.

Archeological Research Design for Block 24, Lot 9

It is anticipated that structural remains from both areas on Lots 9 and 10 where the church buildings were located will be encountered during any ground-disturbing work. The placement of historical buildings on Lots 9-10 is shown in Figure 44. Prior to placing any excavation units, it is recommended that the footprint of the new building's location be determined, as well as the extent of any utility line work.

The front of the church was originally placed almost directly against the southern lot line. Also visible in the photograph are a brick chimney, and a picket fence that may have been partially on Lot 9. The placement of test units is schematically shown in Figure 44. It is recommended that one excavation unit (it is recommended that the unit size of 3' x 3' be maintained) be placed near where southeast corner of the building would have been located in order to see if it is possible to discern exactly where that was. One excavation unit should be placed along the west side, about thirty feet north of the lot line in order to see if anything remains from the original location of the west side of the building, and to determine the amount of disturbance from the possible demolition of the New Home building.

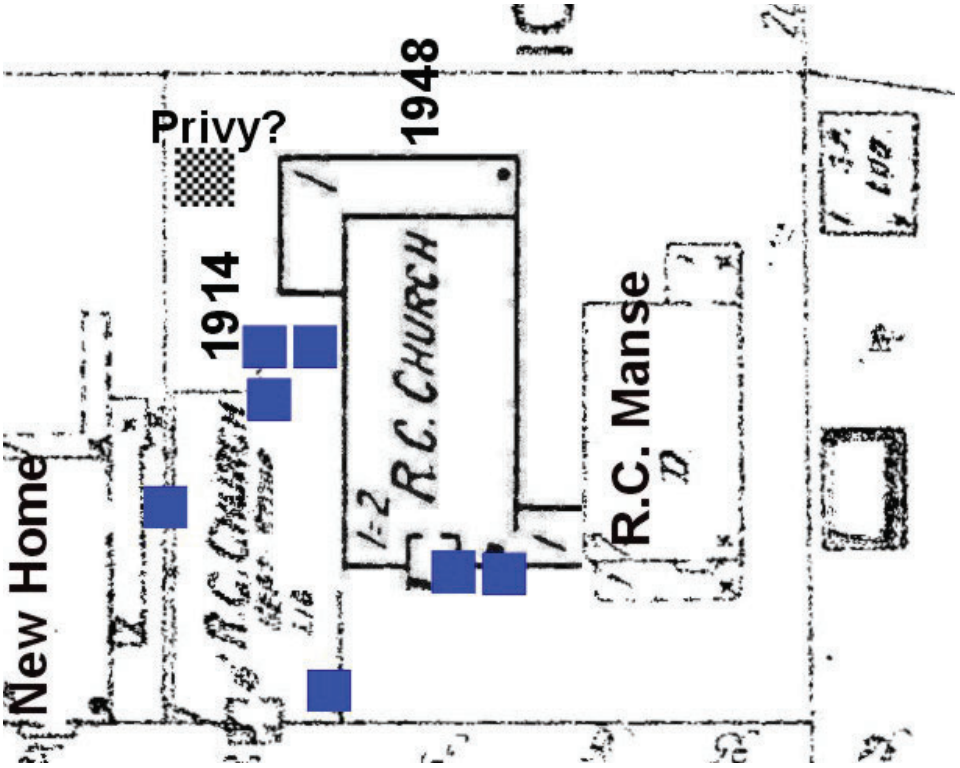


Figure 44—Bl. 24, Lots 9-10 archeological research design

The later alignment of the church on Lot 9 can be seen in Figure 41. The new chimney on the west side is also clearly visible. Two excavation units should be placed along the southeast side of the new location for the church. The object would be to locate the new southeast corner for the building, as well as the covered walkway between the two buildings. Other excavation units should be concentrated to the rear of the 1914 building location. There may or may not have been a privy located to the rear of the original building; the function of the very small room attached to the rear of the building in the 1914 Sanborn building is unknown. Three contiguous excavation units, in the shape of an "L," are recommended to be placed in the approximate location of the small room seen in the 1914 Sanborn drawing to answer those questions.

If no utility lines will go through the northern half of Lot 9, then no testing is recommended more than ten feet north of the project footprint for the warehouse. However, if utility lines will run up to the alley, then their placement must be determined in advance, and excavation units placed along its route. Potentially sensitive areas include the area 60-80 feet north of the south lot line and 5-20 feet east of the western lot line, as well as any areas that are immediately adjacent to the alleyway (based on general knowledge, not specific testing since no shovel tests were dug adjacent to the alley in Lot 9). This area could have as many as 6-8 excavation units, depending on whether or not intact and potentially significant cultural remains were encountered.

Goldberg Cigar Store (Block 24, Lot 7)

If the Frye-Bruhn refrigerated warehouse building is moved to Lot 9 of Block 24, then it will be necessary to relocate the historic Goldberg Cigar Store building currently on the site. The site proposed for this relocation is the northernmost section of Lot 7 of Block 24. A brief synopsis of the historic context of this area vis-à-vis the cigar store is presented here, as well as results of past Section 106 archeological testing.

Historic Context

The Goldberg Cigar Store is one of the oldest buildings in Skagway. It has been rehabilitated to a time period slightly newer than its earliest days since there is now a window on what was its original west side (Figure 45). Otherwise, its façade is similar to what it presented in 1898.



Figure 45—Goldberg Cigar Store and The Office Saloon, 1898[95]

The only documented use of the building is as a cigar store where sundries such as nuts and fruits were also sold. The buildings on the northern half of Lot 7 were built around the same time as the Goldberg cigar store. They consisted of a hotel, a saloon, and a cigar store. The Pioneer Cigar Store was owned and operated by Abraham Laska, a Russian émigré who had come to the United States from Russia as a child, in 1865. His cigar store can be clearly seen in Figure 46, where it sat on the north twenty feet of the southern half of Lot 7. Although it is larger than the Goldberg building, its plain façade without a false front is clearly similar. In 1898, the saloon and cigar store buildings added horizontal siding to the formerly rough exterior. In July 1900, he converted it to a 2 ½ story building with a fancy false front and a gilded cigar on its roof.[96] Laska and his family remained in Skagway until at least 1907, but they had departed by the time the 1910 census was taken.



Figure 46—Bl. 24, Lot 7, facing Broadway ca. August 1897[97]

By moving the Goldberg Cigar Store to Lot 7, and fronting it on Broadway, some of the historic context for that block will be restored in several ways. Lot 7 was one of the earliest parts of Skagway to have permanent buildings erected on it. They were very similar in appearance to the Goldberg Cigar Store. Historically, there was a cigar store on Lot 7 as early as September 1897. Putting the cigar store on Lot 7 will also restore that context. In the first cultural landscape study done for this area (the Moore House property, Bl. 24, Lots 7-10, and the Peniel Mission area), relocating the Goldberg Cigar Store "to a commercial street" was one of the proposed alternatives. The purpose of this alternative was "to depict more accurately the form, features, and character of the sites as they appeared at and immediately following the gold rush period."[98] The alternative was not recommended because of the amount of guesswork necessary to restore the historic scene. However, in this case, the cigar store, and early building phase, of Lot 7 has now been historically linked and is appropriate.

None of that context would be immediately apparent to the casual visitor. It is highly recommended that interpretive signage be placed in the vicinity of the cigar store. Interpretation should focus on Skagway's visual appearance during its very early gold rush era, as opposed to the rather gaudy building facades that appeared later as Skagway prospered. Another theme could address the difficulty of getting enough building materials to the area (there was only local sawmill). In the case of Lot 7 of Block 24, that consisted of three things: a place to lay your head (Samson's Hotel), a place to wet your whistle (the adjacent saloon), and a place that catered to the good things in life for a man (the cigar store).

Archeological Testing

Test Hole 8 and Test Trenches 12 and 13 on Lot 7, all encountered disturbed areas from when the Behrend/Ask building was demolished in 1960. Areas of high artifact concentration, as well as areas of prior disturbance, were found in shovel tests dug found along the northern edge of Lot 8. Because it is not known if Behrend's actually demolished the Occidental Hotel in 1904 when they opened their store in this location, or if it was simply extensively remodeled, testing thus far has not determined whether the disturbance is from the 1904 or the 1960 building demolition, or both. The Occidental Hotel building (and the Behrend's building) was built right up to its boundary with the alley.

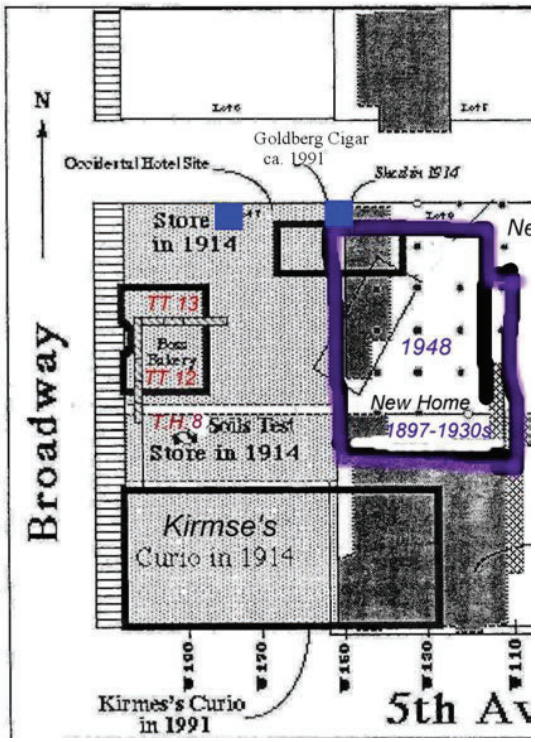


Figure 47—Former and future archeological testing, Block 24, Lot 7

Archeological Research Design—Block 24, Lot 7

Further archeological testing will be required if any ground disturbing construction activities are undertaken when the Goldberg building is moved onto the lot. The areas of Lot 7 where archeological testing has already taken place can be seen in Figure 47.

Test units are recommended only along the northern margin of Lot 7, within the footprint of the Goldberg building's new location. Past testing on Lot 8 indicated that there is a potential for intact deposits to be found there. Two test units to sample the archeological deposit are recommended for excavation. One to be placed about fifteen feet east of Broadway, and the other thirty feet east of Broadway. If there will be utility lines dug, then it is recommended that their location be verified and an excavation unit be placed wherever the line will be dug. No testing is recommended to take place within five feet of Broadway because of the amount of anticipated disturbance. It is also highly recommended that an archeologist be present for any mechanical excavation that is scheduled to take place for the Goldberg building.

Cost Estimates for Archeological Fieldwork

This author has been requested to provide person-days needed to complete the archeological fieldwork and its follow-up rather than exact costs since salaries vary by year of employment and GS-grade of the worker. If the work is out-sourced, then a different formula would probably be necessary to determine the cost. There are various phases to consider when contemplating the total cost of an archeological fieldwork project. First is planning the research design and the logistics for the project, and then coordinating it with Park managers and the SHPO, and also hiring staff or preparing the project to be out-sourced. In this case, much of that work has been eliminated because of this report which puts in place the research design, site history, and site significance for the Park managers. This report will also be the centerpiece of documentation to be submitted on the Determination of Effect to the Alaska SHPO. So, minimal hours are projected to be spent on this phase of the project.

The second phase is the actual fieldwork. All excavations should meet all NPS Professional Standards, and follow procedures set out in the KLGO Field Manual.[99] It has been found that excavation units that are three feet on a side (roughly equivalent to a one square meter) are large enough to discern the presence of intact remains, and to understand their function. If either of these units encounter intact cultural remains, then it is recommended that the excavation be expanded into an adjacent unit until the significance of the deposit can be assessed.

Estimates in Table 4 are for 8-hour days actually spent performing the physical fieldwork. The estimates are highest for the Pantheon and Peniel Garage site, and there are two reasons for that. At the Pantheon site, it is already known that there is a high probability of encountering a potentially significant dump or midden deposit in the area of the alley where a sewer line would have to be placed. Digging a privy or dump deposit is far slower than placing a unit in an area where only sheet midden deposits are found. The soil stratification is more complex, and must be recorded both in drawings and photographically, and a much higher quantity of artifacts is encountered, making excavation a slower process. If there were no utility line placed to the alley, then work at the Pantheon would take a much shorter amount of time because excavation units would be shallow and would encounter few artifacts. The estimate for the Peniel Garage area is set high because virtually no testing has taken place there, and so it is not known what type of deposits would be encountered once fieldwork was initiated. However, there is a strong possibility that there was at least one Gold Rush era present in that area. Based on past fieldwork, it is not anticipated that the deposits encountered at the new Goldberg site and the south fifty feet of Block 24, Lot 9 will be extremely complex, though debris from the demolition of the 1897-1898 building on Lot 9 will be encountered. Most of the time spent doing fieldwork would be if a utility line extends north to the alley, and archeologists encounter a dump or privy deposit in the area planned for the trench. Based on prior testing, there are areas in the northern fifty feet of the lot that had low artifact quantities and no potentially significant features or *in situ* remains, so with proper planning a utility line could miss known the dump or privy deposit on Lot 9, thus reducing the time allocated for fieldwork. Monitoring during actual construction is recommended for all sites, but the time expended there should be minimal. If an *in situ,* potentially significant deposit is encountered, of course, that estimate would go up.

Table 4—Days to Complete Archeological Fieldwork

Type of Work	Goldberg	Warehouse--Bl. 27, Lot 2	Warehouse--Bl. 24, Lot 3	Warehouse--Bl. 24, Lot 9
Planning/Coordination	2	7	7	7
Excavation	7	40	40	35
Monitoring construction	1	3	3	3
Artifact processing	4	15	15	12
Artifact analysis	17	120	120	90
Data entry	3	15	15	10
Curation of records	1	4	4	3
Curation of artifacts	4	25	25	20
Preparation of report	10	120	120	100
TOTALS	**49**	**349**	**349**	**280**

There is a rule of thumb that a day in the field equals a week in the lab. That is an oversimplification, but nevertheless it is true that cleaning and analyzing artifacts, preserving the written field records, preparing the artifacts for curation, and preparing a written report that describes the results of the archeological fieldwork in word, photographs and drawings takes much longer than doing the actual fieldwork. In Table 4, these processes are broken down into several steps. First is the basic cleaning of artifacts that is done as soon after fieldwork has been completed as possible; if there are enough personnel, it can be done at the same time as the fieldwork. Artifacts are removed from their field storage bags, with provenience information about where they came from preserved throughout the entire artifact analysis phase. Once the artifacts have been cleaned and dried, they are normally re-packaged in vented bags that meet curatorial standards. The number of days allocated for this process depend solely on the quantity of artifacts recovered; if minimal amounts are found, then these estimates will be slightly high.

Artifact analysis and data entry are phases that, in the past at KLGO, were done separately. However, this author has successfully combined the two so that data entry takes place at the same time the artifacts are analyzed, and no paper records are generated. This cuts down slightly on the amount of time spent recording the information twice, once on paper and then duplicating it on the computer. Nonetheless, they are two separate processes. All artifacts must be put onto a database that can be uploaded into the Park's curatorial database, R-Discovery. This cuts down on the time it takes for the curatorial staff to accession them into the collection. However, that database is not sufficient for analytical purposes, so additional data fields are usually necessary to prepare the archeological summary report, and hours spent finalizing that strategy would be part of the planning phase. During the artifact analysis itself, artifacts will be described in terms of their quantity, form, function, and potential dates of manufacture or use. Some of the time allocated for artifact analysis will be spent tracking down dates of manufacture through secondary sources such as patent records that are on microfilm at KLGO.

Curation of records and artifacts is a cost category that, in the past, was not always considered part of an archeological project. However, more recently it has been recognized that the time spent by curatorial staff to accession both artifacts and fieldwork records occurs as a direct result of the fieldwork that is undertaken, and should be allocated to that project. There are expenses associated with this phase that are not part of this estimate, but should be estimated as a total part of this undertaking. They are: acid-free paper for fieldwork records; acid-free sleeves for photographs and negatives; boxes and bags that meet NPS artifact curatorial standards; data storage media. Time to physically curate records and artifacts is incurred by both archeological and curatorial staff. Another cost, not considered here, is that incurred for long-term storage of artifacts and records in terms of space and special conditions necessary for successful long-term storage.

Preparation of a summary report is the final step required for any Section 106 archeological fieldwork. In Table 4, the hours estimated for that final step include actually writing a report that summarizes the results of the fieldwork and artifact analysis, and meets NPS professional standards. In this case, both in this report and in other reports prepared summarizing fieldwork undertaken at the Peniel Mission, the Pantheon, the Moore House and the draft Block 24 shovel testing report, the history of the fieldwork locations has been fully described and could be incorporated into a final summary report with minimal effort. Most of the time estimated for preparation of a summary report for these projects would be spent on synthesizing the fieldwork and the results of the artifact analysis. The days estimated to complete this project include time spent on preparation of final drawings showing the site plan and soil profiles encountered during excavation. They do not include extra hours spent on technical edits and reviews before preparation of the final copy. Extra money should also be allocated for publication of the final report.

ENDNOTES: References Cited

[1] http://commons.wikimedia.org/wiki/Image:Seattle_-_Frye-Bruhn_packing_plant_-_1900.jpg
[2] Information and quote obtained from HistoryLink.org, an on-line encyclopedia of Washington State history. This page is devoted to the Frye Art Museum in Seattle. The website link is: http://www.historylink.org/index.cfm?DisplayPage=output.cfm&File_Id=3711
[3] http://vilda.alaska.edu/cdm4/results.php?CISOOP1=all&CISOBOX1=frye&CISOFIELD1=CISOSEARCHALL&CISOROOT=all
[4] "Seattle and the Orient," edited by Alfred D. Bo, The Times Publishing Company (*Seattle Times*), Seattle, p. 133, 1900; available at http://commons.wikimedia.org/wiki/Image:Seattle_and_the_Orient_p133.jpg#filelinks
[5] *Daily Alaskan*, July 11, 1898, adv. on p. 4
[6] On May 10, 1899, the Daily Alaskan reported (p. 4) that Arctic Meat Company's butcher Meyer was putting up a new building on his lot at the southwest corner of 5th and State (Block 8, Lot 1). This historic building has recently been acquired by the National Park Service through the Rapuzzi Collection acquisition.
[7] Herman Meyer, the former manager for Frye-Bruhn, did not fare so well. In April 1900, his Arctic Meat Company seemed to carry everything BUT meat: "State Street, Near 5th Avenue, Carries a Full Line of Brick, … Plaster, Hair, Oats, Hay…, Lime, Lath, Cement, Chop Feed" (*Daily Alaskan*, April 24, 1900, p. 4). In July 1900 he had a new venture, the Arctic Telephone Company, and set up his switchboard in the Arctic Meat Company's shop and connected some of the "automatic" phones for a public demonstration. His first hundred phones sold quickly, but since it got its circuit from the electric lighting plant, it only operated at night (*Daily Alaskan*, July 3, 1900, p. 1; "New Phones Are Here: Arctic Telephone Company Will Soon Be Ready for Business," July 22, 1900, p. 3; "Putting in Phones: Automatic System is Taking Well, More Phones Ordered," July 27, 1900, p. 1). At an unknown date, Meyer sold his telephone system to the Northwest Light & Power Company (*Daily Alaskan*, November 1, 1902, p. 1). By 1902, he was back in the meat business, and was working on building a cold storage plant "adjoining the retail market … on State street. [He] has purchased the 24 feet frontage on State street next to his building from P.E. Kern and the eight feet adjoining the Kern property [a former cigar store]. He has also purchased the gymnasium building from the Y.M.C.A. and has leased the ground upon which it stands… The cold storage plant will include machinery for manufacturing ice as well as cold storage for meat, butter, vegetables and other perishable articles all of which the Arctic Meat Company will carry in stock. The Arctic Meat Company and Mr. Meyer, its manager are connected with the big meat firm of Carstens Bros. of Seattle…" (*Daily Alaskan*, "Herman Meyer Has Begun Work on Cold Storage," May 24, 1902, p. 3). By November, Meyer had sold his meat company and all his Skagway holdings to the Carstens Brothers (*Daily Alaskan*, "Make Change: Carstens Bros. Purchase Arctic Meat Co.," November 1, 1902, p. 1). In December 1903, Meyer had already set up a business in Valdez, and part of his Skagway meat company's ice plant had been purchased by the Valdez Brewing Company, and was to be sent there (*Daily Alaskan*, "Will Stand: Herman Meyers Will Not Take Wires Down," December 20, 1902, p. 2).
[8] *Daily Alaskan*, "Popular Pioneer Firm," February 16, 1900, p. 1.
[9] KLGO SW10-38
[10] *Daily Alaskan*, "New Slaughter House," August 22, 1900, p. 1
[11] *Daily Alaskan*, "Building Large Barn," November 10, 1900, p. 3
[12] *Daily Alaskan*, "Frye-Bruhn Meat Market," January 1, 1901, p. 4
[13] "Seattle and the Orient," edited by Alfred D. Bo, The Times Publishing Company (*Seattle Times*), Seattle, p. 134, 1900; available at: http://commons.wikimedia.org/wiki/Image:Seattle_-_Frye-Bruhn_beef_room_-_1900.jpg
[14] http://commons.wikimedia.org/wiki/Image:Seattle_-_Frye-Bruhn_beef_room_-_1900.jpg
[15] *Daily Alaskan*, "Will Move Building," November 9, 1902, p. 3.
[16] "Refrigeration History," http://www.rogersrefrig.com/history.html; "The History of the Refrigerator and Freezers," About.com: Inventors, http://inventors.about.com/library/inventors/blrefrigerator.htm

[17] There are two maps prepared by the Sanborn Fire Insurance Company for Skagway, one in 1914 and one in 1948. Copies of various sections of the map are used throughout this report. The correct citation is: Sanborn Fire Insurance Company
1914 Fire insurance plat for Skagway. Copy on file at Klondike Gold Rush NHP, Skagway, Alaska.
1948 Fire insurance plat for Skagway. Copy on file at Klondike Gold Rush NHP, Skagway, Alaska.
[18] Skagway Deed Book 10, p. 254, September 30, 1919; the building sold for $450.
[19] *Alaska-Yukon Gazetteer and Business Directory*, R. L. Polk & Co. Seattle, Washington, 1915-1916, p. 488; *Alaska-Yukon Gazetteer and Business Directory*, R. L. Polk & Co. Seattle, Washington, 1917-1918, p. 565.
[20] KLGO 5th-5/1763.
[21] Drawing taken from *Archeological Investigations in Skagway, Alaska, Volume 9: Excavations at the Pantheon Saloon Complex* by Tim A. Kardatzke, Klondike Gold Rush National Historical Park, Skagway, Alaska, 2002 (hereinafter referred to as Kardatzke 2002), Figure 21, p. 31.
[22] Kardatzke 2002:26-32;36-39
[23] from Kardatzke 2002, Figure 8, p. 13)
[24] from Kardatzke 2002, Figure 7, p. 11.
[25] from Kardatzke 2002, p. 37.
[26] The 1899 directory list a new location for the Hotel Seattle, 313 5th Avenue.
[27] *Directory and Guide, Skagway, Metropolis of Alaska and Gate to the Golden North*. Ms. on file at Klondike Gold Rush NHP, Skagway, Alaska, C. Clinton, Ed., 1899
[28] from Kardatzke 2002, Figure 12, p. 18.
[29] KLGO 4th-13
[30] from Kardatzke 2002, p. 37.
[31] KLGO4th-47/8145.
[32] from Kardatzke 2002, p. 38; *Legacy of the Gold Rush: An Administrative History of Klondike Gold Rush National Historical Park*, by Frank Norris, National Park Service, Seattle, Washington, 2006 pp. 187, 254.
[33] Photo on file at Yukon Archives, Barley collection, #5033
[34] Modified from Kardatzke 2002, p. 52.
[35] Kardatzke 2002, *passim*.
[36] From Kardatzke 2002, p. 55.
[37] Archeological excavation results for this unit are summarized in Kardatzke 2002, pp. 101-106.
[38] Archeological excavation results for this unit are summarized in Kardatzke 2002, pp. 106-111.
[39] Custer et al. n.d., pp. 4; 6.
[40] Robert Spude paper included with correspondence dated October 2, 1984, "Introduction"; on file at KLGO Archives, Record Group 10.07, Folder 30, Acc. 466, Cat. No. 49975
[41] "Skookum" Jim Mason went on to achieve fame and fortune when he, his brother-in-law George Carmack, his sister Kate Carmack, and his nephews Dawson Charlie and Patsy Henderson found the gold at Rabbit Creek that set off the Klondike Gold Rush stampede.
[42] Taken from a revised draft version of William Adams's *Historical Archaeology in Skagway, Alaska: Archaeological Overview and Assessment of the Downtown Skagway Unit, Klondike Gold Rush NHP*. Draft ms. on file at Klondike Gold Rush NHP, Skagway, Alaska (1992). The 2000 version is in KLGO's Archives, Record Group 05.17, Folder 12, Accession 411, Cat. No. 47657 (hereinafter, Adams 2000).
[43] Record Group 10.07, Folder 46 (ACC. 466, Cat. No. 49975), on file in the KLGO Museum archives, contains a draft summary report of her findings (hereinafter, C. Spude n.d.).
[44] Drawing is from Adams 2000.
[45] C. Spude n.d., Chapter 2, "Early 1897 Work on the Trail."
[46] "Occidental Hotel," *Daily Alaskan*, January 1, 1900, p. 15.
[47] KLGO SE-25 (from Alaska Historical Library, PCA 21-2, Winter & Pond Col.)
[48] "*Stories of Old Skagway: Told by an Old Timer*," Daily Alaskan, January 1, 1901, p. 14.
[49] *Ibid*.
[50] KLGO SE-2.
[51] KLGO B4-81/575.

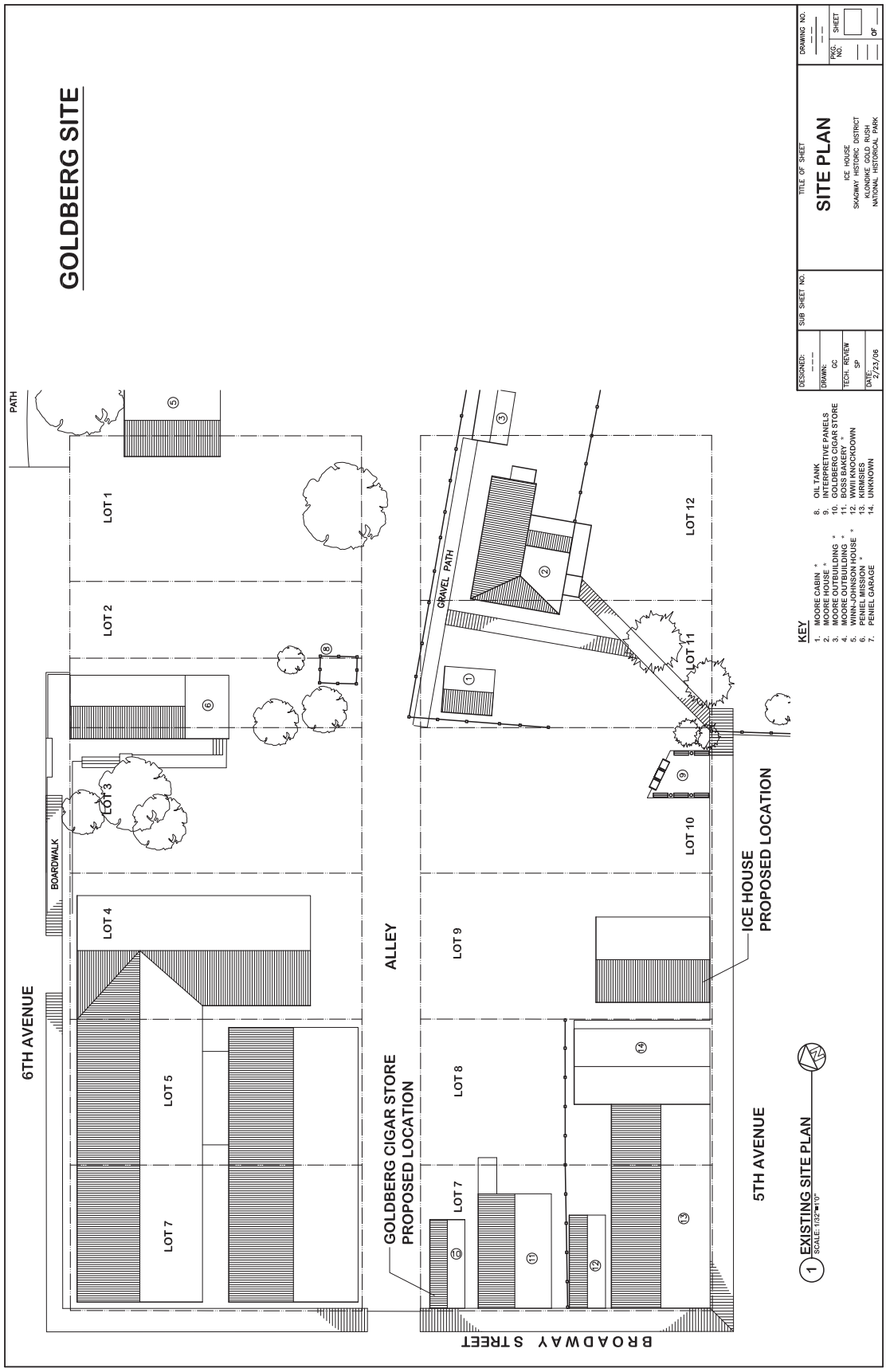
[52] Spude n.d., Chapter 2, "Obliterating the Trail."
[53] "Occidental Hotel," *Daily Alaskan*, January 1, 1900, p. 15.
[54] *Daily Alaskan*, June 23, 1904, p. 1.
[55] *Archeological Investigations in Skagway, Volume 8: A Century at the Moore/Kirmse House* by Doreen C. Cooper, U.S. Department of the Interior, National Park Service, Klondike Gold Rush National Historical Park, Skagway, Alaska, 2001 (hereinafter Cooper 2001), pp. 28-29.
[56] KLGO B5-184
[57] Skagway City Tax records, 1919-1950, on file at the archives of the Skagway City Museum; Catherine Blee, Robert L. Spude and Paul C. Cloyd, *Historic Structure Reports for Ten Buildings*, National Park Service, Denver, Colorado, 1983 (hereinafter *10 Building HSR*), pp. 111-112.
[58] KLGO B4-58, National Archives, #111-SC-76272
[59] KLGO B4-41/8003, Dedman's Photo Collection
[60] KLGO SO-10, Polar & Archives Collection, Rasmuson Library, University of Alaska Fairbanks, Barr Collection, 76-151-40. Although noted as Samson's, this had been converted into the Occidental Hotel.
[61] Yukon Archives, #79/102; date of photo is the date the photographer, Louis Petersen, is known to have lived in and photographed Skagway.
[62] KLGO 5th-73/5488.
[63] KLGO SO-134, Skagway City Museum, Photo No. 79-32
[64] from DePuydt et al. 1997, p. 7.
[65] from DePuydt et al. 1997, pp. 22-23.
[66] from DePuydt et al. 1997, pp. 8-9.
[67] *Archaeological Investigations in Skagway, Alaska, Volume 5: Additional Investigations at the Mill Creek Dump and the Peniel Mission*, by Ray DePuydt, Gwen Hurst, Stephanie Ludwig, Alfred Cammisa, U.S. Dept. of the Interior, National Park Service, Anchorage, Alaska, 1997 (hereinafter, DePuydt 1997). *Archeological Investigations in Skagway, Alaska, Volume 3: The Mill Creek Dump and the Peniel Mission, Klondike Gold Rush NH,* by Diane Lee Rhodes, U.S. Department of the Interior, National Park Service, Denver, Colorado, 1988.
[68] "Peniel Mission Archeological Monitoring," Klondike Gold Rush National Historical Park Archeological Compliance Report, by Doreen Cooper, ca. August 1993. Ms. on file in Section 106 files, Klondike Gold Rush National Historical Park, Skagway, AK.
[69] Adapted from Rhodes 1988 (Figure 4.5) and Depuydt 1997 (Figure 13)
[70] Pilk Cultural Landscape Study 1995, p. 179.
[71] KLGO Museum Archives, Record Group 1.05, Folder 13, "Adaptive Restoration of the Boss Bakery 1984" (Acc. 446, Cat. 49837).
[72] KLGO SO-89
[73] *Skaguay News,* February 11, 1898, p. 1.
[74] "Notice is hereby given that Abraham Goldberg and Joseph Goldberg, co-partners doing business under the firm name … of Goldberg Brothers, have by their deed of assignment duly executed on the 14th day of May A.D. 1898, assigned and conveyed all their estate and property, both real and personal, to the undersigned, in trust for the benefit of all their creditors." They were locally represented by Skagway attorneys Price and Fuller, who began publishing this legal notice June 3, 1898. (*Skaguay News* September 16, 1898, p. 4).
[75] *Skaguay News,* November 11, 1898, p. 3; November 18, 1898, p. 3.
[76] "Moved: Catholic Parsonage Now in Place," *Daily Alaskan*, August 16, 1903, p. 4.
[77] *Daily Alaskan*, January 1, 1900, p. 3.
[78] "Moved: Catholic Parsonage Now in Place," *Daily Alaskan*, August 16, 1903, p. 4.
[79] *Archeological Investigations in Skagway, Volume 4: Father Turnell's Trash Pit*, by Catherine Holder Spude, Douglas D. Scott and Frank Norris, National Park Service, Denver, Colorado, 1993 (hereinafter, *Spude et al.* 1993).
[80] detail from KLGO SO-97, from Skagway City Museum, Photo No. A01-30.
[81] Photo on file at Alaska Historical Library, William Norton collection, asl pca 226 761 jpg.

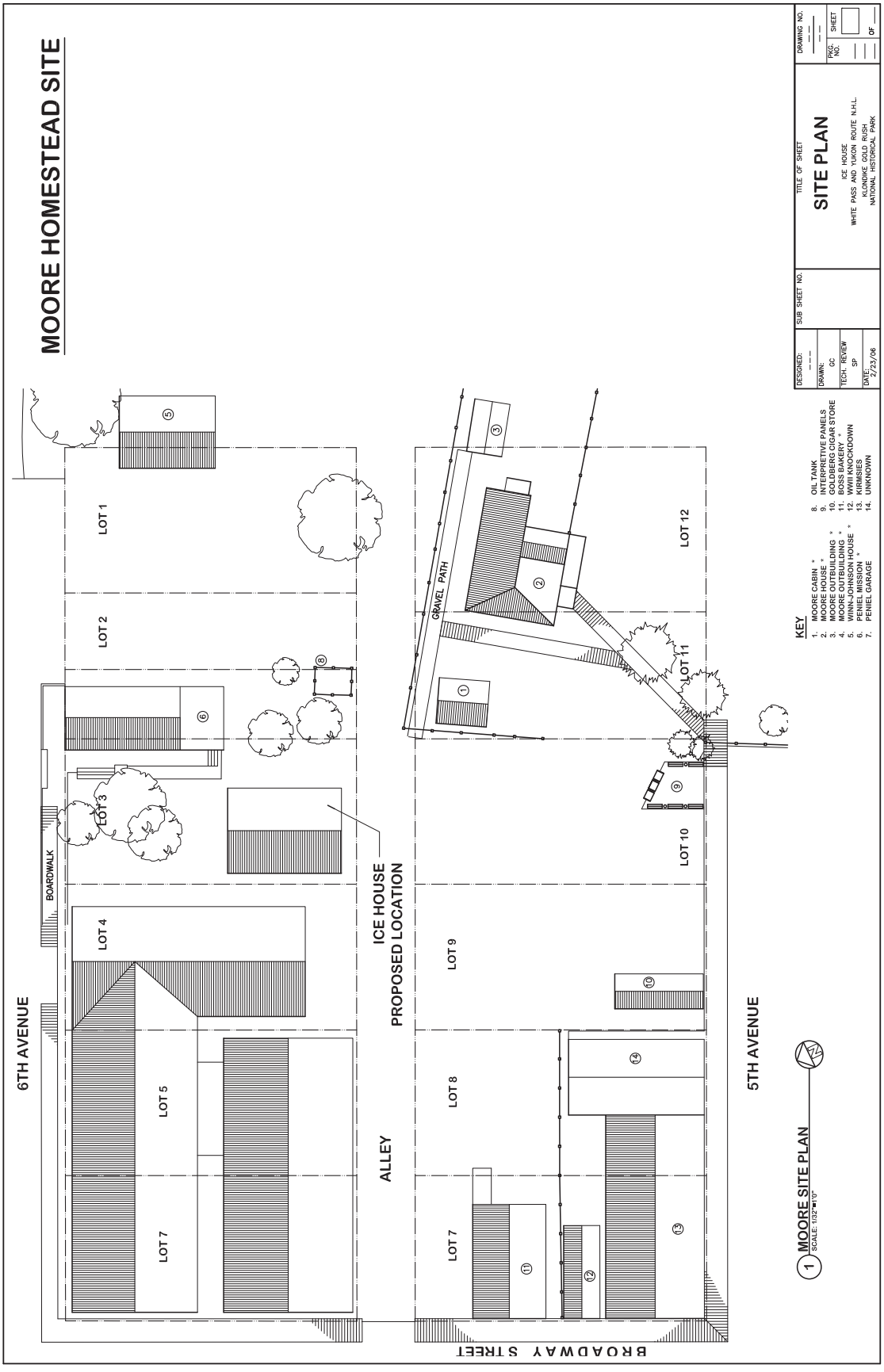
[82] KLGO SO-9, J. B. Moore Collection, MS-224, Alaska and Polar Regions Dept., University of Alaska Fairbanks, Photo No. 76-35-41.
[83] KLGO PB-60/8962.
[84] KLGO 5th-34/957.
[85] KLGO 5th-64/3987
[86] *Spude et a*l. 1993, p. 17.
[87] "Privy-Pocked and Planed: An Archeological Tale of the South Half of Block 24," by Catherine Holder Spude and Doreen Cooper, with the assistance of Robert L. Spude., n.d.; ms. on file at Klondike Gold Rush National Historical Park Museum Archives, Record Group 10.07, Folders 46-48, ACC. 466, Cat. No. 49975 (hereinafter, Spude et al. n.d.).
[88] modified from Adams 2000.
[89] (KLGO Accessions 132, 152m 262)
[90] Spude n.d., "Stratigraphy," no page #.
[91] Joseph L. Connelly and Malcolm A. Menzies, "Subsurface Investigation, Klondike Gold Rush National Historical Park," 1976, letter report on file at Klondike Gold Rush National Historical Park, Skagway, Alaska, p. 4 (cited in Spude n.d., "Stratigraphy," no page #.
[92] Spude n.d., "Shovel Tests," no page #s
[93] Memorandum from Robert L. Spude, Regional Historian, Alaska Region, to Catherine H. Blee, Archeologist, Alaska/Pacific Northwest/Western Team, DSC (H22(ARO-PCR), dated October 2, 1984. Memo on file at KLGO Museum Archives, Record Group 10.07, Folder 30 (ACC. 466, Cat. 49975).
[94] Spude n.d., "1899 Miner's Privy," no page #s
[95] Alaska Historical Library,ASL- PCA -226, William R. Norton Collection
[96] *Daily Alaskan*, July 3, 1900, p. 4; July 13, 1900, p. 4; August 3, 1900, p. 4
[97] KLGO B4-75, photo on file at Klondike Gold Rush National Historical Park.
[98] *Cultural Landscape Report for the Capt. William Moore Cabin, J. Bernard Moore House, Peniel Mission, and Pullen House Sites* (author unnamed, but it was Robert Pilk), U.S. Department of the Interior, National Park Service, Denver Service Center, September 1995, p. 179 (hereinafter, Pilk Cultural Landscape Report 1993). (The report is housed in the KLGO Museum Archives, Record Group 10.08, Folder 2, ACC. 369, Cat. No. 46738.)
[99] *Klondike Gold Rush NHP Field Manual, Procedures for Excavation and Survey in Archeological Investigations*, by Doreen C. Cooper, 1995 Ms. on file at Klondike Gold Rush NHP, Skagway, Alaska.

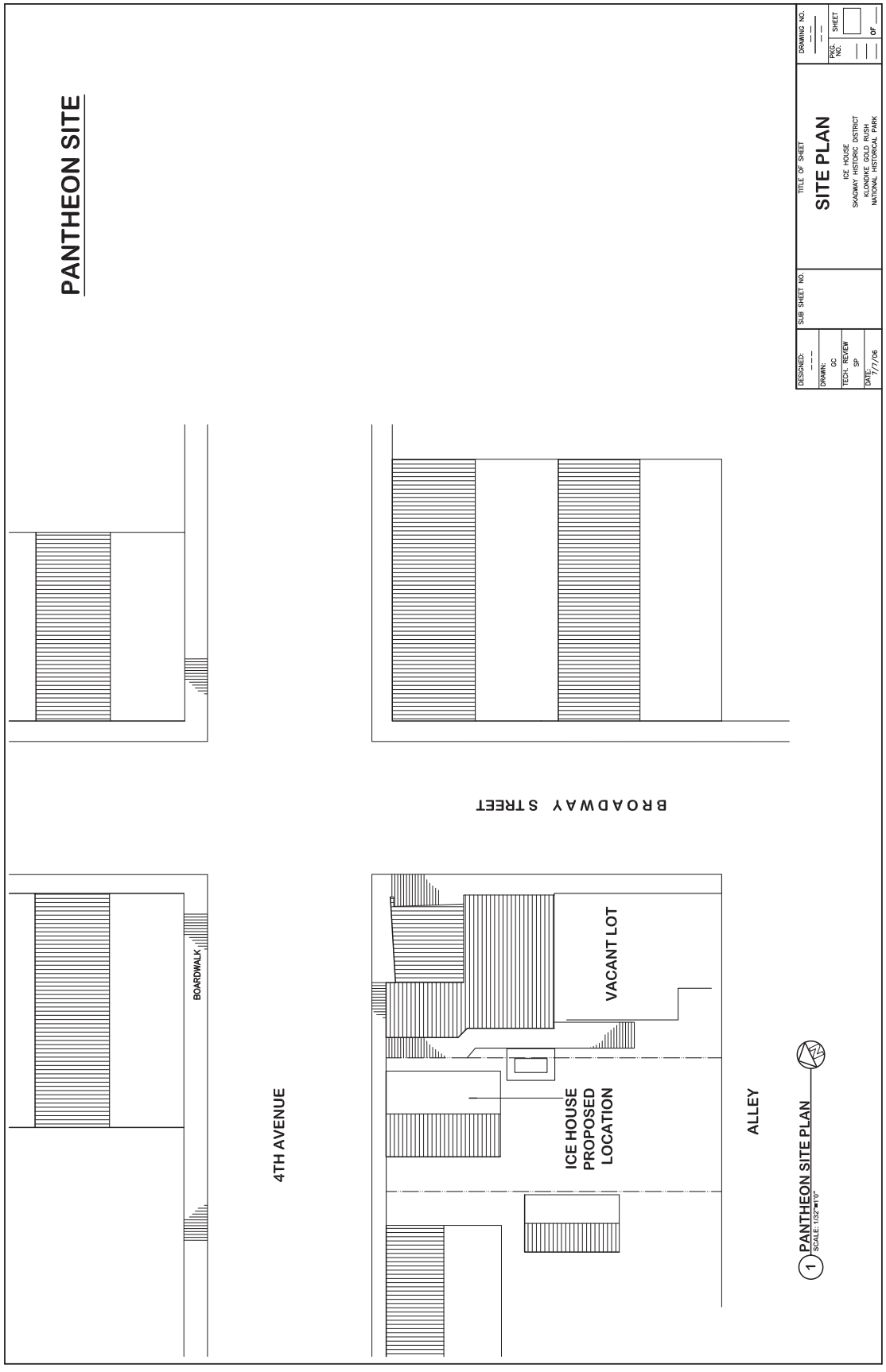
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APPENDIX J: 2009 VALUE ANALYSIS SITE PLANS


GOLDBERG SITE
PATH
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
BOARDWALK
GRAVEL PATH
ALLEY
6TH AVENUE
5TH AVENUE
BROADWAY STREET
GOLDBERG CIGAR STORE
PROPOSED LOCATION
ICE HOUSE
PROPOSED LOCATION
KEY
1. MOORE CABIN *
2. MOORE HOUSE *
3. MOORE OUTBUILDING *
4. MOORE OUTBUILDING *
5. WINN-JOHNSON HOUSE *
6. PENIEL MISSION *
7. PENIEL GARAGE
8. OIL TANK
9. INTERPRETIVE PANELS
10. GOLDBERG CIGAR STORE
11. ICE HOUSE *
12. WWII KNOCKDOWN
13. KIRMSIES
14. UNKNOWN
1 EXISTING SITE PLAN
SCALE: 1/32"=1'0"
DESIGNED: ---
DRAWN: QC
TECH. REVIEW SP
DATE: 2/23/06
SUB SHEET NO.
TITLE OF SHEET
SITE PLAN
ICE HOUSE
SKAGWAY HISTORIC DISTRICT
KLONDIKE GOLD RUSH
NATIONAL HISTORICAL PARK
DRAWING NO. --- T
PKG. NO. SHEET
OF


MOORE HOMESTEAD SITE
6TH AVENUE
5TH AVENUE
BROADWAY STREET
ALLEY
BOARDWALK
GRAVEL PATH
ICE HOUSE
PROPOSED LOCATION
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
KEY
1. MOORE CABIN *
2. MOORE HOUSE *
3. MOORE OUTBUILDING *
4. MOORE OUTBUILDING *
5. WINN-JOHNSON HOUSE *
6. PEMEL MISSION *
7. PEMEL GARAGE
8. OIL TANK
9. INTERPRETIVE PANELS
10. GOLDBERG CIGAR STORE
11. BOSS BAKERY *
12. WWII KNOCKDOWN
13. KENNEDY'S
14. UNKNOWN
1 MOORE SITE PLAN
SCALE: 1/32"=1'0"
DESIGNED: ---
DRAWN: GC
TECH. REVIEW SP
DATE: 2/23/06
SUB SHEET NO.
TITLE OF SHEET
SITE PLAN
ICE HOUSE
WHITE PASS AND YUKON ROUTE N.H.L.
KLONDIKE GOLD RUSH
NATIONAL HISTORICAL PARK
DRAWING NO.
PKG. NO.
SHEET
OF


PANTHEON SITE
BOARDWALK
4TH AVENUE
BROADWAY STREET
VACANT LOT
ICE HOUSE
PROPOSED
LOCATION
ALLEY
1 PANTHEON SITE PLAN
SCALE: 1/32"=1'0"
DESIGNED:
DRAWN: GC
TECH. REVIEW SP
DATE: 7/7/08
SUB SHEET NO.
TITLE OF SHEET
SITE PLAN
ICE HOUSE
SKAGWAY HISTORIC DISTRICT
KLONDIKE GOLD RUSH
NATIONAL HISTORICAL PARK
DRAWING NO.
PAGE NO.
SHEET
OF

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APPENDIX K: 2004 BUILDING MOVE PHOTOGRAPHS



Figure K.1: Interior of the Frye-Bruhn Cold Storage Building with the refrigeration doors on their hinges.



Figure K.2: View to the east of the north interior refrigeration room.



Figure K.3: Excavation around the building perimiter before the relocation effort. Note the corrugated metal over the southwest corner.



Figure K.4: Detail view of the building's southeast corner with substantial deterioration in 2004.



Figure K.5: Lifting the building with large timbers. Note the sawdust spilling from the wall cavities.



Figure K.6: The building was pulled by an excavator and rolled on steel pipes across 5th Avenue.



Figure K.7: Steel pipes served as rollers when pulled across 5th Avenue.



Figure K.8: Large steel I beams with wheels supported the southern portion of the building during the move.



Figure K.9: Worker clearing the sawdust from the exterior walls along the north elevation prior to the move.



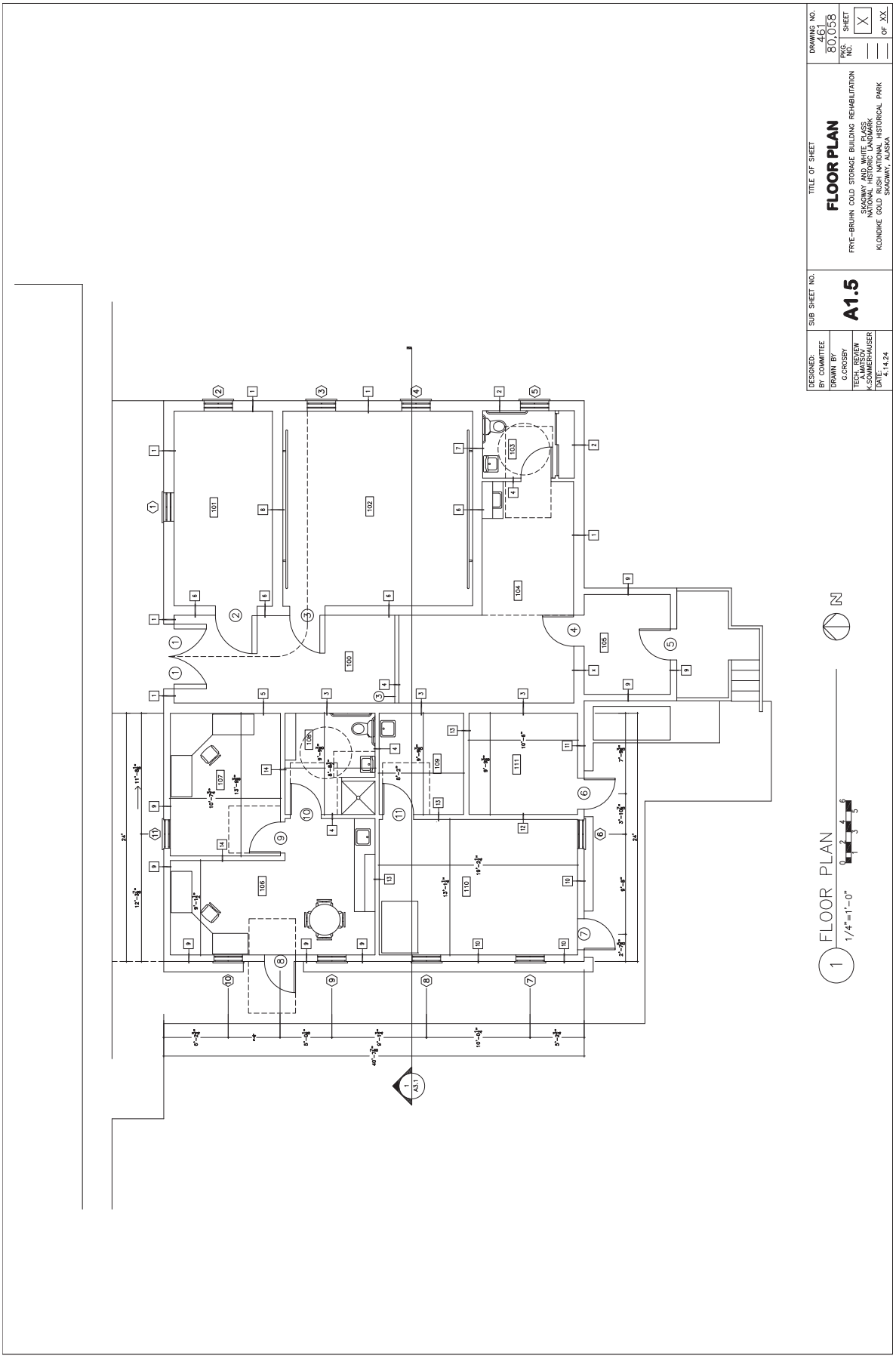
Figure K.10: The building moves onto the NPS lot.



Figure K.11: The Frye-Bruhn Cold Storage Building is within 30 feet of where it was set in 2004.

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APPENDIX L: APRIL 2024 FLOOR PLAN


DRAWING NO.
461
80,058
SHEET
OF XX
TITLE OF SHEET
FLOOR PLAN
FRYE-BRUHN COLD STORAGE BUILDING REHABILITATION
SKAGWAY AND WHITE PASS
NATIONAL HISTORIC LANDMARK
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
SKAGWAY, ALASKA
SUB SHEET NO.
A1.5
DESIGNED:
BY COMMITTEE
DRAWN BY
G.CROSBY
TECH. REVIEW
M.MASSON
K.SOMMERHAUSER
DATE:
4.14.24
N
1 FLOOR PLAN
1/4"=1'-0"