PARK CITY HISTORIC PRESERVATION BOARD MEETING
SUMMIT COUNTY, UTAH
August 5, 2020

PUBLIC NOTICE IS HEREBY GIVEN that the HISTORIC PRESERVATION BOARD of Park City, Utah will hold its Historic Preservation Board Meeting at the City Council Chambers, 445 Marsac Avenue, Park City, Utah 84060 for the purposes and at the times as described below on Wednesday, August 5, 2020.

ATTENTION

ATTENTION - NOTICE OF ELECTRONIC MEETING & HOW TO COMMENT VIRTUALLY:
This meeting will be an electronic meeting as permitted by Park City Open and Public Meeting Resolution 18-2020, adopted March 19, 2020. Some Commissioners will connect electronically and some will meet in Council Chambers. Public comments will be accepted in person or virtually. To comment virtually, use eComment or raise your hand on Zoom. eComments submitted before the meeting date will be attached to the packet as appendices. eComments submitted on Commission meeting days will be read aloud. For more information on participating virtually and to listen live, please go to www.parkcity.org

Determination of Health and Safety Risk Under OPMA

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MEETING CALLED TO ORDER AT 5:00 PM.

1.ROLL CALL

2.MINUTES APPROVAL

2.A. Consideration to Approve the Historic Preservation Board Meeting Minutes from July 1, 2020.
HPB 07.01.2020_Pending Approval

3.PUBLIC COMMUNICATIONS

4.STAFF AND BOARD COMMUNICATIONS AND DISCLOSURES

5.REGULAR AGENDA

5.A. Daly-West Mine Headframe - 9100 Marsac Avenue - Historic Preservation Board Review for Relocation of a Significant Historic Structure – The Applicant is Proposing the Relocation of the Historic Mine Headframe Structure Approximately 150 feet South West of the Historic Site. PL-20-04572

(A) Public Hearing (B) Possible Action
Daly West Headframe Relocation Staff Report
Exhibit A: Proposed Relocation Site Plan
Exhibit B: Historic Preservation Plan
Exhibit C: Historic Site Inventory Form
Exhibit D: Applicant's Submitted Structural and Geotechnical Engineering Reports
Exhibit E: Planning Director and Chief Building Official Determination Letter
Exhibit F: 2019 SWCA Historic Preservation Plan Update for Flagstaff Mountain Resort

6.ADJOURN

A majority of HISTORIC PRESERVATION BOARD members may meet socially after the meeting. If so, the location will be announced by the HISTORIC PRESERVATION BOARD Chair Person. City business will not be conducted. Pursuant to the Americans with Disabilities Act, individuals needing special accommodations during the meeting should notify the Planning Department at 435-615-5060 or planning@parkcity.org at least 24 hours prior to the meeting. Wireless internet service is available in the Marsac Building on Wednesdays and Thursdays from 4:00 p.m. to 9:00 p.m. Posted: See: www.parkcity.org

***Parking validations will be provided for meeting attendees that park in the China Bridge parking structure.**

NOTICE OF ELECTRONIC MEETING & HOW TO COMMENT VIRTUALLY:
This meeting will be an electronic meeting without an anchor location as permitted by Utah Code Open and Public Meetings Act section 52-4-207(4) as amended June 18, 2020, and Park City Resolution 18-2020, adopted March 19, 2020. The written determination of a substantial health and safety risk, required by Utah Code section 52-4-207(4) is attached as Exhibit A. Historic Preservation Board members will connect electronically. Public comments will be accepted virtually as described below.

To comment virtually, use eComment or raise your hand on Zoom. eComments submitted before the meeting date will be attached to the packet as appendices. eComments submitted on Commission meeting days will be read aloud. For more information on participating virtually and to listen live, please go to www.parkcity.org.

Exhibit A: Determination of Substantial Health and Safety Risk

On August 5, 2020 the Commission Chairperson determined that conducting a meeting with an anchor location presents a substantial risk to the health and safety of those who may be present at the anchor location. Utah Code section 52-4-207(4) requires this determination and the facts upon which it is based, which include:

The percent of positive COVID-19 cases in Utah has been on the rise since May 27, 2020.
Positive cases from testing have increased from 4.96% to 9.23% during the month of June, and COVID-19 patients in Utah hospitals have increased during the same time period.
As of June 25, 2020 there have been 158 deaths in Utah due to COVID-19.
Summit County has the third highest case rate of COVID-19 in the state.

This determination is valid for 30 days, and is set to expire on September 5, 2020.

Dated August 5, 2020.

_____
Commission / Board Chair

Approved as to form

_____
City Attorney's Office

ATTEST

_____
City Recorder

PARK CITY MUNICPAL CORPORATION
HISTORIC PRESERVATION BOARD
MINUTES OF JUNE 3, 2020

BOARD MEMBERS IN ATTENDANCE: Lola Beatlebrox, Puggy Holmgren, Jack Hodgkins, John Hutchings, Tana Toly

EX OFFICIO: Bruce Erickson, Caitlyn Barhorst, Laura Kuhrmeyer, Mark Harrington

The Historic Preservation Board meeting was conducted virtually via Zoom. The public was able to submit eComments during the meeting.

MOTION: Board Member Hodgkins nominated Lola Bealtebrox as Chair Pro Tem since Doug Stephens was not present this evening. Board Member Hutchings seconded the motion.

VOTE: The motion passed unanimously.

ROLL CALL
Chair Pro Tem Beatlebrox called the meeting to order at 5:00 p.m. and noted that all Board Members were present except Doug Stephens and Randy Scott, who were excused. Puggy Holmgren joined later in the meeting.

<u>Determination of the Health and Safety Risk under the OPMA</u>

Planner Caitlyn Barhorst read the Determination of Health and Safety Risk under OPMA. Notice of electronic meeting and how to comment virtually. The meeting will be an electronic meeting without an anchor location as permitted by Utah Code Open and Public Meetings Act Section 52-4-207(4) as amended June 18, 2020, and Park City Resolution 18-2020 adopted March 19, 2020. The written determination of a substantial health and safety risk, required by Utah Code section 52-4-207(4) attached as Exhibit A.

The Board will connect electronically. Public comments will be accepted virtually. To comment virtually, use eComment or raise your hand on Zoom. eComments submitted before the meeting date will be attached to the packet as appendices. eComments submitted on HPB meeting days will be read aloud. For more information on participating virtually and to listen live, please go to www.parkcity.org

Planner Barhorst read from Exhibit A, Determination of Substantial Health and Safety Risk. On July 1, 2020, the Board Chair determined that conducting a meeting with an anchor location presents a substantial risk to the health and safety of those who may be present at the anchor location. Utah Code Section 52-4-207(4) requires this determination and the facts upon which it is based,

which include the percent of positive Covid-19 cases in Utah has been on the rise since May 27, 2020. Positive cases from testing have increased from 4.96% to 9.23% during the month of June, and COVID-19 patients in Utah hospitals have increased during the same time period. As of June 25, 2020, there have been 158 deaths in Utah due to COVID-19. Summit County has the third highest case rate of COVID-19 in the state.

This determination is valid for 30 days and is set to expire on July 31, 2020.

Chair Pro Tem Beatlebrox accepted the Determination of Health and Safety Risks under OPMA.

ADOPTION OF MINUTES

June 3, 2020

MOTION: Board Member Hutchings moved to APPROVE the minutes of June 3, 2020 as written. Board Member Hodgkins seconded the motion.

VOTE: The motion passed unanimously. Board Member Holmgren was not present for the vote.

PUBLIC COMMUNICATIONS
There were no comments.

STAFF/BOARD COMMUNICATIONS AND DISCLOSURES

Board Member Hodgkins noted that at the last meeting the Board had commented on the design of the addition at 1162 Woodside; however, the design was not final at that time. He asked for an update and whether any changes were made to the design since the last meeting.

Planner Barhorst stated that the Staff was still working with the applicant. The focus right now is to get the historic window dimensions finalized. The applicant was proposing to restore all the historic wood windows, which would potentially change the proportions of the opening.

Board Member Hodgkins recalled that the comments were more about the addition being compatible with the LMC for Old Town, rather than specifically about the windows and design of the historic structure.

Board Member Holmgren joined the meeting.

Planner Barhorst was not prepared to say whether the design would be approved or denied because they were still working through some of the issues. Planner

Barhorst noted that there would be one more design review team meeting for design of the addition. Overall, the mass and scale were not proposed to change, and the applicant was proposing a minimal footprint and a small amount of area where it attaches to the historic structure. She reported that a public meeting for the HDDR was held on June 18th. No one attended the public hearing and no public comments were received.

Chair Pro Tem Beatlebrox asked if there would be another public hearing once the design is finalized. Planner Barhorst replied that there would be an internal design review team meeting with the Preservation Consultant, the Planner, and the applicant to work through design guidelines compliance. She offered to review the Minutes from the last meeting and try to address the concerns the Board expressed. However, she recalled that the concerns related to the mass and scale of the addition.

Board Member Hodgkins thought it was more about the design and fenestration of the exterior. He recalled someone making the comment about how the Board previously provided feedback on various designs in Old Town, and which ones they thought were appropriate or inappropriate for Old Town. Mr. Hodgkins thought the design of the proposed addition is very modern and will be treated like the 1970s in 20 years. He did not believe it adheres to their feedback regarding compatible design in the Historic District. Chair Pro Tem Beatlebrox concurred.

Board Member Holmgren read through the Minutes and stated that her comments were the same as they were at the last meeting. She did not believe the proposed design was compatible.

Planner Barhorst stated that she would try to send out the link to the applicant's design statement and the plans that were reviewed at the public hearing.

Director Erickson asked Planner Barhorst to also send out the Appeal Regulations as to whether an appeal goes back to the HPB or to the City Council at the applicant's discretion. He believed they were beyond the ten-day appeal period. Planner Barhorst stated that they were beyond the appeal period for the HPB. However, since there has not been final action on the HDDR, that appeal is 30-days from the action date.

Chair Pro Tem Bealtebrox asked if the design has been finalized since the last HPB meeting. Planner Barhorst stated that she received a revision this week, but she had not yet formally addressed it. The Design Review Team would be reviewing the revised design in their DRT meeting next week. Board Member Hodgkins asked if anything in the design had changed based on feedback from the Board. Planner Barhorst replied that the applicant had not proposed any changes per the feedback. The changes strictly relate to the historic window

treatment. Ms. Beatlebrox pointed out that the windows are within the historic home. The Board was talking about the addition and its relationship to the rest of the neighborhood and its relationship to the existing historic structure. Planner Barhorst understood the concern. However, she reiterated that the only updates the applicant has made were the window modifications to the historic structure. No other changes were proposed at this time. Planner Barhorst remarked that at the last meeting, she was still working with the applicant to determine those dimensions, which could potentially alter the addition design. She had not yet done a side by side review, but she would urge the applicant to listen to the recording of this meeting and their comments would be in the record. Planner Barhorst stated that the design review team would have an extensive discussion next week.

City Attorney Harrington noted that the Board made comments and expressed concerns at the last meeting, and they asked for a follow-up status report today. Since this is a Staff decision, Mr. Harrington advised against asserting the Board into the process of the Staff review because it is not in accordance with the Code. However, once the Staff is ready to make their determination, they can inform the Board of their decision and let them know the various appeal or call-up timeframes and who has those rights. Mr. Harrington offered to provide the Board members with information on whether individually they have the right to appeal or whether they can try to call it up collectively as a Board so they will have that information when the 30-day appeal period begins. Mr. Harrington clarified that he did not want to prevent their concerns from being aired at the appropriate time by doing it prematurely and giving the applicant a reason to file a due process claim.

Board Member Hodgkins stated that when they reviewed the changes to the LMC, he was under the impression that the language would prevent such designs being built within a historic district. This is in a historic district and the basis for their concern.

Director Erickson stated that he and Planner Barhorst would work with City Attorney Harrington and provide the Board with options on how to take action if they do not believe it is not consistent with the Historic District Guidelines.

4.A. Fiscal Year 2020 Historic District Grant Program Update

Planner Barhorst updated the Board Members on which projects were approved for the Grant Program and what the project entailed, as outlined in the Staff report. The Planning Department received nine applications for the Fiscal Year 2020 Historic District Grant Program. Eight projects were awarded funds. She noted that half the projects had received a refund and the other half were still being finalized. Planner Barhorst stated that there were delays in the process

due to Covid-19. Some of the final deadlines for completion were extended an extra two weeks to compensate for the lag in construction work.

Planner Barhorst reported that applications for the next fiscal year are open now and that deadline was also extended an additional two weeks. She had received seven applications and she anticipated receiving more. The list will be updated once those applications are processed and approved.

Director Erickson asked if Planner Barhorst could estimate the total amount spent in 2020. Planner Barhorst replied that they used the entire General Fund and the entire Main Street RDA budget. No one applied out of the Lower Park RDA area, so those funds were not used. She estimated the total at under $100,000. Director Erickson noted that both RDAs and the General Fund were now into the 2021 budgets.

Board Member Holmgren asked if paint for exterior was an eligible expense for grant funds. She thought paint was considered maintenance. Planner Barhorst stated that since the intent of the project is to use all the funds, she disbursed it evenly and put the priority projects at the $15,000 cap of the larger repair categories. For applications that came in for other types of repair projects, the remaining funds were used for those projects. Planner Barhorst remarked that because of the Covid-19 delays, the eligible work has not been ironed out yet. However, the competitive cycle is getting pushed another year and those applications did not open. It was only the repair categories. Planner Barhorst noted that the Planning Department was accepting any and all proposals of what could fall under the repair grant category, which are maintenance-type proposals. She clarified that it was not a competitive fund. It was an equally disbursed amount.

Board Member Holmgren asked if the two $15,000 awarded from the General Fund for Thaynes Conveyor Mine Site went to the same applicant. Planner Barhorst explained that $15,000 went for needed emergency stabilization and the other $15,000 went to ordinary repair and maintenance of the structure.

Board Member Hutchings asked if there was a specific reason why funds were not used from the Lower RDA. Planner Barhorst replied that no one had applied. For 2021 funds, postcards were sent to let everyone know that the Grant Program is open for applications. She had received more inquiries for this round of applications. The postcard notices will continue every year.

Board Member Hodgkins understood that 2020 was only repair and maintenance projects. He asked if those projects are scored. Planner Barhorst replied that those projects do not get scored. When the deadline closes, all the applicants are reviewed equally, and the funds are disbursed. It is not a competitive

process as previously discussed. The competitive process was put on hold and it will be reassessed next year.

Chair Pro Tem Beatlebrox asked why the addressee names were redacted. Planner Barhorst stated that she read through the Public Retention Code and the only information that is required to be publicized is the address of the project that received funding. After a request by one of the applicants, she looked into the Code to make sure the information could be redacted. Planner Barhorst pointed out that it is easy to find out who owns a particular property.

REGULAR AGENDA

5.A. Determination of Health and Safety Risk under OPMA

This item was addressed at the start of the meeting.

5.B. Land Management Code (LMC) Amendment – Proposal to amend the LMC to address inconsistencies and amend prohibited siding and roofing materials. The proposed LMC amendments would affect LMC 15-2.1, 15-2.2, 15-2.3, 15-2.4, 15-2.5, 15-2.6, 15-4, 15-5-5, and 15-15.

Planner Laura Kuhrmeyer reported that the Board previously reviewed the majority of these proposed amendments in 2018 when they were presented to the HPB, the Planning Commission, and the City Council. There was a hold up at the City Council and most of the amendments were not adopted.

Planner Kuhrmeyer provided a brief summary of the proposed changes. The sections within each zoning district will be rearranged to create a more consistent pattern to make it easier to find different sections within the Code. Regarding setback exceptions, the major changes are clarifying the setback tables by removing one of the tables that makes it more confusing and adding a new table. Other changes include adding a potential for a decreased setback on corner lots; limiting the size of window wells within the setbacks; and allowing a shared driveway in both the side and rear setbacks. In terms of building height, the Staff was proposing to remove the language that limits the 4' grade change to the periphery of the structure specifically. It will now just be a four-foot grade change across the site, which is how it has always been enforced. The intent is to clarify the Code to make it clear for applicants and Staff. Regarding the Architectural Design Guidelines, they were adding vinyl as a prohibited material, as well as untreated metal window frames as an inappropriate material in the Historic Districts and for any historic sites outside of the Historic Districts. Another amendment would add a definition for a shared driveway. Currently, there is no

definition and the Staff wanted to make it clear since a shared driveway is now being added as an allowed use within the setbacks.

Planner Kuhrmeyer remarked that the remainder of the changes were minor and included rearranging and correcting Scrivener errors and typos.

The Staff recommended that the Board conduct a public hearing and forward a positive recommendation to the Planning Commission and the City Council for the dates specified in the Staff report.

Board Member Hutchings wanted to know what the corner lot setbacks would change. Planner Kuhrmeyer explained that the change would allow a reduced setback if the property is on a platted unbuilt right-of-way. Instead of a 5' setback, a 3' setback would be allowed. However, if the setback is reduced, the owner would not be allowed to use other setback exceptions. Planner Kuhrmeyer explained that in order to reduce the setback on the corner lot from 5' to 3', the City Engineer would need to review the proposal and agree that the reduction would not impact anything within the right-of-way. Mr. Hutchings asked if it would impact parking on Old Town streets. Planner Kuhrmeyer did not believe parking would be affected because parking is required to be onsite for non-historic sites.

Chair Pro Tem Beatlebrox understood that window wells are not supposed to stick out into the setback; however, there are still egress window wells and those need to be large enough for a person to escape. Planner Kuhrmeyer replied that the Planning Department was having problems with people submitting applications where they identified a patio as a window well. The amendment was added to limit window wells to the minimum required by IRC for egress. Planner Barhorst clarified that instead of allowing for walkout windows that cross the line of egress, the amendment clarifies that it is only for a window well and not a sideyard cutout situation.

Board Member Hodgkins asked if patios would no longer be allowed as a paved use in the front yard. He pointed to Item 6 on page 42 of the Staff report where "patio" was crossed out. Planner Kuhrmeyer believed it was crossed out because patios are not listed as a front setback exception. Mr. Hodgkins clarified that paved patios are still allowed in the front yard, but not within the setbacks. Planner Kuhrmeyer answered yes.

Chair Pro Tem Beatlebrox opened the public hearing.

No eComments were submitted and there were no comments on Zoom.

Chair Pro Tem Beatlebrox closed the public hearing.

MOTION: Board Member Hutchings moved to forward as POSITIVE recommendation to the Planning Commission and the City Council on the proposed amendments to LMC Chapters 15-2.1, 15-2.2, 15-2.3, 15-2.4, 15-2.5, 15-2.6, 15-4, 15-5-5, and 15-15. Board Member Holmgren seconded the motion.

VOTE: The motion passed unanimously.

5.C. 180 Daly Avenue – Historic District Design Review – Historic Preservation Board review for Material Deconstruction of a Significant Historic Site. The applicant is proposing Material Deconstruction for the Significant Historic Site consisting of removal of the Historic Foundation for the construction of a new foundation with crawlspace.
(Application PL-20-04537)

Planner Barhorst reviewed the application for the material deconstruction of a Significant historic site at 180 Daly Avenue. The applicant was proposing to lift the structure from its existing wood foundation and construct a crawlspace foundation beneath the historic structure. The floor elevation will be lifted two feet from the existing elevation to protect against erosion of the hillside on Daly Avenue.

Planner Barhorst stated that an addition was not proposed at this time. If an addition is proposed in the future, the HPB would review the removal of the rear wall where the addition would attach. The Staff would review and approve all other material deconstruction, which includes window restorations to the 1940s tax photo.

Planner Barhorst noted that the applicant would be constructing a retaining wall in the rear. The footprint of the addition has not been submitted at this time.

Planner Barhorst clarified that no material was being removed at this time. The applicant was only proposing to lift the house and to build a new crawl space foundation and setting the house on that foundation. The work will also include repairing floorboards and the floor structure. No exterior walls will be removed.

Board Member Hodgkins thought HPB approval was not required if the applicant was lifting the house two feet or less. Planner Barhorst replied that since the house will be lifted and set back on a new foundation, it qualifies as material deconstruction and requires Board approval. She noted that it was similar to what the Board reviewed last month for 1162 Woodside. Mr. Hodgkins recalled that the house at 1162 Woodside was lifted and put back at the same elevation. He wanted to know why the house at 180 Daly would be put back at a different elevation.

Dave Baglino, contractor and original owner of 180 Daly Avenue, explained that the elevation was being lifted two feet because the house is currently in a hole and the floorboards are rotting. If they only upgrade and replace the floor joists it would rot again in a few years. The only reason for lifting the house is to keep it out of the rotten soil it currently sits in. Mr. Baglino noted that 2' is the maximum and he believed lifting 12-18 inches would be sufficient to get the house off the ground. He stated that the reason for proposing a retaining wall is because the dirt on the hillside in the back is pushing the house over. They shored it up temporarily until they get the necessary approvals to complete the restoration of the home.

Chair Pro Tem Beatlebrox opened the public hearing.

No eComments were submitted and there were no comments on Zoom.

Chair Pro Tem Bealtebrox closed the public hearing.

Chair Pro Tem Beatlebrox stated that she is familiar with the steepness of the hillside and she thought it was necessary to raise the building from its current position.

Board Member Hutchings thought it was great that these old houses were being lifted up because they sink into the ground and deteriorate. He believed this was a good project.

Board Member Holmgren concurred.

MOTION: Board Member Hutchings moved to APPROVE the Material Deconstruction of the Significant Historic Site located at 180 Daly Avenue necessary to lift the house 2', based on the Findings of Fact, Conclusions of Law, and Conditions of Approval. Board Member Hodgkins seconded the motion.

VOTE: The motion passed unanimously.

<u>Findings of Fact – 180 Daly Avenue</u>

1. The property is located at 180 Daly Avenue.
2. The legal description of the property is Lot A Daly Delight Plat Amendment. Parcel Number DALYDE-A.
3. The property is located in the Historic Residential (HR-1) Zoning District.
4. The property at 180 Daly Avenue is designated as Significant on the Park City Historic Sites Inventory.
5. On June 10, 2020 the Planning Department received a complete Historic District Design Review application.

6. The proposal complies with LMC § 15-2.2-3 Lot and Site Requirements, including:

Zoning Requirement	Analysis of Proposal
(A) Minimum Lot Size – 1,875 square feet	Complies; Lot contains 3,858 square feet.
(B) Minimum Lot Width – 25 feet	Complies; Lot Width is 44.24 feet.
(E) Maximum Building Footprint – 1,539 square feet	Complies; Proposed Footprint is 790 sq. ft.
(F) Minimum Front and Rear Setback – 12 feet each for a total of 25 feet	Complies; The existing Historic Structure encroaches into the Front Setback but is a valid Complying Structure per LMC § 15-2.2-4
(I) Minimum Side Setbacks – 5 feet each for a total of 10 feet.	Complies; Proposed Side Setbacks are 5 feet each for a total of 10 feet.

7. The proposal complies with LMC § 15-2.2-5 Building Height, including:

Zoning Requirement	Analysis of Proposal
Building Height – 27 feet from Existing Grade.	Complies; Proposed height of the Historic Structure once on the new foundation will be approximately 17 feet, as measured, from Existing Grade
Final Grade within 4 feet of Existing Grade.	Complies; Final Grade is within 4 vertical feet of Existing Grade around the periphery of the Structure, except for the placement of approved window wells, emergency egress, and a garage entrance.
(A) Maximum interior height of 35 feet	Complies; Proposed height is 9 feet, as measured.
(B) 10 foot minimum horizontal step	Complies; The existing Historic Structure measures approximately 17 feet from where the foundation meets the lowest point of existing grade.
(C) Roof Pitch	Complies; the Historic Roof Form is 12:12

8. The proposal complies with LMC § 15-13-2 Design Guidelines for Historic Residential Sites, including:

A. Universal Guidelines	Analysis of Proposal
Universal Guideline No. 1	Complies; The Use is not proposed to change from a Single-Family Dwelling.
Universal Guideline No. 2	Complies; The Historic footprint as seen in the 1941 Sanborn Map will be retained.
Universal Guideline No. 3	Complies; The Historic exterior features will be Retained and preserved.
Universal Guideline No. 4	Complies; The applicant is proposing to Reconstruct the Historic windows and doors based on photographic evidence.
Universal Guideline No. 5	Complies as Conditioned (COA #4).
Universal Guideline No. 6	Complies; The applicant is proposing to remove the non-historic windows, doors, and siding.
Universal Guideline No. 7	Complies; No non-historic architectural elements are proposed.
Universal Guideline No. 8	Complies as Conditioned (COA #5).
Universal Guideline No. 9	Complies; The proposed foundation construction does not destroy any historic materials, features, or spatial relationships that characterize the historic site.
Universal Guideline No. 10	Complies; The proposed foundation is necessary for the Rehabilitation and does not negatively impact the historic site character

B. Specific Guidelines	Analysis of Proposal
1. Site Design	
a. Building Setback and Orientation	Complies; The existing Front and Side Setbacks and original location of the main entry is maintained.
b. Topography and Grading	Complies; The character of the site is not significantly altered and the natural topography is maintained where feasible.
c. Landscaping and Vegetation	Complies; The majority of on-site plantings are maintained and the submitted landscape plan complies with LMC § 15-5-5(N).
d. Retaining Walls	Complies; The retaining wall at the rear of the

	Historic Structure is proposed to be constructed of concrete with a natural stone veneer; there are no existing Historic retaining walls.
e. Fences	Complies; The applicant is proposing to reconstruct the Historic fence to resemble the one seen in the circ. 1940 tax photograph.
2. Primary Structures	
a. Exterior Walls	Complies; The applicant is proposing to restore the original windows and doors openings and restore the Historic wood siding. See Condition of Approval #4.
b. Foundation	Complies; The structure will not be raised more than two feet (2') from its original floor elevation upon the addition of the new concrete foundation, and the site will be re-graded following construction with no more than six inches (6") of the new foundation visible above final grade on the primary and secondary façades.
c. Doors	Complies; The applicant is proposing to restore the Historic door.
d. Windows	Complies; The applicant is proposing to restore the Historic windows.
5. Garages	
a. Scenario 1: Basement Addition without a Garage	Complies; The structure will not be raised more than two feet (2') from its original floor elevation. upon the addition of the new concrete foundation, and the site will be re-graded following construction with no more than six inches (6") of the new foundation visible above final grade on the primary and secondary façades. No basement is proposed, only crawlspace.

9. Staff published notice on the City's website and the Utah Public Notice website, and posted notice to the property on June 17, 2020. Staff mailed courtesy notice to property owners within 100 feet on June 17. 2020. The Park Record published notice on June 17, 2020.

10.Per LMC § 15-11-12.5(A)(2) Historic Preservation Board Review for Material Deconstruction, the Historic Preservation Board shall review the Removal of Historic Material to Accommodate New additions, New Construction, or Structural Upgrades. Prior to issuance of a Building Permit for any Material Deconstruction work, the Review Authority shall review the proposed plans for compliance with

the Land Management Code 15-13 Design Guidelines For Historic Districts and Historic Sites.
11.The Design Review Committee, Development Review Committee, and Planning and Legal Departments reviewed this application.
12.Staff did not receive any public input at the time this report was published.

Conclusions of Law – 180 Daly Avenue

1. The proposal complies with the Land Management Code requirements pursuant to LMC § 15-2.2 Historic Residential (HR-1) District.
2. The proposal complies with the Land Management Code requirements pursuant to LMC § 15-11-12.5 Historic Preservation Board Review for Material Deconstruction.

Conditions of Approval – 180 Daly Avenue

1. Final building plans and construction details shall reflect substantial compliance with
the plans approved July 1, 2020 by the Historic Preservation Board regarding the proposed Material Deconstruction of the Historic foundation. Any changes, modifications, or deviations from the approved design that have not been approved in advance by the Planning and Building Departments may result in a stop work order.
2. The applicant is responsible for notifying the Building Department prior to making any changes to the approved plans.
3. Any changes, modifications, or deviations from the approved scope of work shall be submitted in writing for review and approval/denial in accordance with the applicable standards by the Planning Director or his/her designee prior to construction.
4. Where the Historic exterior materials cannot be repaired, they shall be replaced with materials that match the original in all respects: scale, dimension, texture, profile, material and finish. Prior to removing and replacing Historic materials, the applicant shall demonstrate to the Planning Director and Historic Preservation Planner that the materials are no longer safe and/or serviceable and cannot be repaired to a safe and/or serviceable condition. No Historic materials may be disposed of prior to advance approval by the Planning Director and Historic Preservation Planner.
5. Chemical or physical treatments, if appropriate, should be undertaken using recognized preservation methods. Treatments that cause damage to historic materials should not be used. Treatments that sustain and protect, but do not alter appearance, are encouraged.
6. The applicant shall submit a cribbing and excavation stabilization shoring plan reviewed and stamped by a State of Utah licensed and registered structural engineer prior to issuance of a building permit. Cribbing or shoring must be of engineer specified materials. Screw-type jacks for raising and lowering the building are not allowed as primary supports once the building is lifted.

7. An encroachment agreement may be required prior to issuance of a building permit for projects utilizing soils nails that encroach onto neighboring properties.
8. A Soils Report completed by a geotechnical engineer as well as a temporary shoring plan, if applicable, will be required at the time of building permit application.
9. Within five (5) days of installation of the cribbing and shoring, the structural engineer will inspect and approve the cribbing and shoring as constructed.
10.Historic Structures which are lifted off the foundation must be returned to the completed foundation within 45 days of the date the building permit was issued.
11.The Planning Director may make a written determination to extend this period up to 30 additional days if, after consultation with the Historic Preservation Planner, Chief Building Official, and City Engineer, he determines that it is necessary. This would be based upon the need to immediately stabilize an existing Historic property, or specific site conditions such as access, or lack thereof, exist, or in an effort to reduce impacts on adjacent properties. The applicant is responsible for notifying the Building Department if changes are made. If the cribbing and/or shoring plan(s) are to be altered at any time during the construction of the foundation by the contractor, the structural engineer shall submit a new cribbing and/or shoring plan for review. The structural engineer shall be required to re-inspect and approve the cribbing and/or shoring alterations within five (5) days of any relocation or alteration to the cribbing and/or shoring.
12.The applicant shall also request an inspection through the Building Department following the modification to the cribbing and/or shoring. Failure to request the inspection will be a violation of the Preservation Plan and enforcement action through the Historic Preservation Financial Guarantee or ACE could take place.
13.Prior to removal of any Historic material which is required to be reused, the applicant shall document their location and condition.
14.The historic site shall be returned to original grade following construction of a foundation. When the original grade cannot be achieved, generally no more than six inches (6”) of the new foundation shall be visible above final grade on the primary and secondary facades. The site shall be re-graded so that all water drains away from the structure and does not enter the foundation. A plinth, or trim board at the base of the historic structure, shall be added to visually anchor the historic structure to the new foundation.
15.Per LMC 15-11-9 Preservation Policy, the Planning Department is authorized to require that the Applicant provide the City with a Financial Guarantee to ensure compliance with the conditions and terms of the Historic Preservation Plan.

The Historic Preservation Board Meeting adjourned at 6:10 p.m.

Approved by _____
Douglas Stephens, Chair
Historic Preservation Board

Historic Preservation Board
Staff Report

Subject: **Historic Preservation Board Review for the Relocation of a Significant Historic Structure**
Application: **PL-20-04537**
Author: **Caitlyn Barhorst**
Date: **August 5, 2020**
Type of Item: **Administrative**

Summary Recommendation

Staff recommends the Historic Preservation Board review the proposal, hold a public hearing, and consider approving the Relocation of the Daly-West Mine Headframe, a Significant Historic Site located at 9100 Marsac Avenue based on the Findings of Fact, Conclusions of Law, and Conditions of Approval.

Description

Applicant:	Empire Pass Master Owner's Association, Represented by Douglas Ogilvy
Location:	9100 Marsac Avenue, Daly-West Mine Headframe
Zoning District:	Current Site: Master Planned Development (MPD) Proposed Site: Recreation Open Space (ROS)
Historic Designation:	Significant
Historic Period:	Mature Mining Era (1894-1930)
Reason for Review:	Land Management Code (LMC) § 15-11-13 Relocation And/ Or Reorientation of A Historic Building Or Historic Structure

Acronyms

HPB	Historic Preservation Board
LMC	Land Management Code
HDDR	Historic District Design Review
HSI	Historic Sites Inventory

Terms that are capitalized as proper nouns throughout this staff report are defined in LMC § 15-15-1.

Executive Summary

The Applicant is proposing the Relocation of the Daly-West Mine Headframe Structure approximately 150 feet south-west from the Historic Site.

Background

On July 20, 2020, the Planning Department received a complete Historic District Design Review (HDDR) application. The Daly-West Mine Headframe and Fire Hydrant Shacks located at 9100 Marsac Avenue is designated as Significant on the Park City Historic Sites Inventory (HSI) (see Historic Site Form).

The 2019 SWCA Historic Preservation Plan Update for Flagstaff Mountain Resort highlights recommended work to be done to the Daly-West Mine Headframe in addition to the 2001 recommendation to install interpretive signage (**Exhibit F**, page 31-32). This includes re-erecting the structure to the original upright configuration.

Figure 1: Proposed Relocation Site Plan (**Exhibit A**)

History of Development on the Site

The steel headframe, used to hoist material from the mine shaft, was constructed in 1914 following a December 1913 fire that completely destroyed the first Daly West Mine. The entire mining complex was rebuilt and operational before October 1914, including the hoist headframe. The rebuilt buildings were of metal-clad frame construction, as illustrated on the 1929 Sanborn map (Figure 2) and seen in Image 2. The headframe base was enclosed in a shaft house, which also covered a 1600 foot deep mineshaft. The shaft house burned on Easter Sunday 1974, leaving only the steel headframe intact.

In May 2015, the Daly West headframe toppled after shifting due to the collapse of the shaft below (Image 4). In order to safely cap the shaft, a combination of polyurethane foam, a concrete cap, and a corrugated metal pipe (CMP) to allow airflow to the Park City water supply tunnel located in the Ontario tunnel below the shaft was installed the summer of 2015 following the collapse of the shaft.

Figure 2: Sanborn Fire Insurance Map, circ. 1900 and 1907, pre-fire

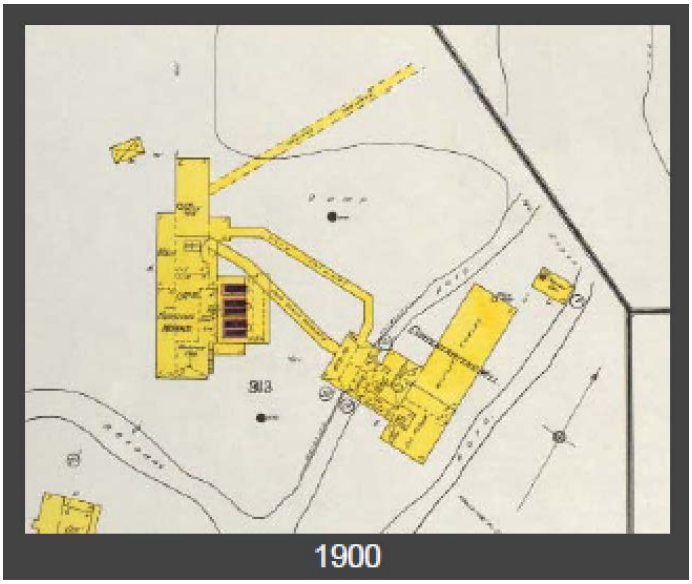
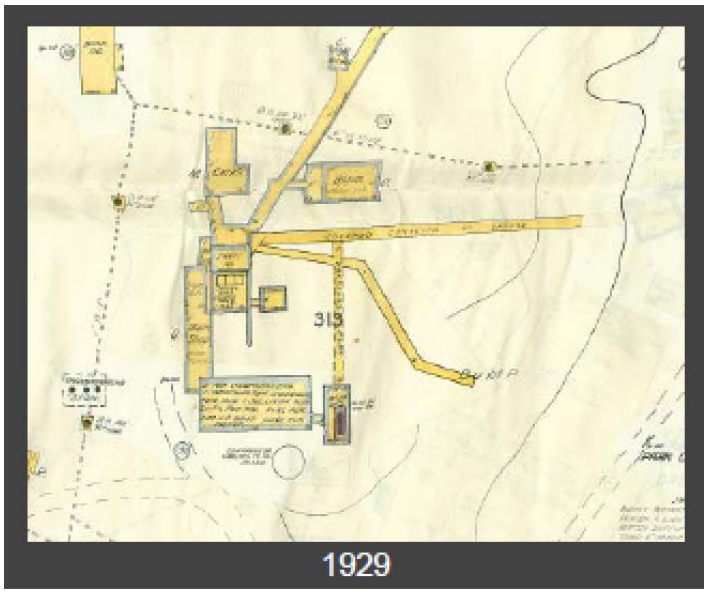


Figure 3: Sanborn Fire Insurance Map, circ. 1929 and 1941, post-fire



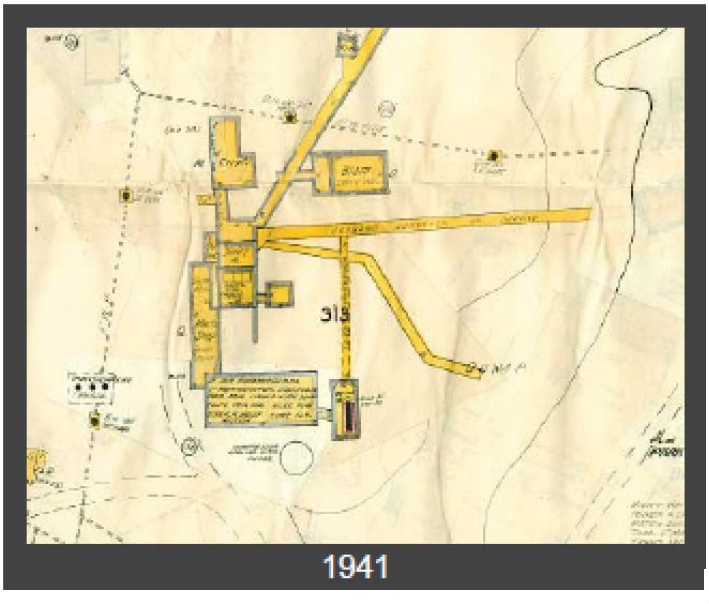


Image 1: Daly-West Mine, circ 1912 (pre-fire)

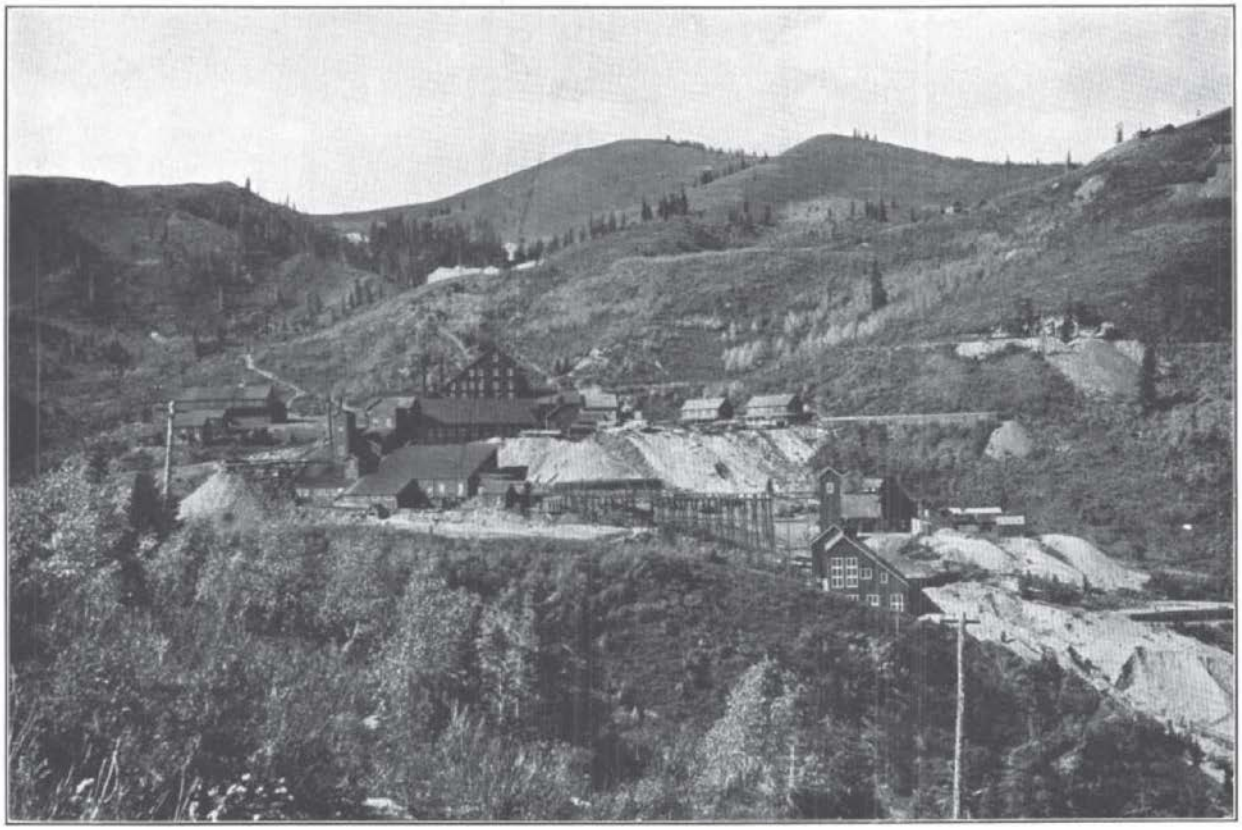


Image 2: Daly-West Mine, circ 1915 (post-fire)

Image 3: Daly-West Mine, circ. 2009, pre-shaft collapse

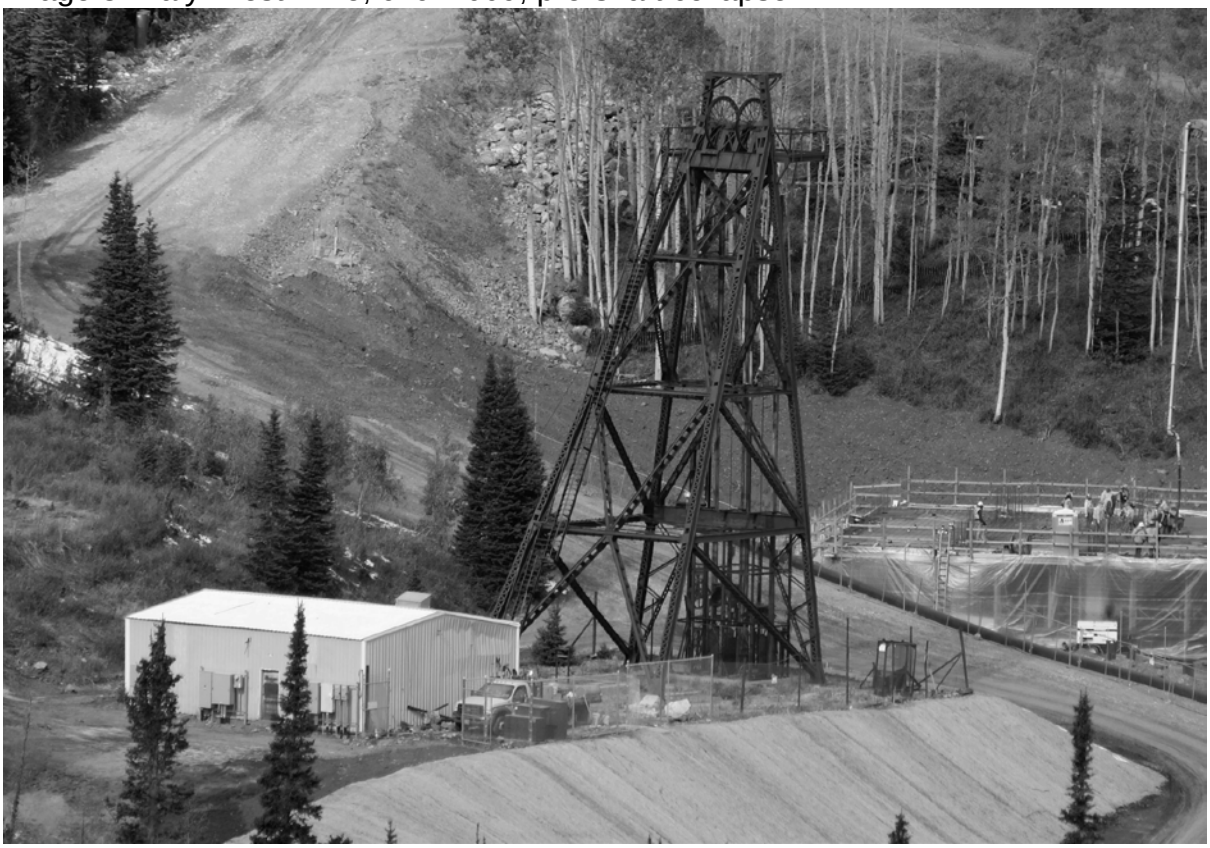


Image 4: Daly-West Mine, circ. 2015, post-shaft collapse

Image 5: Daly-West Mine, circ. 2015, post-shaft collapse

Image 6: Daly-West Mine, circ. 2020

Proposal

The applicant is proposing the Relocation of the Historic Mine Headframe Structure approximately 150 feet southwest of the Historic Site.

Figure 4: Proposed Relocation Site Plan (**Exhibit A**)

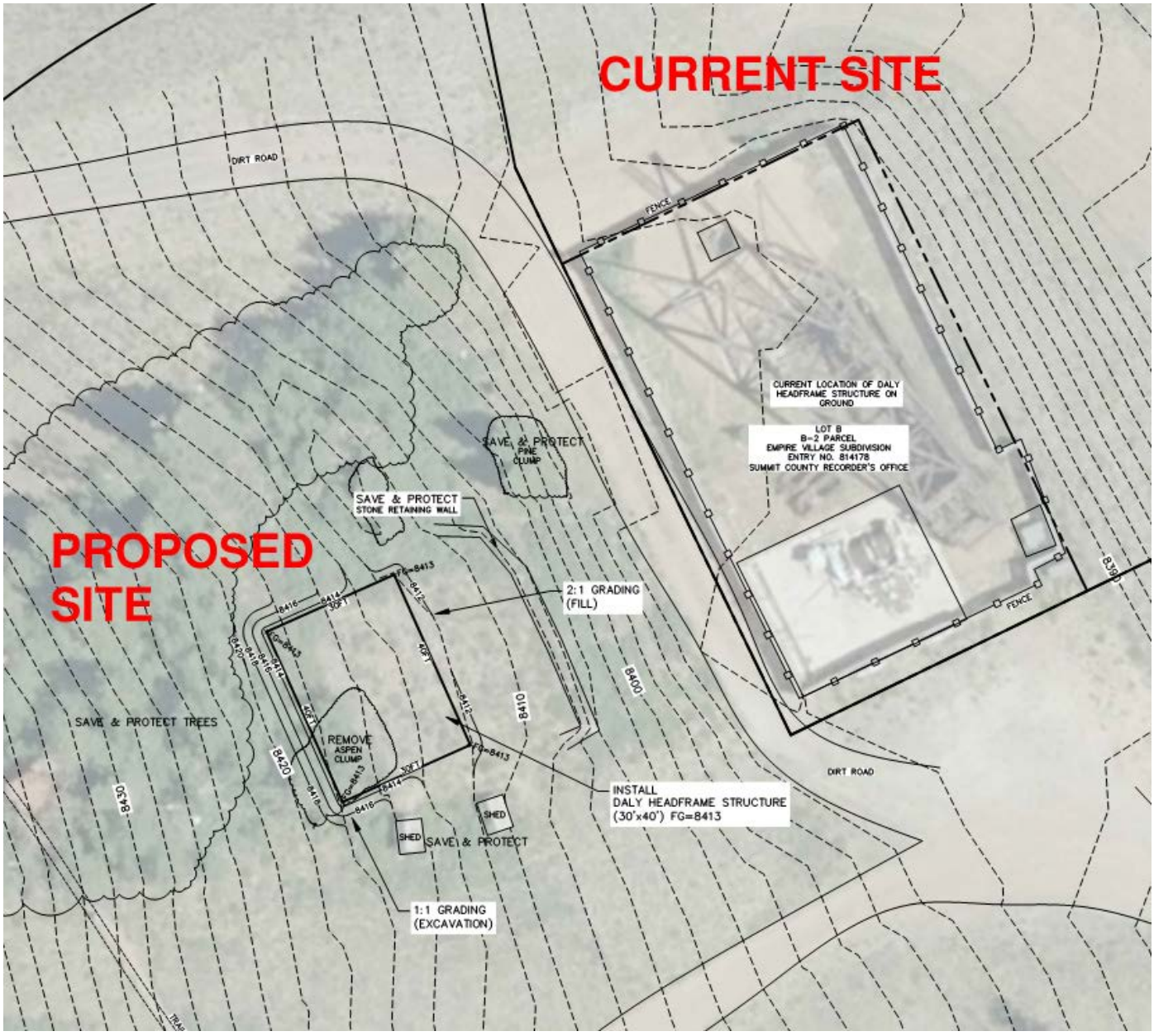
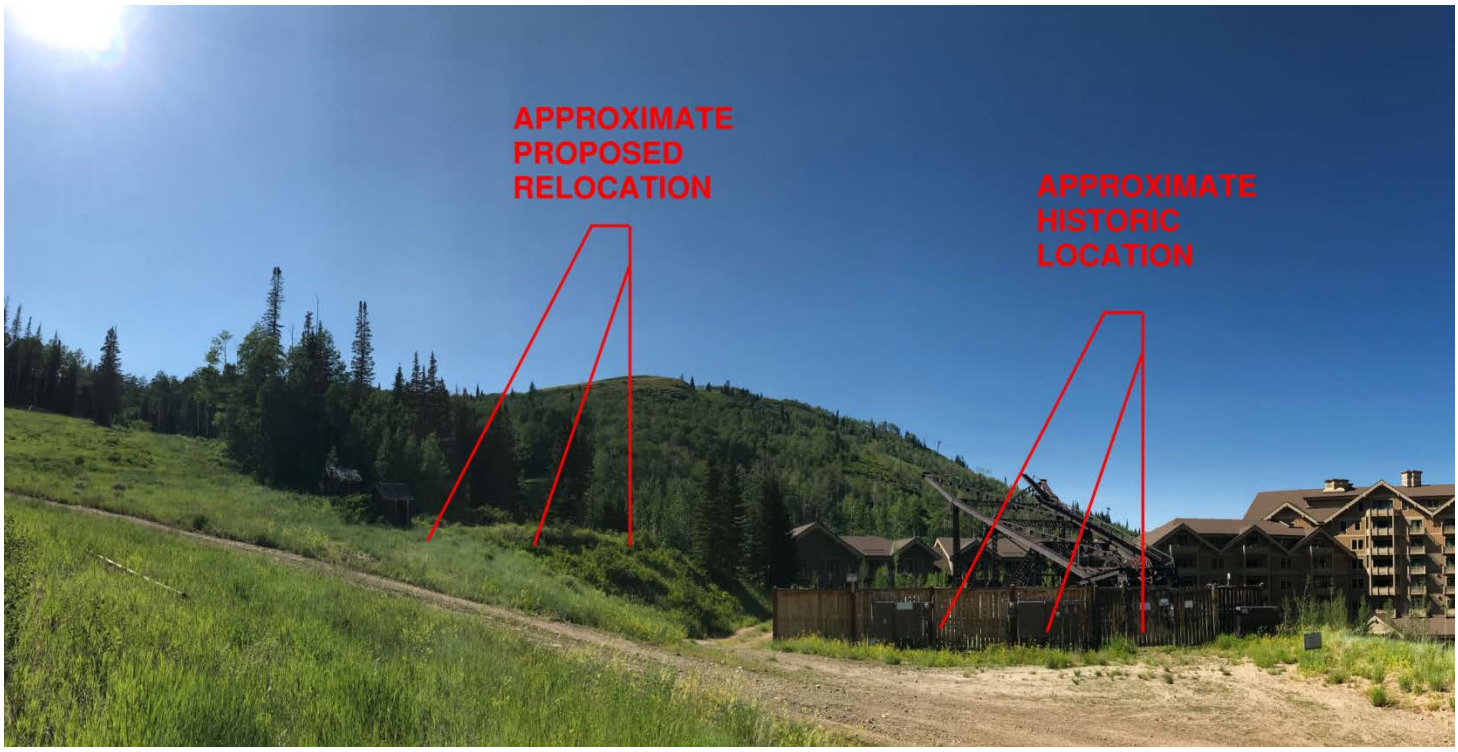


Image 5: Applicant's Submitted Proposed Headframe location shown in red.

Image 6: Staff Site Photograph with Historic and Proposed Site, dated July 20, 2020



Land Management Code (LMC) Sections of Review

1. LMC § 15-11-13(B) Relocation and/or Reorientation of a Historic Building or Historic Structure:

B. PROCEDURE FOR THE RELOCATION AND/OR REORIENTATION OF THE HISTORIC BUILDING(S) AND/OR STRUCTURE(S) TO A PERMANENT NEW SITE.

To approve a Historic District or Historic Site design review Application involving relocation and/or reorientation of the Historic Building(s) and/or Structure(s) on a Landmark Site or a Significant Site to a new site, the Historic Preservation Board shall find the project complies with the following criteria.

1. For either a Landmark or Significant Site, all of the following shall be met:
   a. A licensed structural engineer has certified that the Historic Building(s) and/or Structure(s) can successfully be relocated and the applicant has demonstrated that a professional building mover will move the building and protect it while being stored; and
   b. The proposed relocation will not have a detrimental effect on the structural soundness of the building or structure;

2. Landmark structures shall only be permitted to be relocated to a new site if the relocation will abate demolition and the Planning Director and Chief Building Official find that the relocation will abate a hazardous condition at the present setting and enhance the preservation of the structure.

3. For Significant Sites, at least one of the following must be met:
   a. The proposed relocation and/or reorientation will abate demolition of the Historic Building(s) and/or Structure(s) on the Site; or
   b. The Planning Director and Chief Building Official determine that the building is threatened in its present setting because of hazardous conditions and the preservation of the building will be enhanced by relocating it; or
   c. The Historic Preservation Board, with input from the Planning Director and the Chief Building Official, determines that unique conditions warrant the proposed relocation and/or reorientation to a new Site. This criterion is only available to Significant Sites. Unique conditions shall include all of the following:
      (1) The relocation will not negatively affect the historic integrity of the Historic District, nor the area of receiving site; and
      (2) One of the following must also be met:
         (A) The historic building is located within the Historic districts, but its historic context and setting have become so radically altered that the building may be enhanced by its new setting if the receiving site is more similar to its historic setting in terms of architecture, style, period, height, mass, volume, scale, use and location of the structure on the lot as well as neighborhood features and uses; or
         (B) The historic building is located outside of the Historic districts, and its historic context and setting have been so radically altered that the building may be enhanced by its new setting if the receiving site is more

similar to its historic setting in terms of architecture, style, period, height, mass, volume, scale, use, and location of the structure on the lot as well as neighborhood features and uses; or

(C) City Council, with input from the Historic Preservation Board, Planning Director, and Chief Building Official, determines that the Historic Building(s) and/or Structure(s) is deterrent to a major improvement program outside of the Historic districts that will be of Substantial Benefit to the community, such as, but not limited to:

(a) The relocation of the Historic Building(s) and/or Structure(s) will result in the restoration of the house--both the interior and exterior—in compliance with the Secretary of the Interior's Standards and the relocation will aid in the interpretation of the history of the Historic Building(s) and/or Structure(s); or

(b) The relocation of the Historic Building(s) and/or Structure(s) will result in the revitalization of the receiving neighborhood due to the relocation; or

(c) The relocation of the Historic Building(s) and/or Structure(s) will result in a new affordable housing development on the original site that creates more units than currently provided on the existing site, and the rehabilitation of the Historic Building(s) and/or Structure(s) on the new receiving site.

2. **LMC § 15-13-4 Design Guidelines for Relocation and/or Reorientation of Intact Building Or Structures.**

3. **LMC § 15-11.12.5(A)(1) Historic Preservation Board Review for Material Deconstruction:**
   The Planning Director or his/her designee shall review Routine Maintenance.

Analysis

1. **Staff has reviewed the proposed Relocation per LMC § 15-11-13(B) Relocation and/or Reorientation of a Historic Building or Historic Structure, including:**

B. PROCEDURE FOR THE RELOCATION AND/OR REORIENTATION OF THE HISTORIC BUILDING(S) AND/OR STRUCTURE(S) TO A PERMANENT NEW SITE.

To approve a Historic District or Historic Site design review Application involving relocation and/or reorientation of the Historic Building(s) and/or Structure(s) on a Landmark Site or a Significant Site to a new site, the Historic Preservation Board shall find the project complies with the following criteria.

1. For either a Landmark or Significant Site, all of the following shall be met:

   a. A licensed structural engineer has certified that the Historic Building(s) and/or Structure(s) can successfully be relocated and the applicant has demonstrated that a professional building mover will move the building and protect it while being stored; and

- *<u>Complies</u>. Per **Exhibit D**, a Paul W. McMullin, a licensed structural engineer, states the following:*

  "After observing the Daly Head Frame, and reviewing the geotechnical recommendations, it is my opinion that it is necessary to relocate the headframe from the existing site. This will allow a new foundation to be poured that will adequately support the headframe and eliminate potential problems from the mine shaft.

  Lifting the structure with the crane will be feasible, and can be done by a qualified crane and rigging company, without causing undue distress."

  *Staff finds this structural engineer report, along with the other analyses done for the site (**Exhibit D**) demonstrates, along with the fact that the structure was temporarily moved from the site while the mine shaft closures were taking place in 2015, that the headframe structure can successfully be relocated to the proposed new site.*

b. The proposed relocation will not have a detrimental effect on the structural soundness of the building or structure;

- *<u>Complies</u>. The headframe was temporarily relocated in 2015 while the mine shaft was closed and set back to where it is currently. No further structural damage was incurred during this process; the structural members were damaged during the collapse in 2015 as seen in Image 4 and 5. The new site will allow the necessary structure/ foundation to be installed for the headframe to be re-erected and repaired.*

2. For Landmark Sites (…)

3. For Significant Sites, at least one of the following must be met:

   a. (…)

   b. The Planning Director and Chief Building Official determine that the building is threatened in its present setting because of hazardous conditions and the preservation of the building will be enhanced by relocating it; or

   - *<u>Complies</u>. The collapsed mine shaft was closed in 2015 using a combination of polyurethane foam, a concrete cap, and a corrugated metal pipe (CMP) to allow airflow to the Park City water supply tunnel located in the Ontario tunnel below the shaft. The structural stability of the closed shaft at the current site was not designed to incur the load of the re-erected structure (estimated weight of 80,000 pounds). The proposed Relocation is necessary in order to re-erect the Structure with proper structural foundations that will not compromise the mine shaft. Per **Exhibit E**, the Planning Director and Chief Building Official find the proposed site does not negatively impact the historic character or context of the Structure, as the proposed site is within the Historic context of the Daly-West Mine complex.*

   c. (…)

2. Staff has reviewed the proposed Relocation for compliance with LMC § 15-13-4 Design Guidelines for Relocation and/or Reorientation of Intact Building Or Structures, including:

A. Protection for the Historic Building and Site	Analysis of Proposal
1. Relocation and/or reorientation of a historic building shall be considered only after it has been determined by the Historic Preservation Board that the integrity and significance of the historic building will not be diminished by such action.	*Under review by the Historic Preservation Board with this application.*
2. Relocation and/or reorientation of a historic building shall be considered only after it has been determined that the structural soundness of the building will not be negatively impacted. A professional structural analysis shall be conducted in order to minimize any damage that may occur during the relocation/reorientation of a historic structure.	*Complies; The structural soundness of the headframe structure will not be negatively impacted upon relocation. A professional structural analysis shall be required upon Building Permit review. Condition of Approval (COA) #4.*
3. Hire licensed professional building movers to relocate a historic building.	*Complies as conditioned. COA #5.*
4. A historic structure shall be secured and protected from adverse weather conditions, water infiltration, and vandalism before, during, and after the relocation/ reorientation process.	*Complies as conditioned. COA #6.*
5. When rehabilitation of the historic structure is delayed, temporary improvements, such as roof repairs, secured and/or covered windows and doors, and adequate ventilation shall be made to the structure to protect the historic fabric until rehabilitation can be accomplished.	*Complies as conditioned. COA #7.*
6. A written plan detailing the steps and procedures for relocation or reorientation of a historic building shall be completed and approved by the Planning and Building Departments. This plan shall outline, step by step, the proposed work to relocate and/or reorient the building to ensure that the least destructive method of moving the building will be employed.	*Complies as conditioned. COA #8.*
7. Relocating and/or reorienting a historic building of which the location contributes to the character of the Historic District shall be avoided.	*The Structure is not located within the Historic District.*

8. A historic building shall be moved in one piece whenever possible. When problematic structural or relocation route conditions preclude moving a building as a single unit, then partial disassembly into large sections may be acceptable. Total disassembly of building components shall be avoided except under extreme situations.	*Complies as conditioned. COA #9.*
9. Buildings and their components shall be protected from damage during the moving process by adding bracing, strapping, and by temporarily infilling door and window openings for structural rigidity.	*Complies as conditioned. COA #10.*
10. The setting for a relocated historic building shall be selected for compatibility with the character of the structure and with the character of the original site.	*Complies; The proposed new site is compatible with the character of the structure and the character of the original site, as the site 150 feet south west of the historic location still remains within the historic Daly-West Mine context of which the headframe structure contributed to.*
11. A relocated/reoriented historic building shall be sited in a position similar to its historic orientation. The relocated/reoriented historic building shall maintain its relationship with the street and shall have a relatively similar setback. Relocating a historic structure to the rear of a parcel to accommodate a new building in front of it is not appropriate.	*Complies; The proposed orientation of the headframe will be sited in a position similar to the historic orientation on the original site. COA #11.*
12. When a historic building is relocated to a new site, the building shall be placed on the new lot with the same orientation and (if consistent to the District) with the same setbacks to the street as the placement on the original site.	*Complies; the headframe will maintain the same orientation as the historic site upon placement on the new site. COA #11.*

3. Staff shall review the proposed repairs and re-erection of the Historic Structure per LMC § 15-11.12.5(A)(1) Historic Preservation Board Review for Material Deconstruction.

Department Review
The Design Review Committee, Planning and Legal Departments reviewed this application.

Notice
Staff published notice on the City's website and the Utah Public Notice website, and posted notice to the property on July 22, 2020. Staff mailed courtesy notice to property owners within 100 feet on July 22, 2020. The *Park Record* published notice on July 22, 2020. LMC § 15-1-21.

Public Input
Staff did not receive any public input at the time this report was published.

Alternatives
- The Historic Preservation Board may approve the proposed Relocation of the Daly-West Mine Headframe;
- The Historic Preservation Board may deny the proposed Relocation of the Daly-West Mine Headframe; or
- The Historic Preservation Board may request additional information and continue the discussion to September 2, 2020.

Exhibits
Exhibit A: Proposed Relocation Site Plan
Exhibit B: Historic Preservation Plan
Exhibit C: Historic Site Inventory Form
Exhibit D: Applicant's Submitted Structural and Geotechnical Engineering Reports
Exhibit E: Planning Director and Chief Building Official Determination Letter
Exhibit F: 2019 SWCA Historic Preservation Plan Update for Flagstaff Mountain Resort

Findings of Fact
1. The property is located at 9100 Marsac Avenue.
2. The legal description of the property is Lot B Empire Village Subdivision Parcel B-2. Parcel Number EV-B-2-B.
3. The property is located in Flagstaff Mountain Resort Master Planned Development.
4. The Daly West Mine Headframe and Fire Hydrant Shacks located at 9100 Marsac Avenue is designated as Significant on the Park City Historic Sites Inventory.
5. On July 20, 2020 the Planning Department received a complete Historic District Design Review application.
6. The Applicant is proposing the Relocation of the Daly-West Mine Headframe approximately 150 feet south west from the Historic Site.
7. The 2019 SWCA Historic Preservation Plan Update for Flagstaff Mountain Resort highlights recommended work to be done to the Daly-West Mine Headframe in addition to the 2001 recommendation to install interpretive signage. This includes re-erecting the structure to the original upright configuration.
8. The proposal complies with the Land Management Code requirements pursuant to LMC § 15-11-13(B) Relocation and/or Reorientation of a Historic Building or Historic

Structure, including:

- LMC § 15-11-13(B)(1)(a). *Per Exhibit D, a Paul W. McMullin, a licensed structural engineer, states the following:*
  "After observing the Daly Headframe, and reviewing the geotechnical recommendations, it is my opinion that it is necessary to relocate the headframe from the existing site. This will allow a new foundation to be poured that will adequately support the headframe and eliminate potential problems from the mine shaft.
  Lifting the structure with the crane will be feasible, and can be done by a qualified crane and rigging company, without causing undue distress."
  Staff finds this structural engineer report, along with the other analyses done for the site (Exhibit D) demonstrates, along with the fact that the structure was temporarily moved from the site while the mine shaft closures were taking place in 2015, that the headframe structure can successfully be relocated to the proposed new site.
- LMC § 15-11-13(B)(1)(b). *The proposed relocation will not have a detrimental effect on the structural soundness of the building or structure; The headframe was temporarily relocated in 2015 while the mine shaft was closed and set back to where it is currently. No further structural damage was incurred during this process; the structural members were damaged during the collapse in 2015 as seen in Image 4 and 5. The new site will allow the necessary structure/ foundation to be installed for the headframe to be re-erected and repaired.*
- LMC § 15-11-13(B)(3)(b). *The collapsed mine shaft was closed in 2015 using a combination of polyurethane foam, a concrete cap, and a corrugated metal pipe (CMP) to allow airflow to the Park City water supply tunnel located in the Ontario tunnel below the shaft. The structural stability of the closed shaft at the current site was not designed to incur the load of the re-erected structure (estimated weight of 80,000 pounds). The proposed Relocation is necessary in order to re-erect the Structure with proper structural foundations that will not compromise the mine shaft. Per **Exhibit E**, the Planning Director and Chief Building Official find the proposed site does not negatively impact the historic character or context of the Structure, as the proposed site is within the Historic context of the Daly-West Mine complex.*

9. The proposal complies with the Land Management Code pursuant to LMC § 15-13-4 Design Guidelines for Relocation and/or Reorientation of Intact Building Or Structures, including:

A. Protection for the Historic Building and Site	Analysis of Proposal
1. Relocation and/or reorientation of a historic building shall be considered only after it has been determined by the Historic Preservation Board that the integrity and significance of the historic building will not be diminished by such action.	*Under review by the Historic Preservation Board with this application.*

2. Relocation and/or reorientation of a historic building shall be considered only after it has been determined that the structural soundness of the building will not be negatively impacted. A professional structural analysis shall be conducted in order to minimize any damage that may occur during the relocation/reorientation of a historic structure.	*Complies; The structural soundness of the headframe structure will not be negatively impacted upon relocation. A professional structural analysis shall be required upon Building Permit review. Condition of Approval (COA) #4.*
3. Hire licensed professional building movers to relocate a historic building.	*Complies as conditioned. COA #5.*
4. A historic structure shall be secured and protected from adverse weather conditions, water infiltration, and vandalism before, during, and after the relocation/ reorientation process.	*Complies as conditioned. COA #6.*
5. When rehabilitation of the historic structure is delayed, temporary improvements, such as roof repairs, secured and/or covered windows and doors, and adequate ventilation shall be made to the structure to protect the historic fabric until rehabilitation can be accomplished.	*Complies as conditioned. COA #7.*
6. A written plan detailing the steps and procedures for relocation or reorientation of a historic building shall be completed and approved by the Planning and Building Departments. This plan shall outline, step by step, the proposed work to relocate and/or reorient the building to ensure that the least destructive method of moving the building will be employed.	*Complies as conditioned. COA #8.*
7. Relocating and/or reorienting a historic building of which the location contributes to the character of the Historic District shall be avoided.	*The Structure is not located within the Historic District.*
8. A historic building shall be moved in one piece whenever possible. When problematic structural or relocation route conditions preclude moving a building as a single unit, then partial disassembly into large sections may be acceptable. Total disassembly of building components shall be avoided except under extreme situations.	*Complies as conditioned. COA #9.*
9. Buildings and their components shall be protected from damage during the moving process by adding bracing, strapping, and by temporarily infilling door and window openings	*Complies as conditioned. COA #10.*

for structural rigidity.	
10. The setting for a relocated historic building shall be selected for compatibility with the character of the structure and with the character of the original site.	*Complies; The proposed new site is compatible with the character of the structure and the character of the original site, as the site 150 feet south west of the historic location still remains within the historic Daly-West Mine context of which the headframe structure contributed to.*
11. A relocated/reoriented historic building shall be sited in a position similar to its historic orientation. The relocated/reoriented historic building shall maintain its relationship with the street and shall have a relatively similar setback. Relocating a historic structure to the rear of a parcel to accommodate a new building in front of it is not appropriate.	*Complies; The proposed orientation of the headframe will be sited in a position similar to the historic orientation on the original site. COA #11.*
12. When a historic building is relocated to a new site, the building shall be placed on the new lot with the same orientation and (if consistent to the District) with the same setbacks to the street as the placement on the original site.	*Complies; the headframe will maintain the same orientation as the historic site upon placement on the new site. COA #11.*

10. Per LMC § 15-11-12.5(A)(1) Historic Preservation Board Review for Material Deconstruction, the Planning Director or their designee shall review the proposed Routine Maintenance of the repair of the Historic Structure.
11. Staff published notice on the City's website and the Utah Public Notice website, and posted notice to the property on July 22, 2020. Staff mailed courtesy notice to property owners within 100 feet on July 22, 2020. The *Park Record* published notice on July 22, 2020.
12. The Design Review Committee, Development Review Committee, and Planning and Legal Departments reviewed this application.
13. Staff did not receive any public input at the time this report was published.

Conclusions of Law

1. The proposal complies with the Land Management Code (LMC) pursuant to LMC § 15-11-13(B) Relocation and/or Reorientation of a Historic Building or Historic Structure.
2. The proposal complies with the Land Management Code (LMC) pursuant to LMC § 15-13-4 Design Guidelines for Relocation and/or Reorientation of Intact Building Or Structures.

Conditions of Approval

1. Final building plans and construction details shall reflect substantial compliance with the Relocation site plans approved August 5, 2020 by the Historic Preservation Board.

2. The applicant is responsible for notifying the Building Department prior to making any changes to the approved plans.
3. Any changes, modifications, or deviations from the approved scope of work shall be submitted in writing for review and approval/denial in accordance with the applicable standards by the Planning Director or his/her designee prior to construction. Any changes, modifications, or deviations from the approved Relocation that have not been approved in advance by the Planning and Building Departments may result in a stop work order.
4. In order to minimize any damage that may occur during the relocation/reorientation of a historic structure, a professional structural analysis shall be conducted and submitted for review and approval by the Planning Director and Chief Building Official upon submittal of the Building Permit.
5. The applicant shall hire licensed professional building movers to relocate the Historic Structure.
6. The historic structure shall be secured and protected from adverse weather conditions, water infiltration, and vandalism before, during, and after the relocation/ reorientation process.
7. When rehabilitation of the historic structure is delayed, temporary improvements, such as roof repairs, secured and/or covered windows and doors, and adequate ventilation shall be made to the structure to protect the historic fabric until rehabilitation can be accomplished.
8. A written plan detailing the steps and procedures for relocation or reorientation shall be completed and approved by the Planning and Building Departments upon submittal of the Building Permit. This plan shall outline, step by step, the proposed work to relocate and/or reorient the building to ensure that the least destructive method of moving the building will be employed.
9. The Historic Structure shall be moved in one piece whenever possible. When problematic structural or relocation route conditions preclude moving a building as a single unit, then partial disassembly into large sections may be acceptable. Total disassembly of building components shall be avoided except under extreme situations.
10. The Historic Structure and its components shall be protected from damage during the moving process by adding bracing, strapping, and by temporarily infilling door and window openings for structural rigidity.
11. The relocated structure shall be sited in a position similar to its historic orientation.
12. When a historic building is relocated to a new site, the building shall be placed on the new lot with the same orientation as the placement on the original site.
13. The applicant shall submit a cribbing and excavation stabilization shoring plan reviewed and stamped by a State of Utah licensed and registered structural engineer prior to issuance of a building permit. Cribbing or shoring must be of engineer specified materials. Screw-type jacks for raising and lowering the building are not allowed as primary supports once the building is lifted.
14. Per LMC § 15-11-9 Preservation Policy, the Planning Department is authorized to require that the Applicant provide the City with a Financial Guarantee to ensure compliance with the conditions and terms of the Historic Preservation Plan.

(435) 649-9467

Alliance Engineering Inc

CONSULTING ENGINEERS LAND PLANNERS SURVEYORS

323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

PROFESSIONAL LAND SURVEYOR
No. 4857264
MICHAEL
DEMKOWICZ
6/25/20
STATE OF UTAH

STAFF:
MICHAEL DEMKOWICZ
CHARLES GALATI
CONNOR DINSMORE
JASON WYNNE

DATE: 6/25/20

EXISTING CONDITIONS & TOPOGRAPHIC MAP
DALY HEADFRAME AT EMPIRE PASS

FOR: EMPIRE PASS MOA
JOB NO.: 9-5-20
FILE: X:\Empire\dwg\Redus\Daly Head Frame\09-05-20 Daly headframe epmoa civil.dwg

SHEET 1 **OF** 2

REGISTERED PROFESSIONAL ENGINEER
No. 4857264
MICHAEL DEMKOWICZ
6/25/20
STATE OF UTAH

(435) 649-9467

Alliance Engineering Inc

CONSULTING ENGINEERS LAND PLANNERS SURVEYORS

323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

STAFF:
MICHAEL DEMKOWICZ
CONNOR DINSMORE

DATE: 6/25/20

SITE & GRADING PLAN
DALY HEADFRAME AT EMPIRE PASS

FOR: EMPIRE PASS MOA
JOB NO.: 9-5-20
FILE: X:\Empire\dwg\Redus\Daly Head Frame\09-05-20 Daly headframe epmoa civil.dwg

SHEET
2
OF
2

PHYSICAL CONDITIONS REPORT
&
HISTORIC PRESERVATION PLAN

INFORMATION GUIDE
AND APPLICATIONS

If you have questions regarding the requirements on this application or process please contact a member of the Park City Planning Staff at (435) 615-5060 or visit us online at www.parkcity.org. Updated 10/2014.

PHYSICAL CONDITIONS REPORT

For Use with the *Historic District Design Review (HDDR)* Application

For Official Use Only

PLANNER: _____ APPLICATION #: _____

DATE RECEIVED: _____

PROJECT INFORMATION

NAME: Daly Headframe Relocation and Resurrection

ADDRESS: Adjacent 9101.5 Marsac Ave

Proposed Location Parcel PCA-S-98-FF

TAX ID: _____ OR

SUBDIVISION: _____ OR

SURVEY: _____ LOT #: _____ BLOCK #: _____

HISTORIC DESIGNATION: ■ LANDMARK ☐ SIGNIFICANT ☐ NOT HISTORIC

APPLICANT INFORMATION

NAME: Douglas Ogilvy, Empire Pass MOA

MAILING ADDRESS: P.O. Box 99 Kamas, UT 84036

PHONE #: ( )775. -223.1204 FAX #: ( ) -

EMAIL: douglas.ogilvy@gmail.com

APPLICANT'S REPRESENTATIVE INFORMATION

NAME: Douglas Ogilvy

PHONE #: ( ) -775.223.1204

EMAIL: douglas.ogilvy@gmail.com

If you have questions regarding the requirements on this application or process please contact a member of the Park City Planning Staff at (435) 615-5060 or visit us online at www.parkcity.org. Updated 10/2014.

ACKNOWLEDGMENT OF RESPONSIBILITY

This is to certify that I am making an application for the described action by the City and that I am responsible for complying with all City requirements with regard to this request. This application should be processed in my name and I am a party whom the City should contact regarding any matter pertaining to this application.

I have read and understood the instructions supplied by Park City for processing this application. The documents and/or information I have submitted are true and correct to the best of my knowledge. I understand that my application is not deemed complete until a Project Planner has reviewed the application and has notified me that it has been deemed complete.

I will keep myself informed of the deadlines for submission of material and the progress of this application. I understand that a staff report will be made available for my review three days prior to any public hearings or public meetings. This report will be on file and available at the Planning Department in the Marsac Building.

I further understand that additional fees may be charged for the City's review of the proposal. Any additional analysis required would be processed through the City's consultants with an estimate of time/expense provided prior to an authorization with the study.

Signature of Applicant: _____

Name of Applicant: Douglas Ogilvy

Mailing Address: P.O. Box 99, Kamas, UT 84036

Phone #: ( ) -775.223.1204 Fax #: ( ) -

Email: douglas.ogilvy@gmail.com

Type of Application: _____

AFFIRMATION OF SUFFICIENT INTEREST

I hereby affirm that I am the fee title owner of the below described property or that I have written authorization from the owner to pursue the described action. I further affirm that I am aware of the City policy that no application will be accepted nor work performed for properties that are tax delinquent.

Name of Owner: Deer Valley Resort Company

Mailing Address: P.O. Box 889
Park City, UT 84060

Street Address/ Legal Description of Subject Property: Adjacent 9101.5 Marsac Avenue
Daly West Headframe to be relocated upslope

Signature: _____ Date: 7/1/20

1. If you are not the fee owner attach a copy of your authorization to pursue this action provided by the fee owner.
2. If a corporation is fee titleholder, attach copy of the resolution of the Board of Directors authorizing the action.
3. If a joint venture or partnership is the fee owner, attach a copy of agreement authorizing this action on behalf of the joint venture or partnership
4. If a Home Owner's Association is the applicant than the representative/president must attaché a notarized letter stating they have notified the owners of the proposed application. A vote should be taken prior to the submittal and a statement of the outcome provided to the City along with the statement that the vote meets the requirements set forth in the CC&Rs.

Please note that this affirmation is not submitted in lieu of sufficient title evidence. You will be required to submit a title opinion, certificate of title, or title insurance policy showing your interest in the property prior to Final Action.

If you have questions regarding the requirements on this application or process please contact a member of the Park City Planning Staff at (435) 615-5060 or visit us online at www.parkcity.org Updated 10/2014

Physical Conditions Report + HPP

PHYSICAL CONDITIONS REPORT

Detailed Description of Existing Conditions. *Use this page to describe all existing conditions. Number items consecutively to describe all conditions, including building exterior, additions, site work, landscaping, and new construction. Provide supplemental pages of descriptions as necessary for those items not specifically outlined below.*

1. Site Design

This section should address landscape features such as stone retaining walls, hillside steps, and fencing. Existing landscaping and site grading as well as parking should also be documented. Use as many boxes as necessary to describe the physical features of the site. Supplemental pages should be used to describe additional elements and features.

Element/Feature: _____

This involves: ■ An original part of the building
☐ A later addition

Estimated date of construction: 1913

Describe existing feature:

Daly Headframe was one of the last standing headframes in the Park City area standing over 80' tall. It collapsed in 2015 due to soil instability in the Daly Shaft. EPMOA has accepted responsibility to stand up the ehadframe and perform such repairs as necessary to achieve this. Under advice from geotechnical engineer, Deer Valley and EPMOA propose to relocate the headframe approximately 150' SW of original location so the headframe foundations may be placed on native soil a safe distance from the Daly Shaft.

Describe any deficiencies:

Existing Condition: ☐ Excellent ■ Good ☐ Fair ☐ Poor

During headframe collapse, three of the legs of the headframe were bent and several steel members have been damaged beyond repair, most notably one of the first horizontal beams. Above the first set of horizontal beams, the structure is generally in good condition. EPMOA is engaging a structural engineer to determine which steel members will need to be replaced.

Photo Numbers: _____ Illustration Numbers: _____

2. Structure

Use this section to describe the general structural system of the building including floor and ceiling systems as well as the roof structure. Supplemental pages should be used to describe additional elements and features.

Element/Feature: _____

This involves: ☐ An original part of the building

☐ A later addition Estimated date of construction: _____

Describe existing feature:

Daly Headframe is a steel tower with steel members built with rivetted connections and lattice webs.

Describe any deficiencies: Existing Condition: ☐ Excellent ☐ Good ☐ Fair ☐ Poor

Headframe collapsed due to mine shaft soil instability causing significant damage to structural steel members in lower quarter of structure.

Photo Numbers: _____ Illustration Numbers: _____

6. Foundation

Use this section to describe the foundation including its system, materials, perimeter foundation drainage, and other foundation-related features. Supplemental pages should be used to describe additional elements and features.

Element/Feature: _____

This involves: ☐ An original part of the building

☐ A later addition Estimated date of construction: _____

Describe existing feature:

Original foundation failed. See Google Earth photo.

Describe any deficiencies: Existing Condition: ☐ Excellent ☐ Good ☐ Fair ☐ Poor

Erecting the headframe over the Daly Shaft not recommended since bedrock 120' down and shaft will continue to collapse over time. Neither EPMOA nor Deer Valley will accept the risk of putting the Headframe back in its original location.

Photo Numbers: _____ Illustration Numbers: _____

PARK CITY MUNICIPAL CORPORATION
PLANNING DEPARTMENT
445 MARSAC AVE - PO BOX 1480
PARK CITY, UT 84060
(435) 615-5060

HISTORIC PRESERVATION PLAN

For Use with the *Historic District/Site Design Review* Application

For Official Use Only

PLANNER: _____ APPLICATION #: _____

DATE RECEIVED: _____

PLANNING DIRECTOR
APPROVAL DATE/INITIALS: _____

CHIEF BUILDING OFFICIAL
APPROVAL DATE/INITIALS: _____

PROJECT INFORMATION

■ LANDMARK ☐ SIGNIFICANT DISTRICT: _____

NAME: Daly Headframe

ADDRESS: Adjacent 9101.5 Marsac Avenue
Proposed Location PCA-S-98-FF

TAX ID: _____ OR

SUBDIVISION: _____ OR

SURVEY: _____ LOT #: _____ BLOCK #: _____

APPLICANT INFORMATION

NAME: Empire Pass MOA, Douglas Ogilvy

PHONE #: ( ) -775.223.1204 FAX #: ( ) -

EMAIL: douglas.ogilvy@gmail.com

If you have questions regarding the requirements on this application or process please contact a member of the Park City Planning Staff at (435) 615-5060 or visit us online at www.parkcity.org. Updated 10/2014.

Site Design

Use this section should describe the scope of work and preservation treatment for landscape features such as stone retaining walls, hillside steps, and fencing. Existing landscaping and site grading as well as parking should also be documented. Use supplemental pages if necessary.

Element/Feature: _____

This involves: ■ Preservation ☐ Restoration
■ Reconstruction ■ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

EPMOA proposes to construct a new bench 150' SW of original location of headframe and erect the headframe on new foundations on this bench. See Alliance plans dated 6-25-20. Alternately, headframe to be located 10' north of location shown on Alliance plans to facilitate future relocation of Fire Hydrant sheds off the ski trail to improve skier safety and reduce risk of damage from snowcats.

Structure

Use this section to describe scope of work and preservation treatment for the general structural system of the building including floor and ceiling systems as well as the roof structure. Supplemental pages should be used to describe additional elements and features.

Element/Feature: _____

This involves: ☐ Preservation ☐ Restoration
☐ Reconstruction ☐ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

Structural steel repairs necessary to erect the headframe to be determined in conjunction with structural engineer. Goal is to retain as much of the original structure as possible. Members to be replaced will be replaced with modern steel sections not rivetted built up members.

Foundation

Use this section to describe the proposed scope of work and preservation treatment for the foundation including its system, materials, perimeter foundation drainage, and other foundation-related features. Use supplemental pages if necessary.

Element/Feature: _____

This involves: ☐ Preservation ☐ Restoration
☐ Reconstruction ☐ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

New foundations to be constructed on native soil in location shown on Alliance plans.

Porches

Use this section to describe the proposed scope of work and preservation treatment for all porches Address decorative features including porch posts, brackets, railing, and floor and ceiling materials.

Element/Feature: _____

This involves: ☐ Preservation ☐ Restoration
☐ Reconstruction ☐ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

N/A

Doors

Use this section to describe the proposed scope of work and preservation treatment for all exterior doors, door openings, and door parts referenced in the Door Survey of the Physical Conditions Report. Please describe the scope of work for each individual exterior door, use supplemental pages if necessary.

Element/Feature: _____

This involves: ☐ Preservation ☐ Restoration
☐ Reconstruction ☐ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

N/A

Element/Feature: _____

This involves: ☐ Preservation ☐ Restoration
☐ Reconstruction ☐ Rehabilitation

Based on the condition and deficiencies outlined in the Physical Conditions Report, please describe in detail the proposed work:

EPMOA propose to create a new level site (~150' SW of original location) to erect the headframe after performing structural steel repairs as recommended by structural engineer. Headframe legs will remain "bent", but with several new steel members.

Daly-West Mine Headframe, Shaft, and Hoist

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Daly-West Mine Headframe, Shaft, and Hoist, which is excerpted here:

> The Daly-West headframe and Daly-West shaft are located in upper Empire Canyon, about a quarter of a mile above the Daly No. 2 Shaft. The headframe is directly over the Daly-West shaft, and both of these features are still in operable condition. The shaft provides an emergency exit and a ventilation shaft for the Ontario Drain Tunnel No. 2 and other workings.
>
> The headframe is a distinctive mining-related feature that probably dates from 1913, when the mill and hoisting works were destroyed in a fire. It is constructed of riveted steel "laced girders" that are typical of that period. The entire framework is exposed and it presents an impressive sight. A chain-link fence surrounds the headframe for security reasons.
>
> Just upslope of the Daly-West headframe and shaft are traces of the waste dump and/or surface operations of the Meears Company Shaft No. 1, although very little remains of this operation. The Meears Company Shaft No. 2 operation was located immediately to the northeast of the Daly-West headframe and shaft, but no remains of this operation were noted. (Bowes et al. 2000:70)

Existing conditions were described in the 2001 HPP Summary as follows:

> These features are still in operable condition and are maintained as an emergency exit and ventilation source for the drain tunnels. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 35–38):

- The headframe, shaft, and hoist are all still present at the site. However, the headframe collapsed in 2018 and now lies on its side near the other resources. Therefore,
  - the metal structural members of the headframe are deformed;
  - a wood fence has been erected around the headframe, shaft, and hoist to prevent access to the area; this fence replaces a chain-link security fence present in 2000 (Bowes et al. 2000:70);

  - the fence blocks the view of the resources from the ground, although they are visible from a nearby hillside; and
  - the wood fence significantly changes the overall design of the site from its 2001 configuration.
- The shaft is no longer operable and is now covered with a metal grate.
- The hoist is corroded, and the concrete pad has minor amounts of spalling.
- Plant growth surrounds the shaft.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Daly-West Mine Headframe, Shaft, and Hoist should be created and installed to meet recommendations in the 2001 HPP Summary.

Additional Recommended Work

The collapse of the Daly-West Mine headframe represents a significant condition issue, and the following additional work is recommended:

- If possible, the headframe should be returned to its original upright configuration.
- If re-erecting the headframe is not feasible due to cost, insufficient integrity of metal structural members, or other factors, the headframe should be left as-is and interpretive signage explaining its original use and the circumstances of its collapse should be provided.
- The current wood fence, which blocks the view of visitors to the site, should be removed and replaced with a fence allowing greater visibility while also providing security, such as a chain-link or metal post fence.

The hoist mechanisms and shaft also show evidence of deterioration:

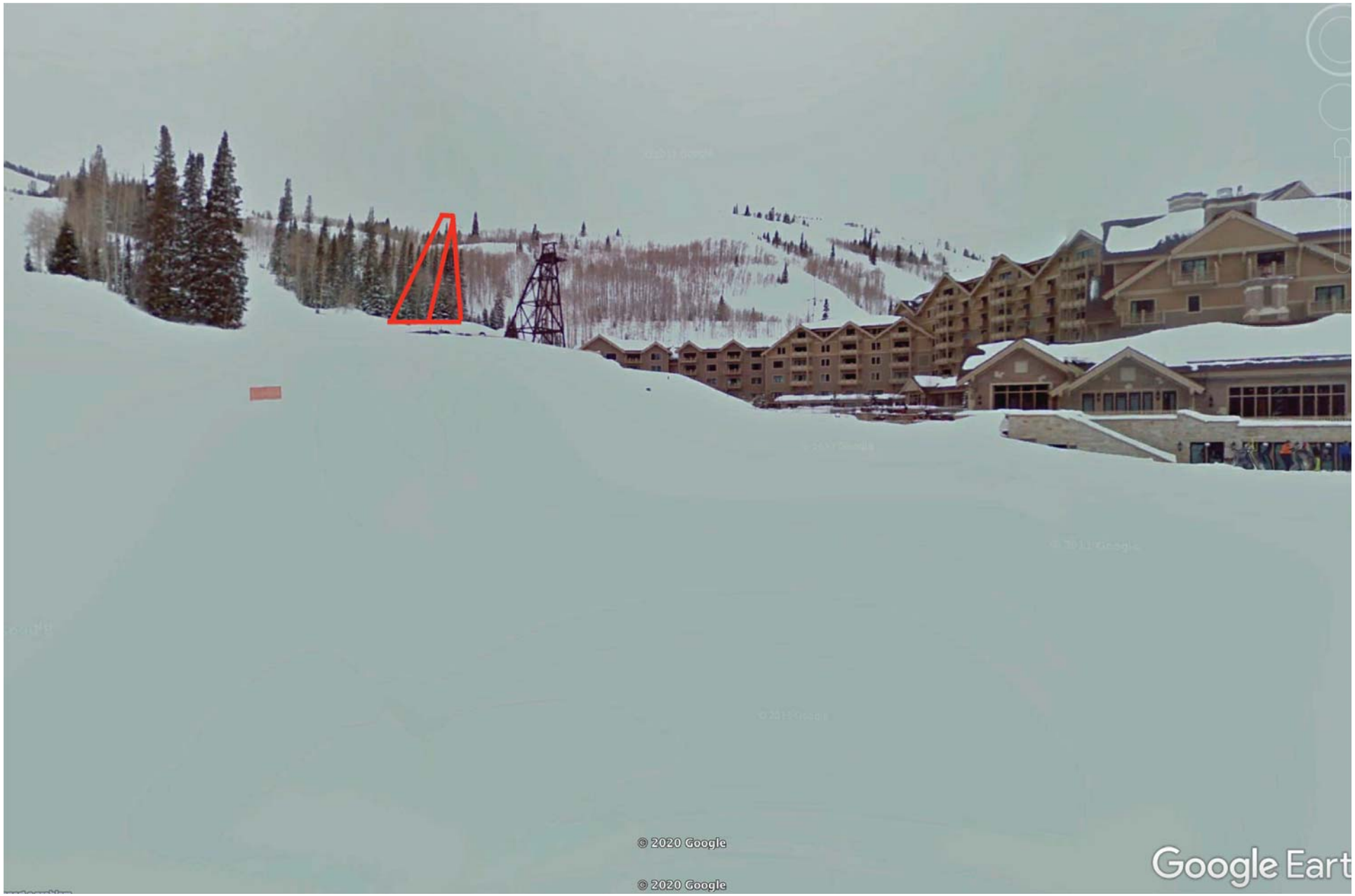
- Areas of corrosion on the hoist mechanism should be scraped to a sound surface, and previously painted areas should be repainted to match the current color.
- Plant growth should periodically be removed from around the shaft opening.
- Concrete should be monitored for further deterioration; if deterioration becomes severe or pervasive, it should be repaired using National Park Service (NPS 2007) preservation standards.

Figure 35. Overview of Daly-West Mine Headframe, Shaft, and Hoist, facing north. Note collapsed headframe.

Figure 36. Overview of Daly-West Mine Hoist, facing northeast, with collapsed headframe in background.

Figure 37. Detail of Daly-West Mine Shaft, facing southeast.

Figure 38. Overview of collapsed Daly-West Mine Headframe, facing southeast.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Google Eart

6/2015
2019

Daly-West Headframe and Shaft

Description

The Daly-West headframe and Daly-West shaft are located in upper Empire Canyon, about a quarter of a mile above the Daly No. 2 Shaft. The headframe is directly over the Daly-West shaft, and both of these features are still in operable condition. The shaft provides an emergency exit and a ventilation shaft for the Ontario Drain Tunnel No. 2 and other workings.

Figure 75 – Daly-West headframe.

The headframe is a distinctive mining-related feature that probably dates from 1913, when the mill and hoisting works were destroyed in a fire. It is constructed of riveted steel "laced girders" that are typical of that period. The entire framework is exposed and it presents an impressive sight. A chain-link fence surrounds the headframe for security reasons.

Just upslope of the Daly-West headframe and shaft are traces of the waste dump and/or surface operations of the Meears Company Shaft No. 1, although very little remains of this operation. The Meears Company Shaft No. 2 operation was located immediately to the northeast of the Daly-West headframe and shaft, but no remains of this operation were noted.

Function

This headframe and shaft represent the extraction and maintenance processes in a mining system. More specifically, the shaft was used to haul ore and waste rock from the workings and to transport miners, equipment, and supplies in and out of the mine. It also served as an extra exit point and ventilation shaft.

Deficiencies and Suggested Mitigation Work

The headframe and shaft are still in usable condition and are maintained as an emergency exit and ventilation source for the drain tunnels that provide water for Park City's culinary water system. The area around the headframe and shaft is fenced. If this feature were to be abandoned, steps could be taken to preserve the feature, such as protective coatings on exposed iron and steel surfaces, lubrication, etc.

In terms of stabilization, as long as this feature is being maintained in operable condition, no stabilization work is recommended at this time.

Potential Safety Hazards

Potential safety hazards could be associated with this feature, but are not known to SWCA.

Interpretation Recommendations

Interpretive signage could be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. Besides providing basic

background information, the signage should point out interesting facts about the resource and take advantage of any clearly visible features to create a more interesting, educational, and personal experience.

For example, the signage could relate the site to the many other mining operations in the area that were founded or influenced by John Daly, one of the most prominent silver magnates in the American West. The headframe is a visually interesting feature, and the signage could point out and explain the function of the various visible components, such as the hoist shack, cables, sheaves, cages, etc. It could also point out that this is a working feature and make reference to the depth of the works or how the air moves in or out of the shaft, depending on changes in temperature or atmospheric pressure. It might also point out some interesting details about the headframe construction, such as the beautiful lace girders, or how the steel headframe was a replacement for a wooden headframe destroyed by fire in 1913. It might also point out some slightly warped areas in the girders that may have resulted from a subsequent fire.

A discussion of fires at the Daly-West site would provide a natural segue to interpretive signage about the fire hydrant shacks above the shaft works.

HISTORIC SITE FORM -- HISTORIC SITE INVENTORY

PARK CITY MUNICIPAL CORPORATION (06-09)

1 IDENTIFICATION

Name of Property: Daly-West Mine Head Frame & Fire Hydrant Shacks

Address: 9100 Marsac Avenue *AKA:*

City, County: Park City, Summit County, Utah *Tax Number:* EV-B-2-C

Current Owner Name: Talisker Empire Pass Hotel, LLC *Parent Parcel(s):* EVS-A, PCC-S-98-C &

Current Owner Address: PO Box 4349, Park City, UT 84060 PCA-S-98-FF

Legal Description (include acreage): 15.96 acres; Empire Village Subdivision Parcel B-2 Lot C.

2 STATUS/USE

Property Category	*Evaluation**	*Reconstruction*	*Use*
☐ building(s), main	☐ Landmark Site	Date:	Original Use: Industrial/Mining
☐ building(s), attached	☑ Significant Site	Permit #:	Current Use: Industrial/Mining
☐ building(s), detached	☐ Not Historic	☐ Full ☐ Partial	
☐ building(s), public			
☐ building(s), accessory			
☑ structure(s)			

*National Register of Historic Places: ☑ ineligible ☐ eligible
☐ listed (date:)

3 DOCUMENTATION

Photos: Dates
☐ tax photo:
☑ prints: 2009
☐ historic: c.

Drawings and Plans
☐ measured floor plans
☐ site sketch map
☐ Historic American Bldg. Survey
☐ original plans:
☐ other:

Research Sources (check all sources consulted, whether useful or not)

☐ abstract of title	☐ sewer permit	☐ university library(ies):
☐ tax card	☑ Sanborn Maps	☐ other:
☐ original building permit	☐ obituary index	
	☐ city directories/gazetteers	
	☐ census records	
	☐ biographical encyclopedias	
	☑ newspapers	
☑ city/county histories		
☐ personal interviews		
☐ Utah Hist. Research Center		
☑ USHS Preservation Files		
☐ USHS Architects File		
☐ LDS Family History Library		
☑ Park City Hist. Soc/Museum		

Bibliographical References (books, articles, interviews, etc.).

Boutwell, John Mason. Geology and Ore Deposits of the Park City District, Utah. United States. Department of the Interior. United States Geological Survey. Washington: GPO, 1912.

"John J. Daly Dies." Park Record [Park City] 28 Oct. 1927: 4.

Morrison, Sandra. 1999-2000 Reconnaissance Level Survey: Unincorporated Areas of Summit County (North Summit County, Snyderville Basin & Park City). Summit County: Summit County Historical Society, 2000.

Noble, Bruce J. and Robert Spude. Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties. Rev. ed. United States. Department of the Interior. National Park Service. National Register of Historic Places Bulletin 42. Washington: GPO, 1997.

Park City, Utah. Aerial photograph from Google Earth. March 5, 2006. Google, 2009.

"R.C. Chambers Dead." Park Record [Park City] 13 Apr. 1901: 2.

Sanborn, D.A. "Sheet 11, Park City, Utah, 1889." Map. Sanborn Fire Insurance Maps. J. Willard Marriott Library. 15 Sept. 2009. <http>//www.lib.utah.edu/digital/sanborn/>

---. "Sheet 12, Park City, Utah, 1900." Map. Sanborn Fire Insurance Maps. J. Willard Marriott Library. 15 Sept. 2009. <http>//www.lib.utah.edu/digital/sanborn/>

---. "Sheet 13, Park City, Utah, 1900." Map. Sanborn Fire Insurance Maps. J. Willard Marriott Library. 15 Sept. 2009. <http>//www.lib.utah.edu/digital/sanborn/>

---. "Sheet 19, Park City, Utah, 1907." Map. Sanborn Fire Insurance Maps. J. Willard Marriott Library. 15 Sept. 2009. <http>//www.lib.utah.edu/digital/sanborn/>

---. "Sheet 19, Park City, Utah, 1907 (corrected to 1929)." Map. Sanborn Fire Insurance Maps. *Hal Compton Research Library*. Park City Historical Society & Museum. 13 Oct. 2009. Electronic.

Researcher/Organization: Preservation Solutions/Park City Municipal Corporation *Date:* 10-2009

SWCA, Inc. Environmental Consultants. Flagstaff Mountain Resort: A Planned Resort Community at Deer Valley: Historic Preservation Plan. Salt Lake City: SWCA, 2001.
Thompson, George A. and Fraser Buck. Treasure Mountain Home: Park City Revisited. 1968. Salt Lake City: Dream Garden Press, 1993.
Utah. State Historic Preservation Office. Architectural Survey Data for Park City. Salt Lake City: SHPO, 2006. Electronic.

4 ARCHITECTURAL DESCRIPTION & INTEGRITY

Building Type and/or Style: Structure-Head Frame / None No. Stories: 80'

Additions: ☑ none ☐ minor ☐ major (describe below) Alterations: ☑ none ☐ minor ☐ major (describe below)

Number of associated outbuildings and/or structures: ☐ accessory building(s), # _____; ☐ structure(s), # _____.

General Condition of Exterior Materials:

☑ Good (Well maintained with no serious problems apparent.)

☐ Fair (Some problems are apparent. Describe the problems.):

☐ Poor (Major problems are apparent and constitute an imminent threat. Describe the problems.):

☐ Uninhabitable/Ruin

Materials (The physical elements that were combined or deposited during a particular period of time in a particular pattern or configuration. Describe the materials.):

Site: The head frame is located behind a new development on a level building pad above a shaft. The pad drops away from the base of the head frame to a road that winds around the back of the new development. The shacks are located uphill from the head frame.

Foundation: Unknown (Head frame assumed to be concrete).

Walls: N/A The head frame is steel; the shacks are clad in wood siding.

Roof: The gable roofs are sheathed in galvanized metal, though several panels appear to be missing.

Windows/Doors: N/A

Essential Historical Form: ☑ Retains ☐ Does Not Retain, due to:

Location: ☑ Original Location ☐ Moved (date _____) Original Location:

Design (The combination of physical elements that create the form, plan, space, structure, and style. Describe additions and/or alterations from the original design, including dates--known or estimated--when alterations were made): The steel gallows frame structure is approximately 85' tall was likely built after 1912. The shacks (date unknown) are small square structures that house a hydrant and various pipes and valves.

Setting (The physical environment--natural or manmade--of a historic site. Describe the setting and how it has changed over time.): The structure is located behind a large hotel development at the base of a stand of trees that extends up the canyon. The ground to the north slopes away from the structure and a narrow road winds below. The structure is adjacent to a shed building and the entire site is fenced. The shacks are upslope from the head frame at the base of a stand of trees.

Workmanship (The physical evidence of the crafts of a particular culture or people during a given period in history. Describe the distinctive elements.): The physical evidence of the mining era is the head frame, the hoist equipment, the small shacks, and the proximity to the shaft.

Feeling (Describe the property's historic character.): The physical elements of the site, even lacking all of the other mine-related structures, convey a sense of Western mining operations of the late nineteenth and early twentieth centuries. Though the lack of surrounding structures and the intrusion of the contemporary development significantly diminish the historic character.

Association (Describe the link between the important historic era or person and the property.): The site is linked to the active mining era in Park City. It is associated with the Daly-West Mine Company as well as with John Daly and R.C. Chambers; two prominent figures in the areas mining history.

5 SIGNIFICANCE

Architect: ☑ Not Known ☐ Known: (source:) Date of Construction: c. 1912

Builder: ☑ Not Known ☐ Known: (source:)

The site must represent an important part of the history or architecture of the community. A site need only be significant under one of the three areas listed below:

1. Historic Era:
   - ☐ Settlement & Mining Boom Era (1868-1893)
   - ☑ Mature Mining Era (1894-1930)
   - ☐ Mining Decline & Emergence of Recreation Industry (1931-1962)

   The Daly-West Mine was one of the richest mines in Park City, but also the site of one of the worst mining disasters in the City's history. Its ore production rivaled that of the Silver King Coalition and the Ontario mines. On July 15, 1902, thirty-four miners died from either explosion or asphyxiation (reports differ on the cause of death), which prompted a law to prohibit the storage of explosives underground.

2. Persons (Describe how the site is associated with the lives of persons who were of historic importance to the community or those who were significant in the history of the state, region, or nation): This site is associated with John Daly and R.C. Chambers. These men were prominent not only in Utah mining, but also in regional and state politics, culture, economics, and business.

3. Architecture (Describe how the site exemplifies noteworthy methods of construction, materials or craftsmanship used during the historic period or is the work of a master craftsman or notable architect):

6 PHOTOS

Digital photographs are on file with the Planning Department, Park City Municipal Corp.

Photo No. 1: Southeast view. Camera facing northwest, 2009.
Photo No. 2: Southeast view, context. Camera facing northwest, 2009.

AGEC
Applied GeoTech

June 17, 2020

EPMOA
PO Box 99
Kamas, Utah 84036

Attention: Doug Ogilvy
EMAIL: douglas.ogilvy@gmail.com

Subject: Geotechnical Consultation
Daly West Headframe
Near Montage Hotel
Park City, Utah
Project No. 1200160

Gentlemen:

Applied Geotechnical Engineering Consultants (AGEC) was requested to provide geotechnical consultation with regards to the Daly West headframe. The headframe is planned to be relocated to a site west of the Montage Hotel in Park City, Utah.

BACKGROUND

The Daly West mine shaft is located uphill to the west of the Montage Hotel. We understand that in approximately 2015, a headframe constructed over the mine shaft collapsed. Consideration is being given to relocating the headframe approximately 150 feet southwest (uphill) from the mine shaft. The headframe has an estimated weight of 80,000 pounds and is planned to be supported on spread footings.

FIELD INVESTIGATION

An engineer from AGEC visited the site on June 16, 2020. Two test pits were excavated near the area where the headframe is planned to be located. The approximate test pit locations are shown on Figure 1. A track-mounted excavator was used to excavate test pits. The test pits were backfilled with the excavated material and without significant compaction.

The subsurface soil encountered in Test Pit TP-1 consisted of approximately 15 feet of fill. Approximately 4 feet of fill overlying natural clayey gravel extending to 10 feet was encountered in Test Pit TP-2. No subsurface water was encountered in the test pits at the time of excavation.

SOIL DESCRIPTION

The fill generally consisted of clayey gravel with sand. The fill contains frequent cobbles, some boulders up to 3 feet in size and occasional wood debris. The fill is moist and dark brown with some light brown areas.

The natural clayey gravel with sand contains cobbles. The gravel is dense to very dense, moist and yellowish brown.

CONCLUSIONS AND RECOMMENDATIONS

Based on our observations at the site and the planned relocation of the headframe, the following conclusions and recommendations are given:

1. In our professional opinion, the headframe may be supported on footings bearing on the undisturbed natural soil or on compacted structural fill extending down to the natural soil. The on-site fill, in its current condition, is not suitable to support the headframe.

2. Footings may be designed using a net allowable bearing pressure of 3,500 pounds per square foot. Footings should have a width of at least 2 feet and a depth of embedment of at least 42 inches for frost protection.

3. We estimate total and differential settlement using the structural load and bearing pressure described above will be less than 1 inch.

4. Structural fill placed to support footings should have a maximum particle size of 3 inches and less than 35 percent passing the No. 200 Sieve. The on-site fill and natural soil may be considered for use as structural fill if they meet this criteria.

5. Fill placed to support the headframe should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D 1557 (modified Proctor). Fill should be frequently tested for compaction.

6. Structural fill placed to support footings should extend out from the sides of the footing at least a distance equal to the fill thickness below the footing.

7. AGEC should observe footing excavations prior to placement of structural fill or concrete for footings.

LIMITATIONS

This letter has been prepared in accordance with generally accepted geotechnical engineering practices in the area for the use of the client. The information included in the letter is based on our observations at the site and our experience in the area. If conditions encountered are significantly different than what is described above, AGEC should be notified to review and provide additional geotechnical consultation, if needed.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Scott D. Anderson, P.E.

Reviewed by CJB, P.E.
SDA/rs

Enclosure

N

0 500 1000 feet

Approximate Scale

DALY WEST HEADFRAME
NEAR MONTAGE HOTEL
PARK CITY, UTAH

1200160	AGEC	Test Pit Locations	Figure 1

AGEC
Applied GeoTech

July 16, 2020

EPMOA
PO Box 99
Kamas, Utah 84036

Attention: Doug Ogilvy
EMAIL: douglas.ogilvy@gmail.com

Subject: Daly West Headframe
Construction Over Mine Shaft
Near Montage Hotel
Park City, Utah
Project No. 1200160

Gentlemen:

Applied Geotechnical Engineering Consultants (AGEC) was requested to provide geotechnical consultation with regards to the planned location of the Daly West headframe. We understand that consideration is being given to reconstructing the headframe above the Daly West mine shaft.

AGEC previously provided geotechnical consultation with regards to a potential location for the Daly West headframe.

BACKGROUND

The Daly West mine shaft is located uphill to the west of the Montage Hotel in Park City, Utah. We understand that in approximately 2015, the headframe collapsed. We understand that a vertical pipe and foam backfill was subsequently placed in the mine shaft. The headframe has an estimated weight of 80,000 pounds.

CONCLUSIONS AND RECOMMENDATIONS

Based on information presented in the above-referenced letter and our experience in the area, the following conclusions and recommendations are given:

1. If the headframe will be reconstructed over the mine shaft, we recommend that foundation support be provided using micropiles. With the anticipated proximity of the headframe supports to the mine shaft, we anticipate the

micropiles will need to extend through the unsuitable fill down to the bedrock, a depth of approximately 100 feet.

2. Consideration should be given to performing subsurface investigation to provide information for design of the micropiles. Subsurface investigation would consist of drilling a boring to a depth of approximately 100 feet.

3. AGEC should observe construction of the micropiles.

LIMITATIONS

This letter has been prepared in accordance with generally accepted geotechnical engineering practices in the area for the use of the client. The information included in the letter is based on information presented in the above-referenced letter and our experience in the area. If conditions are observed that are significantly different than what is described above, AGEC should be notified to review and provide additional geotechnical consultation, if needed.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Scott D. Anderson, P.E.

Reviewed by DRH, P.E., P.G.

SDA/rs

McMullin Engineering

20.02 **Daly Headframe Structural Stabilization**

July 16, 2020

Douglas Ogilvy
EPMOA
PO Box 99
Kamas, UT 84036

RE–Headframe Relocation

Dear Doug—

After observing the Daly Headframe, and reviewing the geotechnical recommendations, it is my opinion that it is necessary to relocate the headframe from the existing site. This will allow a new foundation to be poured that will adequately support the headframe and eliminate potential problems from the mine shaft.

Lifting the structure with a crane will be feasible, and can be done by a qualified crane and rigging company, without causing undue distress.

As part of the relocation and lifting, structural repairs will be required for a selection of members. These members and details for their connections will be the result of additional analysis and engineering, and documented in the repair drawings. Some of these repairs will need to be completed before relocation of the structure, and will be identified on the plans accordingly.

Respectfully,

Paul W. McMullin, SE, PhD
Structural Engineer

NOTICE OF OFFICIAL DETERMINATION:

Project Address:	9100 Marsac Avenue – Daly West Head Frame Structure
Project Description:	Planning Director and Chief Building Official Determination
Date of Action:	July 21, 2020

ACTION TAKEN:

The Daly West Mine located at 9100 Marsac Avenue is designated as Significant on the City's Historic Sites Inventory. Per The Land Management Code § 15-11-13(B)(3)(b) Relocation and/or Reorientation of a Historic Building or Historic Structure: the Planning Director must determine that the building is threatened in its present setting because of hazardous conditions and the preservation of the building will be enhanced by relocating it. This letter is to act as the determination from both the Chief Building Official and Planning Director.

In May 2015, the Daly West headframe toppled after shifting due to the collapse of the shaft below. In order to safely cap the shaft, a combination of polyurethane foam, a concrete cap, and a corrugated metal pipe (CMP) to allow airflow to the Park City water supply tunnel located in the Ontario tunnel below the shaft was installed the summer of 2015 following the collapse of the shaft.

In order to re-erect, repair, and preserve the head frame structure, the proposed Relocation is necessary. The current site poses a structural risk as the mine shaft closure done in 2015 was not designed to accommodate the approximate 80,000 pound load of the head frame. The new site, approximately 150 feet south west of the Historic Site, keeps the Structure within the Historic Daly-West Mine complex which does not diminish the historic character of the site nor the structure.

If you have any questions regarding this determination, please don't hesitate to contact the Building Department at 435-615-5100 or the Planning Department at 435-615-5060.

Sincerely,

Dave Thacker
Chief Building Official

Bruce Erickson, AICP
Planning Director

Historic Preservation Plan Update for Flagstaff Mountain Resort in Park City, Summit County, Utah

OCTOBER 2019

PREPARED FOR

Empire Pass Master Owners Association

PREPARED BY

SWCA Environmental Consultants

HISTORIC PRESERVATION PLAN UPDATE FOR FLAGSTAFF MOUNTAIN RESORT IN PARK CITY, SUMMIT COUNTY, UTAH

Prepared for

Empire Pass Master Owners Association
4188 UT-248
Kamas, Utah 84036
Attn: Douglas Ogilvy

Prepared by

Kate Hovanes, M.S., and Megan Daniels, M.P.S.

Principal Investigator

Anne Oliver, M.S.

SWCA Environmental Consultants
Salt Lake City Office
257 East 200 South, Suite 200
Salt Lake City, Utah 84111
(801) 322-4307
www.swca.com

SWCA Project No. 57171

SWCA Cultural Resources Report No. 19-632

October 2019

EXECUTIVE SUMMARY

Flagstaff Mountain Resort consists of approximately 1,750 acres of private land in Park City, Summit County, Utah. The original Flagstaff Mountain Resort developers included United Park City Mines Company and certain other private property owners. A Development Agreement was negotiated between the developers and Park City Municipal Corporation (PCMC) as a prerequisite to Park City's annexation of the Flagstaff Mountain Resort property, which took place on June 24, 1999; as part of this a Historic Preservation Plan (HPP) was commissioned by United Park City Mines Company and completed in 2000.

The 2000 HPP identified historic mining-related resources within the Flagstaff Mountain Annexation Boundary and provided information that was intended to help the resort developers and PCMC make informed decisions regarding possible treatment plans for these properties. The 2000 HPP provided the following key information:

- A historic context for the area
- An inventory of historic resources largely within the Flagstaff Mountain Annexation Boundary, including descriptions, historic functions, condition assessments and suggested mitigation work, and interpretation recommendations
- General information about developing treatment plans
- A treatment plan for Flagstaff Mountain properties

The HPP identified and described 32 historic mining resources; from these, 21 resources were selected as "important sites" or resources (Table ES1) (Bowes et al. 2000). A summary of the HPP was prepared in May 2001 and revised and approved in December 2001 by PCMC (SWCA Environmental Consultants [SWCA] 2001). Exhibit 6 of the HPP Summary included a chart that synthesized information from the 2000 HPP and provided more detailed work recommendations. Fulfillment of these work recommendations formed part of the Development Agreement between Flagstaff Mountain Partners (the original developers) and PCMC. The chart has served as a treatment plan in the ensuing years and has guided preservation efforts by Flagstaff Mountain Partners and its successors.

The maintenance and ongoing protection of many of the historic mining resources have become the responsibility of the Empire Pass Master Owners Association (EPMOA), which has replaced Flagstaff Mountain Partners in management of much of the land encompassed by the 2000 HPP. The EPMOA sought to update the 2000 HPP and assess progress in preserving the important resources identified in the HPP that are also subject to the Flagstaff Development Agreement between the EPMOA and PCMC. The EPMOA retained SWCA to document and assess the condition of the resources, including to assess whether treatment recommendations listed in the 2001 HPP Summary had been met (see Table ES1). Of the 21 original important resources, 17 were surveyed by SWCA and two (which were partially located on land owned by the EPMOA) were reported on by the EPMOA. The remaining two resources are not on land owned by the EPMOA, are not subject to the Flagstaff Development Agreement, and were not included.

The condition of the 19 resources assessed in 2019 varied widely. Some were in good condition, while others, such as the Judge Mining and Smelting Company Office and the Little Bell Mine Ore Bin, exhibited significant deterioration conditions. For 14 of the 19 resources, the 2001 HPP Summary recommendations have not been fully satisfied (see Table ES1).

Table ES1. Summary of Important Historic Mining-Related Resources Identified in the 2000 HPP, 2019 Survey Status, and 2001 HPP Summary Treatment Recommendation Status

Important Sites Identified in 2000 HPP	Surveyed for 2019 HPP Update	2001 HPP Summary Work Recommendations Fully Met?
Judge Mining and Smelting Company Office	Yes	No
Anchor (Daly-Judge) Drain Tunnel	Yes	No
American Flag Mine Waste Dump	Yes	No
Ontario Mine Shaft No. 3	Yes	No
Daly Mine No. 1 Waste Dump	Yes	No
Daly Mine No. 2 Shaft	Yes	No
Daly-West Mine Headframe, Shaft, and Hoist	Yes	No
Daly-West Mine Fire Hydrant Shacks	Yes	No
Daly-West Mine Waste Dump	Yes	No
Diamond-Nemrod Mine Waste Dumps	Yes	No
Anchor Mine Waste Dump	Yes	Yes
Quincy Mine Hoist Plant	Yes	Yes
Quincy Mine Shaft and Waste Dump	Yes	Yes
Little Bell Mine Ore Bin	Yes	No
Little Bell Mine Waste Dump	Yes	Yes
White Pine Mine Log Structure	Yes	Yes
White Pine Mine Waste Dumps	Yes	No
Flagstaff Mine Waste Dumps	No (only a small part of dump is on land owned by the EPMOA and subject to Flagstaff Development Agreement)	No
Naildriver Mine Waste Dump	No (mine and most of dump not on land owned by the EPMOA; only a small area subject to Flagstaff Development Agreement)	No
Flagstaff Mine Shaft	No (not on land owned by the EPMOA; not subject to Flagstaff Development Agreement)	N/A
Explosives Bunker	No (not on land owned by the EPMOA; not subject to Flagstaff Development Agreement)	N/A

CONTENTS

Appendices

Figures

Tables

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INTRODUCTION

Background

Flagstaff Mountain Resort consists of approximately 1,750 acres of private land in Park City, Summit County, Utah. The original Flagstaff Mountain Resort developers included United Park City Mines Company and certain other private property owners. A Development Agreement was negotiated between the developers and Park City Municipal Corporation (PCMC) as a prerequisite to Park City's annexation of the Flagstaff Mountain Resort property, which took place on June 24, 1999.

A Historic Preservation Plan (HPP) was commissioned by United Park City Mines Company to satisfy PCMC's requirements for the documentation and protection of historic mining-related resources on the property, as described in the Development Agreement. There were no federal or state requirements for the HPP, which was completed in 2000 (Bowes et al. 2000).

The 2000 HPP identified historic mining-related resources within the Flagstaff Mountain Annexation Boundary and provided information that was intended to help the resort developers and PCMC make informed decisions regarding possible treatment plans for these properties. The 2000 HPP provided the following key information:

- A historic context for the area
- An inventory of historic resources largely within the Flagstaff Mountain Annexation Boundary, including descriptions, historic functions, condition assessments and suggested mitigation work, and interpretation recommendations
- General information about developing treatment plans
- A treatment plan for Flagstaff Mountain properties

The HPP identified and described 32 historic mining resources; from these, 21 resources were selected as "important sites" or resources (Table 1) (Bowes et al. 2000). A summary of the HPP was prepared in May 2001 and revised and approved in December 2001 by PCMC (SWCA Environmental Consultants [SWCA] 2001) (Appendix A). Exhibit 6 of the HPP Summary included a chart that synthesized information from the 2000 HPP and provided more detailed work recommendations. Fulfillment of these work recommendations formed part of the Development Agreement between Flagstaff Mountain Partners (the original developers) and PCMC. The chart has served as a treatment plan in the ensuing years and has guided preservation efforts by Flagstaff Mountain Partners and its successors (see Table 1).

Table 1. Summary of Important Historic Mining-Related Resources Identified in the 2000 HPP and 2019 Survey Status

Important Sites Identified in 2000 HPP	Surveyed for 2019 HPP Update
Judge Mining and Smelting Company Office	Yes
Anchor (Daly-Judge) Drain Tunnel	Yes
American Flag Mine Waste Dump	Yes
Ontario Mine Shaft No. 3	Yes
Daly Mine No. 1 Waste Dump	Yes
Daly Mine No. 2 Shaft	Yes
Daly-West Mine Headframe, Shaft, and Hoist	Yes
Daly-West Mine Fire Hydrant Shacks	Yes
Daly-West Mine Waste Dump	Yes
Diamond-Nemrod Mine Waste Dumps	Yes

Important Sites Identified in 2000 HPP	Surveyed for 2019 HPP Update
Anchor Mine Waste Dump	Yes
Quincy Mine Hoist Plant	Yes
Quincy Mine Shaft and Waste Dump	Yes
Little Bell Mine Ore Bin	Yes
Little Bell Mine Waste Dump	Yes
White Pine Mine Log Structure	Yes
White Pine Mine Waste Dumps	Yes
Flagstaff Mine Waste Dumps	No (most of dump on Extell land [formerly Mayflower] not owned by EPMOA; small remaining area subject to Flagstaff Development Agreement reported on by EPMOA)
Naildriver Mine Waste Dump	No (mine and most of dump on Naildriver Mining Company land not owned by EPMOA; small remaining area subject to Flagstaff Development Agreement reported on by EPMOA)
Flagstaff Mine Shaft	No (resource on Extell land [formerly Mayflower]; not subject to Flagstaff Development Agreement)
Explosives Bunker	No (resource on LEC Properties land; not subject to Flagstaff Development Agreement)

Objectives

The maintenance and ongoing protection of many of the historic mining resources identified in the 2000 HPP have become the responsibility of the Empire Pass Master Owners Association (EPMOA), which has replaced Flagstaff Mountain Partners in management of most of the land encompassed by the 2000 HPP. The EPMOA sought to update the 2000 HPP and assess progress in preserving the important resources identified in the HPP that are also subject to the Flagstaff Development Agreement between the EPMOA and PCMC.

Of the 21 resources originally identified in the HPP, 17 are fully on land currently owned by the EPMOA and are included in this HPP Update (Figure 1; see Table 1). Two resources (Flagstaff Mine Waste Dumps and Naildriver Mine Waste Dump) are partly on land owned by the EPMOA and are subject to the Development Agreement. Per initial direction from EPMOA, these sites were not included in the field survey. Subsequent ownership review determined that the Flagstaff Mine Waste Dumps are partially located on land owned by the EPMOA and partially on land owned by Extell. The Naildriver Mine Waste Dump is partially on land owned by EPMOA and partially on land owned by the Naildriver Mining Company. Both sites were included in the condition assessment using data provided by EPMOA.

Additionally, two resources (Flagstaff Mine Shaft and Explosives Bunker) are not located on land owned by the EPMOA and are not subject to the Development Agreement; these resources were not included in the survey. The Flagstaff Mine Shaft is on land owned by Extell. During the project, the question was raised about whether the Empire Canyon Explosives Bunker should be included on the list. Alliance Engineering surveyed the location of the bunker and confirmed that it is on the Marsac Mining Claim owned by LEC Properties. It was therefore determined that the EPMOA should not be accountable for this historic resource because the underlying property is not subject to the Flagstaff Development Agreement; the Empire Canyon Explosives Bunker was therefore also not included in the survey.

The objectives of this HPP Update were to document and assess the condition of the 17 resources fully on land currently owned by the EPMOA through the following tasks:

- Comprehensive survey of each resource, including the identification of current deficiencies and suggested mitigation or maintenance work (if not already implemented after the 2000 HPP or if new conditions warrant further action)

- An assessment of progress in preserving the resources, in accordance with the recommendations in the Flagstaff Development Agreement and the 2001 HPP Summary
- Photographic documentation of each resource
- Collection of spatial data on the location of each resource

In summary, a total of 19 resources were included in the condition assessment. These included the 17 resources surveyed by SWCA, as well as the Flagstaff Mine Waste Dumps and the Naildriver Mine.

Figure 1. Resource location map.

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METHODOLOGY

The survey of historic mining resources was divided into two parts: documentation and condition assessment. SWCA's principal investigator Anne Oliver served as the historic architecture team lead and architectural conservation specialist. SWCA historic preservation specialist Kate Hovanes served as the project manager and conducted fieldwork and completed report preparation; she was assisted by SWCA historic preservation specialist Megan Daniels. Oliver, Hovanes, and Daniels meet the professional qualifications for architectural history, defined in 36 Code of Federal Regulations 61.

Documentation

Fieldwork was conducted on August 27 and 28, 2019. The SWCA project team identified historic mine resources requiring assessment; photographed each resource using a digital single-lens reflex (SLR) camera at 18-megapixel resolution; recorded locational data using a handheld global positioning system (GPS) unit; and conducted full condition assessments of the exterior and, when applicable, the interior of each resource.[1] SWCA coordinated these site visits with Douglas Ogilvy (EPMOA), who provided important logistical information and knowledge about the mining resources. After fieldwork, the data were processed, organized, and evaluated in accordance with the project objectives. Two of the 19 sites were not visited by SWCA but aerial imagery was provided by EPMOA.

Condition Assessment

For each resource, condition assessment involved visual inspection and recordation of current conditions with photographs and notes. Visual inspection included examining roofs, walls, foundations, doors and windows, and any additional architectural features, when present, for signs of deterioration or condition problems. When appropriate and necessary, more in-depth assessments of building components were conducted, which in some cases involved probing exposed wood members to test for rot, observing the structural systems of resources (when relevant), and identifying probable causes of detected deterioration. The condition of two of the 19 sites was not assessed by SWCA but EPMOA conducted a visual inspection.

Treatment Recommendations

Each resource was inspected to assess progress in implementing the treatment recommendations of the 2001 HPP Summary, which was incorporated in the Flagstaff Development Agreement. Treatment recommendations were then developed for the 19 mining resources fully or partially on EPMOA land. The treatment recommendations first note any work still required to fulfill recommendations in the 2001 HPP Summary and are then prioritized by importance for the ongoing preservation of the resource. All treatment recommendations are consistent with *The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (Morton et al. 1992).

[1] The GPS unit was a geographic information system (GIS)–grade Trimble, accurate to within 1 meter.

CONDITION ASSESSMENT AND TREATMENT RECOMMENDATIONS

The following section describes each historic mining resource using excerpts from the 2000 HPP and summarizes existing conditions and work recommendations from Exhibit 6 of the 2001 HPP Summary (SWCA 2001). This section also provides an updated condition assessment, an assessment of work required to meet 2001 HPP Summary recommendations, and additional recommended work for each resource. Photographs of each resource documenting its current condition are also included.

This report does not include a historic context or detailed descriptions of resources, except when the appearance of a resource has changed significantly from that described in the 2000 HPP (Bowes et al. 2000). For a historic context of mining in Park City and for histories and descriptions of specific resources, see Bowes et al.'s (2000) report.

Judge Mining and Smelting Company Office

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Judge Mining and Smelting Company Office, which is excerpted here, and includes a floor plan:

> The Judge Mining & Smelting Company office building is located adjacent to the extension of the Anchor (Daly-Judge) Drain Tunnel portal. It is a simple, front-gabled, one-story, concrete-walled structure that is divided into two functional areas.
>
> [Figure 2] shows the building layout. The front section was used as an office and is subdivided into six rooms, consisting of a Reception (Room 1) and Main Office (Room 2) at the north end of the building, a Small Office (Room 3) adjoining the south wall of Room 2, a Restroom (Room 4), Closet 1 and Closet 2 (Room 5 and Room 6), and a large walk-in Vault (Room 7) with a steel door.
>
> The rear section consists of a large Changing Room (Room 8) for miners, with toilet, lavatory, shower, dressing benches, and clothing storage facilities. Room 8 connects with the Anchor (Daly-Judge) Drain Tunnel via a doorway in its east wall.
>
> A small shed-roofed extension on the west side of the building serves as the entry to the rear section. There is no physical connection between the front and rear sections, except for an opening between the attic area in the front section and the loft area in the rear.
>
> There is an attic area in the front section, but it is not known if it was ever used, since an employee of United Park City Mines Company indicated that the attic stairway was built for the purpose of filming a movie, and may not have replaced an earlier stairway. The rear section of the building does not have an attic, although it has a loft area above some of the rooms of the front section.
>
> The roof of the building extends over the wood-frame extension of the Anchor (Daly-Judge) Drain Tunnel portal. The roof of the drain tunnel behind the portal is constructed of concrete and abuts the east wall of the changing room.
>
> All of the building's outer walls, plus at least one internal wall, are constructed of poured concrete. The walls of the vault may also be concrete. The exterior walls are finished with stucco, which shows no obvious evidence of paint and retains its natural appearance. The stucco appears to be original and has the logo "J. M. & S. Co. – 1920" incised into the front gable above the entrance.
>
> The structure is built partially into the hillside. The rear (south) wall of the building is embedded into the slope to a level just below the eaves of the roof. Judging by the large rocky outcroppings in the hillside and the size of the trees growing immediately behind the building, the slope has not subsided since the building was constructed, and the current grade is close to the original. (Bowes et al. 2000:51–52)

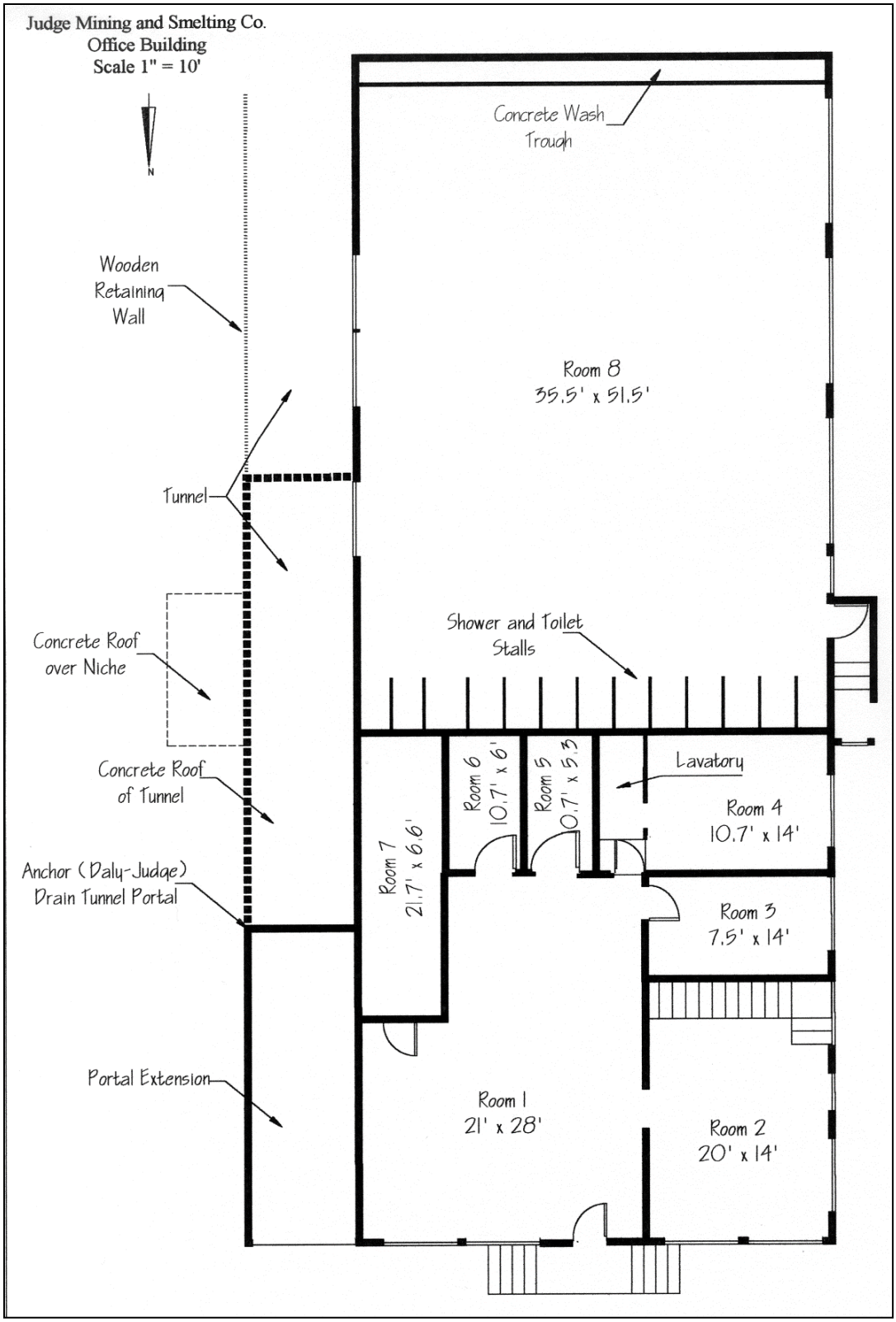

Figure 2. Floor plan (first floor), Judge Mining and Smelting Company Office building (from Bowes et al. 2000).

Existing conditions were described in the 2001 HPP Summary as follows:

> All of the building's walls, plus at least one internal wall, are constructed of poured concrete. The exterior walls are finished with stucco, which shows no obvious evidence of paint and retains its natural appearance. The stucco appears to be original and has the logo "J.M. & S. Co. -1920" incised into the front gable above the original entrance. All of the windows, with the exception of three windows on the east wall of the Changing Room, are wood-framed, double-hung windows, without counterweights or springs. The building appears to be in fair condition but is in need of some repairs. (SWCA 2001)

Work recommendations in 2001 were as follows:

- The building site will be cleaned of debris in summer 2001.
- With the first phase of Flagstaff development the restoration of the building will be initiated, interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
- After restoration, the building is anticipated to serve as office and recreation uses for the Flagstaff development. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The building's interior was cleared of debris in 2005 (personal communication, Douglas Ogilvy, August 27, 2019).
- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.
- The 2001 recommendation relating to the restoration and reuse of the building did not take place. The revised goal of the EPMOA is to stabilize the building in its current condition. Measures to achieve that goal have included the following:
    - The roof on the northeast end of the building was shored up with heavy timber to brace the purlins in 2005 (personal communication, Douglas Ogilvy, August 27, 2019).
    - Windows and door openings were boarded up in 2005 (personal communication, Douglas Ogilvy, August 27, 2019).

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 3–14):

- Intrusive vegetation and debris have built up against the foundation and wall bases on the southeast and southwest sides of the building. The weight of this build-up has caused structural cracking and displacement of the walls, although it is unclear whether wall movement is ongoing; the weight of water saturating soils during the spring thaw and rain events, as well as freeze-thaw cycling, may exacerbate this problem.
- Portions of concrete on the southeast and northwest walls are spalling due to water infiltration and the freeze-thaw cycle. The concrete walls of the entrance vestibule to the changing room on the northwest side of the building are friable and extensively eroded and exhibit significant material loss. However, the concrete walls are structurally stable, including the entrance vestibule (McMullin 2019).

- The roof is partially collapsed on the southeast side of the building. Wood purlins have collapsed, resulting in the overall collapse of the roof; the metal trusses remain intact. Deterioration over time and rolling over combined with overstressing likely resulted in the purlins' collapse. Overstressing is the result of a heavy snow load. Before its abandonment, the building would have been heated through the winter, reducing the weight of snow; now that it is vacant, large amounts of snow build up on the roof and remain late into the season because of the shaded location.
- Corrugated metal roofing panels are damaged, detached, and missing. Some panels have holes where flues and stovepipes were originally located; these holes were patched, but in some cases the patching has been detached or damaged.
- Portions of the corrugated metal cornice are detached.
- Most of the plywood boards remain over window and door openings, but large holes have been made in boards on the northwest and northeast sides, allowing access to the interior of the building.
- Significant amounts of animal refuse are present in the interior of the building.

As a part of the 2019 condition assessment, the EPMOA also contracted with Ingenium Design (Ingenium) to conduct structural observations and calculations for the Judge Mining and Smelting Company Office. Ingenium conducted a site visit on October 13, 2019, after which it produced general structural notes, a roof framing plan, and framing details (McMullin 2019). Key observations from the report are excerpted here; the full report is included as Appendix B:

- The failure of the purlins resulted in the collapse of large sections of roofing.
- The original purlins are 70% overstressed (by code). This alone did not account for their failure; deterioration over time and rolling over combined with overstressing likely resulted in their collapse.
- Remaining purlins can be retrofitted by adding a 1 ¾"x5 ½" LVL on one side and nailing/bolting it to the existing purlin.
- Where the purlins are broken, it is possible to use (2) 1 ¾"x5 ½" LVL or a solid member of similar dimensions to replace the original member. These are about twice as strong as the existing members.
- Blocking should be added along the steel trusses to keep the [purlins] from rolling over.
- A spot check of the bottom chord of the metal truss revealed that stress was within reasonable levels. Based on a visual condition assessment, there is no need to retrofit the bottom chords of the metal trusses.
- The walls on the southwest end of the structure are tipping to the northwest and soil build up on the southeast side is pushing the southeast wall, which is then pushing the northwest wall by way of the trusses. However, the southeast wall may be stabilizing the slope above it; removing the soil is therefore not advised without oversight by a geotechnical engineer.
- It is unclear if the walls are continuing to move. Yearly monitoring of wall movement is therefore recommended. If movement over 2 to 3 inches at the tops of the walls is detected, it is recommended to develop a repair plan.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign explaining the history and function of this building and describing its relationship with other historic mining-related resources in the immediate vicinity should be created and installed to meet recommendations in the 2001 HPP Summary.
- The 2001 HPP Summary recommendation relating to the restoration and reuse of the building did not take place. Instead, measures have been taken to stabilize the building in its current condition. Additional work required to achieve stabilization is outlined below.

Additional Recommended Work

- Before implementing any interior treatments, clean the interior of animal refuse to ensure worker health and safety.
- Monitor walls for movement on a yearly basis. If movement greater than 2 to 3 inches at the top of the walls is detected, develop a treatment plan (McMullin 2019).
- Monitor vestibule to changing room on northwest side of building for increasing or ongoing deterioration. If necessary, install an unobtrusive bracing system or reconstruct the vestibule to match the original in design and materials.
- Treat spalling concrete of main walls by improving site drainage through the removal of soil and debris and by repairing the roof; however, removing soil has the potential to destabilize the slope and is not a recommended treatment unless ongoing structural damage to walls is noted (McMullin 2019).
- Replace broken boards at window and door openings. For a more substantial and vandal/animal-proof option, replace or cover the boards with nonreflective sheet metal or back them with metal gratings.
- Stabilize the roof framing system. Fully document the roof system with drawings and photographs before and after treatment. According to the engineer's report, the metal truss system can be retained (with the addition of bracing as indicated) and remaining intact purlins can be braced. Collapsed purlins can be replaced as indicated in the engineer's report (McMullin 2019).
- For the roof covering, replace damaged or missing corrugated panels with galvanized, corrugated steel panels of identical or (if an exact match is not possible) a similar appearance (i.e., matching panel size and corrugation frequency/height). Leave existing panels in place or reuse whenever possible and refasten as needed. All holes in roofing materials (where pipes or chimneys were originally located) should be covered to prevent moisture infiltration.
- Reattach detached corrugated metal cornice or replace in kind as necessary.
- Clear spruce trees from the slopes southeast and southwest of the building that would comprise the structural integrity of the building through extensive root systems or cause roof collapse in the event of tree falls.
- If determined necessary from wall movement monitoring, clear potentially intrusive vegetation and heavy debris from southeast and southwest slopes. All work should be done under the oversight of a geotechnical engineer to assess and monitor slope stability (McMullin 2019).
- If determined necessary from wall movement monitoring, install an additional drainage system at the base of the southeast and southwest slopes to prevent water infiltration from snowmelt and structural damage caused by the weight of overburdened soil. Direct additional drainage to the existing drain in front of the principal (northeast) wall.

Figure 3. Overview of Judge Mining and Smelting Company Office, facing southwest.

Figure 4. Northeast and northwest sides of Judge Mining and Smelting Company Office, facing south.

Figure 5. Northwest side of Judge Mining and Smelting Company Office, facing east.

Figure 6. Southwest side of Judge Mining and Smelting Company Office, facing east.

Figure 7. Entrance on northwest side of building, facing south. Note damaged roofing and deteriorated concrete, as well as earth piled against the building.

Figure 8. Southeast side of Judge Mining and Smelting Company Office, facing north. Note collapsed roof.

Figure 9. Southeast side of Judge Mining and Smelting Company Office, facing west. Note collapsed roof and spalling concrete of wall.

Figure 10. Detail of collapsed roof with twisted wood purlins visible in foreground at right, facing west-northwest.

Figure 11. Interior of Judge Mining and Smelting Company Office, first floor, facing south-southwest. Note the use of pressed tin for wall finishes.

Figure 12. Interior of Judge Mining and Smelting Company Office, first floor, facing northwest. Note the wood partition wall, which may have originally contained windows.

Figure 13. Interior of Judge Mining and Smelting Company Office changing room, facing southwest. Note accumulation of debris on floor and collapsed roof, but with intact metal truss system.

Figure 14. Interior of Judge Mining and Smelting Company Office changing room. Detail of collapsed roof with intact metal truss system, facing south.

Anchor (Daly-Judge) Drain Tunnel

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Anchor (Daly-Judge) Drain Tunnel, which is excerpted here:

> The portal of the Anchor Drain Tunnel (known later as the Daly-Judge Drain Tunnel) is located approximately one mile up Empire Canyon. The portal's covered extension is directly adjacent to the east wall of the Judge Mining & Smelting Company office building. Access to the tunnel is secured with a hinged steel grating that allows ventilation. A doorway in the changing room in the rear section of the office building connects directly to the tunnel. This doorway allowed miners to conveniently enter the tunnel from the changing room. This opening is covered with a steel grating. The portal itself is of concrete construction, and its covered extension is a wood-frame structure with galvanized corrugated steel panels. (Bowes et al. 2000:49)

Existing conditions were described in the 2001 HPP Summary as follows:

> The portal appears to be in generally good condition. The tunnel is being maintained as part of Park City's culinary water system, and it is assumed that this feature is still structurally sound. However, there are some wooded patches on the east wall of the portal extension that may need to be secured. The condition of the sills and the bottoms of the wooden posts in the east wall is unknown. There are some loose corrugated roofing panels at the northeast corner of the roof of the Judge Mining & Smelting Company Office building, this problem would be addressed by deficiency mitigation work on that structure. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 15–18):

- Some evidence of water infiltration (such as staining and minor cracks in concrete) is present, but no evidence of significant or ongoing damage is visible.
- The shed-roofed portal protecting the entrance to the tunnel was installed in 2008 (as evidenced by the date inscribed on the metal posts supporting the roof). The roof framing partially obscures the historic inscription panel over the tunnel entrance.
- The tunnel continues to be maintained by the municipality as part of Park City's culinary water system and is generally in good condition.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign explaining the history and function of the tunnel in relation to the Judge, Anchor, and Daly Mines and its ongoing function as the water source for Park City should be created and installed to meet recommendations in the 2001 HPP Summary.

Additional Recommended Work

No additional work is recommended at this time.

Figure 15. Covered entrance to Anchor (Daly-Judge) Drain Tunnel, facing southwest.

Figure 16. Entrance to Anchor (Daly-Judge) Drain Tunnel, facing southwest. Note modern metal posts supporting roof and modern gate over entrance.

Figure 17. Embossed concrete panel over Anchor (Daly-Judge) Drain Tunnel, facing southwest. Note roof framing partially covering embossed panel, as well as minor cracks and evidence of water infiltration.

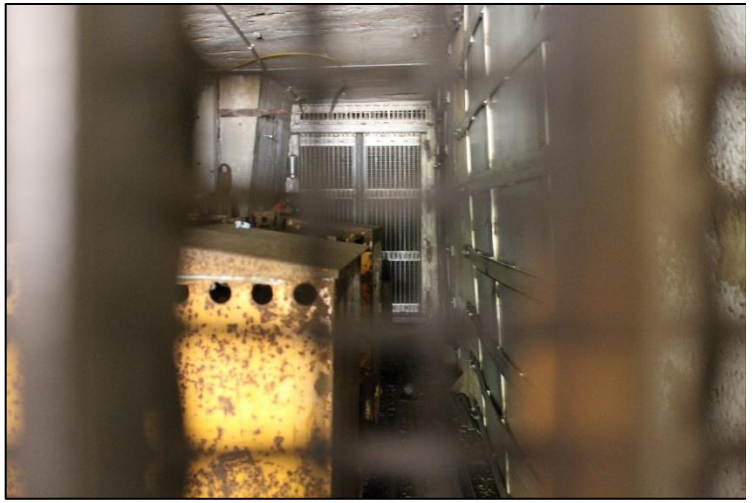

Figure 18. View of Anchor (Daly-Judge) Drain Tunnel entrance, through gate. Note additional modern gate and spalling concrete on ceiling.

American Flag Mine Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the American Flag Mine Waste Dump, which is excerpted here:

> The American Flag Mine and its associated dump are located about one mile up Empire Canyon, on the east side of the canyon and opposite the site of the Daly-Judge Mill. Very little remains of the American Flag Mine itself, although it may have some potential to yield archaeological remains. A portion of its waste dump is still visible, but landslides and subsequent road construction have altered much of it. (Bowes et al. 2000:63)

Existing conditions were described in the 2001 HPP Summary as follows:

> The basic form of the waste dump has been significantly altered by landslides and other activities in the area. Vegetation has been growing up on portions of the dump. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump.
- This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- The steepness of the slope of this feature will restrict and lengthen the revegetation process. Stabilization of some of the mine waste will likely be necessary.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related feature s in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed. An interpretive sign for the American Flag Mine is located across the road from the dump.
- Attempts have been made to revegetate the slope, but as noted above, the steepness of the slope and likely the soil composition are not conducive to rapid revegetation.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 19–22):

- The waste dump slope is approximately 50 percent revegetated; the rest of the slope remains bare.
- No serious condition issues (such as erosion) were noted; it is likely that the vegetation and the rock retaining wall at the base of the slope prevent or limit erosion.

Work Required to Meet 2001 HPP Summary Recommendations

- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

No additional work is recommended at this time.

Figure 19. Overview of American Flag Mine Waste Dump, facing northeast.

Figure 20. Overview of American Flag Mine Waste Dump, facing east.

Figure 21. Overview of American Flag Mine Waste Dump slope, facing north. Note areas of vegetation cover mixed with areas of unvegetated tailings.

Figure 22. Overview of nearby American Flag Mine site, with interpretive sign, facing east.

Ontario Mine Shaft No. 3

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Ontario Mine Shaft No. 3, which is excerpted here:

> Ontario Mine Shaft No. 3 is located in middle Ontario Canyon, west of and adjacent to State Road 224, also known as the Guardsman Pass road. The associated complex is situated atop a large historic mine waste dump, which is easily seen by visitors passing by on State Road 224. All of the surface works were replaced in the 1970s and consist of a complex of metal buildings that house offices, a workshop or garage, concentrator equipment, conveyors, the shaft works, and the [former] Silver Mine Adventure museum in the shaft works buildings. There are also various tanks, pieces of mounted equipment, and smaller structures throughout in the complex. Some of the modern buildings are still in use as office and maintenance facilities for United Park City Mines Company.
>
> Although the surface structures are modern, the Ontario No. 3 Shaft is historic and was used almost continually from the late 1870s into modern times. It also represents the last working mine in the Park City area, having ceased mining operations in 1982. Despite the end of mining activities in the area, the shaft is still operational. Until the Silver Mine Adventure was closed in 1999, the shaft was used to transport visitors down into the mine works, and it still serves the needs of underground work crews who continually maintain several miles of drain tunnels that supply water to the Park City culinary water system and to the Jordanelle Water Conservancy District. (Bowes et al. 2000:39)

Existing conditions were described in the 2001 HPP Summary as follows:

> The No. 3 shaft and the modern surface works appear to be in good overall condition. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:[2]

- Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump.
- This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- The steepness of the slope of this feature will restrict and lengthen the revegetation process. Stabilization of some of the mine waste will likely be necessary.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity. (SWCA 2001)

[2] The 2001 HPP Summary conflates the Ontario Mine Shaft No. 3 with the nearby Ontario Mine Shaft No. 3 Waste Dump. The 2001 summary offers few work recommendations relating specifically to the preservation or interpretation of the shaft and related buildings and surface works.

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.
- Attempts have been made to revegetate the slope, but as noted above, the steepness of the slope and likely the soil composition are not conducive to rapid revegetation.

Conditions and changes observed during the 2019 condition assessment[3] are as follows (Figures 23–30):

- The hoist house, headframe, and shop buildings remain in good condition and are still in use. The hoist remains operable.
- Some site elements to facilitate interpretation for visitors were present, including a square-set timber framework on the front of the primary building and a tram tower moved to the site from its original location.
- The slope of waste dump is approximately 70 percent revegetated; the rest of the slope remains bare. The exposed sections are likely unvegetated due to the steepness of the slope.
- No serious condition issues (such as erosion) were noted; it is likely that the vegetation prevents or limits erosion.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Ontario Mine Shaft No. 3 and Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

- Additional signage describing nonoriginal site elements, such as the timber framework and tram tower, would also facilitate interpretation of the Ontario Mine Shaft No. 3.

[3] The Ontario Mine Shaft No. 3 was not visible due to surrounding buildings; the site as a whole was surveyed, but a detailed condition assessment of the shaft was not conducted.

Figure 23. Overview of Ontario Mine Shaft No. 3, facing northwest.

Figure 24. Overview of Ontario Mine Shaft No. 3 hoist and associated buildings, facing west-northwest.

Figure 25. Overview of Ontario Mine Shaft No. 3 building north of hoist, facing north. Note square-set timbering and tram tower, later additions to building.

Figure 26. Overview of Ontario Mine Shaft No. 3 buildings south of hoist, facing west.

Figure 27. Overview of Ontario Mine Shaft No. 3 Waste Dump, from top, facing northwest.

Figure 28. Overview of Ontario Mine Shaft No. 3 Waste Dump, from top, facing southeast.

Figure 29. Overview of Ontario Mine Shaft No. 3 Waste Dump, from base, facing northwest.

Figure 30. Overview of Ontario Mine Shaft No. 3 Waste Dump, from bottom, facing northwest.

Daly Mine No. 1 Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The 2001 HPP Summary provides a brief description of the Daly Mine No. 1 Waste Dump, which is excerpted here:

> This dump represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits. The dump is located in upper Empire Canyon, about a half mile further up the canyon than the Anchor (Daly-Judge) Drain Tunnel portal. This site is located on 0.51 acres. (SWCA 2001)

Existing conditions were described in the 2001 HPP Summary as follows:

> This basic form of the waste dump remains intact. Some recontouring has taken place in portions of the dump. It is a highly visible feature of a mining landscape. Vegetation has grown up on portions of the dump, although there is still a small amount of bare materials exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- Revegetation efforts have already begun on this mine site.
- A mulch has been spread over the dump and a seed mix used that contained species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.
- The slope of the waste dump is approximately 90 to 100 percent revegetated and is considered complete. Stands of aspen and spruce, along with bushes and forbs, cover the entire slope. Due to recontouring, recent residential development to the northeast, and revegetation, the slope is no longer easily identifiable as a waste dump.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 31–34):

- No serious condition issues (such as erosion) were noted; it is likely that the vegetation prevents or limits erosion.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Daly Mine No. 1 Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
    - As discussed in the following section for the Daly Mine No. 2 Shaft, SWCA recommends installing an interpretive sign only for the Daly Mine No. 1 Waste Dump, which can also be used to discuss the associated shaft.

Additional Recommended Work

No additional work is recommended at this time.

Figure 31. Overview of Daly Mine No. 1 Waste Dump, facing north.

Figure 32. Overview of Daly Mine No. 1 Waste Dump, facing southwest. Note extensive revegetation.

Figure 33. Overview of Daly Mine No. 1 Waste Dump and possible stone wall, facing southeast.

Figure 34. Overview of Daly Mine No. 1 Waste Dump showing revegetation, including tree growth, facing north-northwest.

Daly Mine No. 2 Shaft

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Daly Mine No. 2 Shaft, which is excerpted here:

> The Daly Mine Shaft No. 1 and Shaft No. 2 are located in upper Empire Canyon, about a half mile further up the canyon than the Anchor (Daly-Judge) Drain Tunnel portal. Little remains today from these operations, except some scattered rock foundations or retaining walls, composed of coursed and uncoursed rough stone. (Bowes et al. 2000:67)

Existing conditions were described in the 2001 HPP Summary as follows:

> The rock walls are in poor condition and the area has been heavily disturbed. (SWCA 2001)

The 2000 HPP provides additional details:

> These rock walls represent the extraction and maintenance processes in a mining system. More specifically, they could be associated with boarding houses or bunkhouses . . . but their exact function has not been ascertained. (Bowes et al. 2000:67)

For work recommendations, the 2001 HPP Summary conflates the Daly Mine No. 2 Shaft with the Daly Mine No. 1 Waste Dump. Therefore, the work recommendations and observations relate primarily to the No. 1 Waste Dump. Work recommendations and observations in 2001 were as follows:

- Much of this mine feature has been covered.
- A thick soil cover will be placed on this mine dump.
- This will be followed by the addition of a seed mix that will consist of species a close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

The Daly Mine No. 2 Shaft could not be found during survey, and no condition assessment was possible. Field crews consulted maps and information provided by the EPMOA, but the shaft has likely been obscured as part of the fulfillment of the 2001 work recommendations (personal communication, Douglas Ogilvy, August 27, 2019).

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.
- Because the shaft could not be found, it is presumed that revegetation has been successful.

Work Required to Meet 2001 HPP Summary Recommendations

- Given the distance between the estimated locations of the Daly Mine waste dump and shaft, the unclear present location of the shaft, and the lack of extant resources, SWCA recommends that no

separate interpretive sign for the Daly Mine No. 2 Shaft be installed. The installation of a sign for the Daly Mine No. 1 Waste Dump, discussed above, that incorporates a discussion of the shaft will adequately meet the 2001 HPP Summary recommendations.

Additional Recommended Work

- No additional work is recommended at this time.

Daly-West Mine Headframe, Shaft, and Hoist

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Daly-West Mine Headframe, Shaft, and Hoist, which is excerpted here:

> The Daly-West headframe and Daly-West shaft are located in upper Empire Canyon, about a quarter of a mile above the Daly No. 2 Shaft. The headframe is directly over the Daly-West shaft, and both of these features are still in operable condition. The shaft provides an emergency exit and a ventilation shaft for the Ontario Drain Tunnel No. 2 and other workings.
>
> The headframe is a distinctive mining-related feature that probably dates from 1913, when the mill and hoisting works were destroyed in a fire. It is constructed of riveted steel "laced girders" that are typical of that period. The entire framework is exposed and it presents an impressive sight. A chain-link fence surrounds the headframe for security reasons.
>
> Just upslope of the Daly-West headframe and shaft are traces of the waste dump and/or surface operations of the Meears Company Shaft No. 1, although very little remains of this operation. The Meears Company Shaft No. 2 operation was located immediately to the northeast of the Daly-West headframe and shaft, but no remains of this operation were noted. (Bowes et al. 2000:70)

Existing conditions were described in the 2001 HPP Summary as follows:

> These features are still in operable condition and are maintained as an emergency exit and ventilation source for the drain tunnels. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 35–38):

- The headframe, shaft, and hoist are all still present at the site. However, the headframe collapsed in 2018 and now lies on its side near the other resources. Therefore,
  - the metal structural members of the headframe are deformed;
  - a wood fence has been erected around the headframe, shaft, and hoist to prevent access to the area; this fence replaces a chain-link security fence present in 2000 (Bowes et al. 2000:70);

  - the fence blocks the view of the resources from the ground, although they are visible from a nearby hillside; and
  - the wood fence significantly changes the overall design of the site from its 2001 configuration.
- The shaft is no longer operable and is now covered with a metal grate.
- The hoist is corroded, and the concrete pad has minor amounts of spalling.
- Plant growth surrounds the shaft.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Daly-West Mine Headframe, Shaft, and Hoist should be created and installed to meet recommendations in the 2001 HPP Summary.

Additional Recommended Work

The collapse of the Daly-West Mine headframe represents a significant condition issue, and the following additional work is recommended:

- If possible, the headframe should be returned to its original upright configuration.
- If re-erecting the headframe is not feasible due to cost, insufficient integrity of metal structural members, or other factors, the headframe should be left as-is and interpretive signage explaining its original use and the circumstances of its collapse should be provided.
- The current wood fence, which blocks the view of visitors to the site, should be removed and replaced with a fence allowing greater visibility while also providing security, such as a chain-link or metal post fence.

The hoist mechanisms and shaft also show evidence of deterioration:

- Areas of corrosion on the hoist mechanism should be scraped to a sound surface, and previously painted areas should be repainted to match the current color.
- Plant growth should periodically be removed from around the shaft opening.
- Concrete should be monitored for further deterioration; if deterioration becomes severe or pervasive, it should be repaired using National Park Service (NPS 2007) preservation standards.

Figure 35. Overview of Daly-West Mine Headframe, Shaft, and Hoist, facing north. Note collapsed headframe.

Figure 36. Overview of Daly-West Mine Hoist, facing northeast, with collapsed headframe in background.

Figure 37. Detail of Daly-West Mine Shaft, facing southeast.

Figure 38. Overview of collapsed Daly-West Mine Headframe, facing southeast.

Daly-West Mine Fire Hydrant Shacks

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Daly-West Mine Fire Hydrant Shacks, which is excerpted here:

> These three fire hydrant or water-connection shacks are located at the Daly-West Mine, just upslope from the headframe. One shack has a fire hydrant inside and the others have smaller water pipes and valves. All are painted red with white trim, perhaps as a requirement to indicate their function as water sources for fire fighting.
>
> The cedar shake shingles have been covered with corrugated galvanized steel panels, one of which is missing, exposing the shingles underneath.
>
> All three of these shacks are single-unit, side-gabled structures with one doorway and no windows. The doors are simple batten-type doors and are still intact and operational. The wood frame construction incorporates a variety of lumber sizes, mostly rough-sawn, and the shacks vary somewhat in construction technique, as though they were made up without plans or by different people. The shacks all have board-and-batten siding. The type of wood used for the siding was not determined. The shack closest to the headframe seems to be somewhat newer than the others, judging by the planking used in its construction and some other details, but all appear to be historic. (Bowes et al. 2000:73)

Existing conditions were described in the 2001 HPP Summary as follows:

> Other than some missing galvanized roofing panels and typical weather, these sheds are in reasonably good condition and do not appear to have been significantly altered over time. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.

Three fire hydrant shacks were present. For each, conditions and changes observed during the 2019 condition assessment are as follows (Figures 39–42):

- Fire Hydrant Shack No. 1
  - Fire Hydrant Shack No. 1 is on the south side of the ski area near which all three shacks are located; Fire Hydrant Shack No. 1 is separate from the other two shacks.
  - Settlement has occurred, resulting in vertical displacement of wood sills and walls.
  - Rodent holes are present at the foundation.
  - Weathered wood is present on the walls.

  - Wood shingles are missing and detached from the roof.
  - Signs of insect activity (bore-holes) are present in the wood of walls and roof.

- Fire Hydrant Shack No. 2
  - Shacks No. 2 and No. 3 are on the north side of the ski run, just west of the Daly-West Mine Headframe, Shaft, and Hoist. Shack No. 2 is slightly downhill from Shack No. 3 and is the farthest east of the two shacks.
  - Plant growth is occurring against walls and inside building.
  - Corrugated metal roofing is partially detached on west side and entirely missing on east.
  - Walls have weathered wood, and boards are missing in places.
  - For roof, wood shingles on east side are detached and missing.
  - Door is missing from building.
- Fire Hydrant Shack No. 3
  - Shack No. 3 is west (uphill) of Shack No. 2.
  - Settlement resulting in vertical displacement of foundation and walls.
  - Significant plant growth is occurring against walls and inside building.
  - Walls have weathered wood.
  - Door is missing from building.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Daly-West Mine Fire Hydrant Shacks should be created and installed to meet recommendations in the 2001 HPP Summary.

Additional Recommended Work

- Foundations should be stabilized for Shacks No. 1 and No. 3 by replacing wood sills in kind as needed.
- For all buildings, detached, missing, or deteriorated building elements, such as wood wall boards or roofing materials, should be reattached or replaced in kind.
- Vegetation growing around and inside Shacks No. 2 and No. 3 has the potential to increase moisture in foundation and walls. Vegetation should be cleared from around buildings.
- Doors similar in design and materials to that of Shack No. 1 should be installed on Shacks No. 2 and No. 3 to reduce animal activity and the amount of moisture entering the buildings.

Figure 39. Overview of Daly-West Mine Fire Hydrant Shack No. 1, facing north.

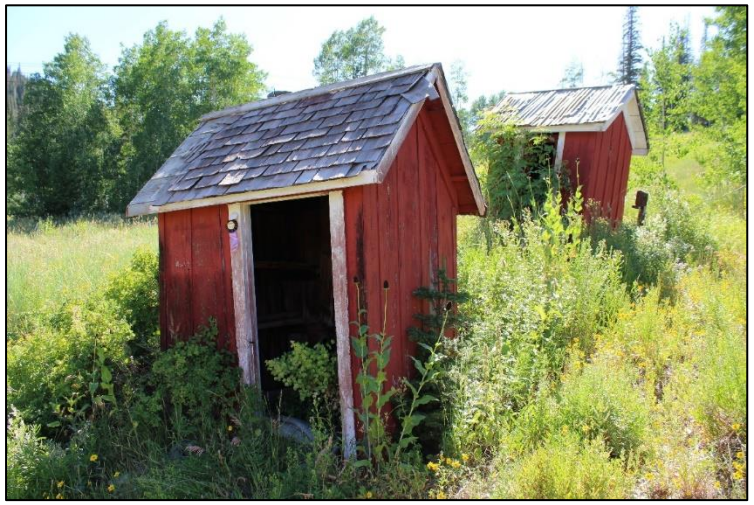

Figure 40. Overview of Daly-West Mine Fire Hydrant Shacks No. 2 (foreground) and No. 3 (background), facing west.

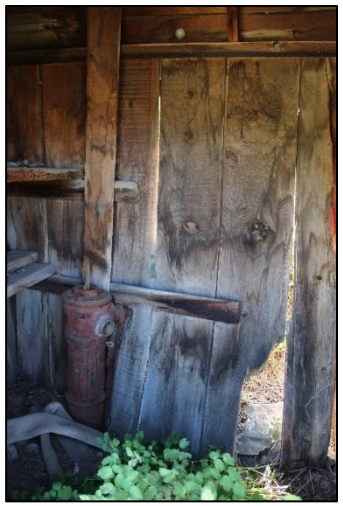

Figure 41. Interior of Daly-West Mine Fire Hydrant Shack No. 2, facing west. Note damaged wood on wall.

Figure 42. Detached roofing on Daly-West Mine Fire Hydrant Shack No. 2, facing east.

Daly-West Mine Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Daly-West Mine Waste Dump, which is excerpted here, and includes a floor plan:

> This feature is a large waste dump in the middle part of Empire Canyon that is associated with the Daly-West mine. It is a substantial feature that is visible from a great distance. (Bowes et al. 2000:77)

Existing conditions were described in the 2001 HPP Summary as follows:

> The basic form of the waste dump remains intact. Some recontouring has taken place in portions of the dump. It is a highly visible feature of a mining landscape. Vegetation has grown up on portions of the dump, although there is still a large amount of bare material exposed to view. (SWCA 2001)

Work recommendations in 2001 were as follows:

- Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump.
- This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed.
- The slope of the waste dump is approximately 50 percent revegetated; the rest of the slope remains bare.
    - The exposed sections are likely unvegetated due to the steepness of the slope or their use as roads and ski runs.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 43–46):

- The dump has been regraded to create dirt roads and a ski slope.
- An artificial stream and pond have been constructed on the west side of the dump.
- No serious condition issues (such as erosion) were noted; it is likely that the vegetation and grading prevent or limit erosion.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Daly-West Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Partial revegetation has been successful, and unvegetated parts of the waste dump are used for ski runs and roads; no additional revegetation efforts are recommended.

Additional Recommended Work

No additional work is recommended at this time.

Figure 43. Overview of Daly-West Mine Waste Dump, facing west, from Highway 224.

Figure 44. Overview of top of Daly-West Mine Waste Dump, facing northwest.

Figure 45. Overview of Daly-West Mine Waste Dump, facing southwest.

Figure 46. Overview of Daly-West Mine Waste Dump, facing northeast.

Diamond-Nemrod Mine Waste Dumps

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Diamond-Nemrod Mine Waste Dumps, which is excerpted here:

> The Diamond-Nemrod waste dumps are located high on the steep hillside above the Daly-West Mine, and are clearly visible from a distance. The associated Farish Shaft is filled and no longer visible. (Bowes et al. 2000:97)

Existing conditions were described in the 2001 HPP Summary as follows:

> The basic form of the dump[s] remains relatively intact. Vegetation has been growing up on portions of the dump, although there is still some bare material exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- These mine dumps will be mulched with a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- However, access to these sites is limited and the merits of establishing access for the purpose of revegetating the mine dumps will have to be made prior to any work.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed for either waste dump.
- The slope of the Diamond Waste Dump is partially revegetated (approximately 30 percent); large portions of the slope remain bare, likely due to the steepness of the slope and soil composition.
- The slope of the Nemrod Waste Dump is partially revegetated (approximately 50 percent); large portions of the slope remain bare, likely due to the steepness of the slope and soil composition.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 47–54):

- A mountain bike trail parallels the northwest side of the slope of the Diamond Waste Dump.
- A large hole (approximately 12 feet in diameter) is present in the ground at the northwest corner of the Nemrod Waste Dump; the cause of the hole is unclear but may be mining related.
- No serious condition issues (such as erosion) were noted.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Diamond Mine Waste Dump and for the Nemrod Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

No additional work is recommended at this time.

Figure 47. Overview of Diamond Waste Dump, facing west.

Figure 48. Overview of Diamond Waste Dump, facing northeast.

Figure 49. Overview of Diamond Waste Dump, facing south.

Figure 50. Overview of Diamond Waste Dump, facing southeast.

Figure 51. Overview of Nemrod Waste Dump, facing west.

Figure 52. Overview of Nemrod Waste Dump, facing east.

Figure 53. Overview of Nemrod Waste Dump, facing north.

Figure 54. Hole in ground northwest of Nemrod Waste Dump, facing northeast.

Anchor Mine Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Anchor Mine Waste Dump, which is excerpted here:

> The Anchor Mine waste dump is a massive feature located in upper Empire Canyon. It is clearly visible from a great distance and is one of the largest and best preserved of the dumps in Empire Canyon. (Bowes et al. 2000:101)

Existing conditions were described in the 2001 HPP Summary as follows:

> The basic form of the dump remains relatively intact. It is a large waste dump and a highly visible part of a mining landscape, although there has been major recontouring of the east side of the dump for a ski run. Vegetation has been growing up on portions of the dump, although there is still a considerable area of bare material exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- Some revegetation has already taken place on this mine feature.
- This is one of the largest mine features in the Flagstaff Project.
- The steep long slopes of the mine dump will make any revegetation efforts difficult.
- The surface of the dump will be covered with soil as it is available.
- The top of the steep slopes will be mulched and seeded with a mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed. An interpretive sign for the Anchor Mine is at the top of the slope.
- The slope of the waste dump is almost entirely revegetated (approximately 90 percent) with low grass. The exposed sections are likely unvegetated due to the steepness of the slope.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 55–56):

- Terracing was observed on the slope; the cause is unclear but may be intentional and represent regrading.
- No serious condition issues (such as erosion) were noted.

Work Required to Meet 2001 HPP Summary Recommendations

- None. Work recommendations from the 2001 HPP Summary have been fulfilled.

Additional Recommended Work

No additional work is recommended at this time.

Figure 55. Overview of Anchor Mine Waste Dump, facing north.

Figure 56. Overview of Anchor Mine Waste Dump, facing northwest. Note terracing of slope.

Quincy Mine Hoist Plant

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Quincy Mine Hoist Plant, which is excerpted here:

> This feature consists of the remains of the hoist plant for the Quincy Mine shaft. It is located in middle Empire Canyon, just upslope of the Daly-West Mine. A rectangular area and traces of rock foundations define the area that was occupied by the hoist building.
>
> A two-cylinder steam-driven hoist is still mounted on its concrete pad. The hoist is powered by a double-acting, crosshead-type engine, which, like many hoist engines and marine windlasses, is integrated into the same iron frame as the hoist. Historic photos depict what appears to be the same kind of hoist being used as a winch at the Anchor Mine for raising ore cars in an incline. This hoist could even be the same hoist as the one at the Quincy, since it was common to buy, sell, trade, and move equipment from one mine to another.
>
> Located between the hoist engine and the mine shaft, and apparently within the area once covered by the hoist building, are the remains of a boiler, consisting of the lower portion of its brick enclosure and the boiler's lower water drum.
>
> The larger, upper drum has been removed, and the bricks from the upper part of the brick enclosure are scattered around the base of the boiler. There are also some remaining vertical iron or steel straps that may have acted as supports or anchors for the brick boiler enclosure. It is difficult to make a determination of the boiler type without removing the debris that covers the remains of the boiler and firebox.
>
> In addition to the boiler and engine, the remains of a mortared-brick pad are located immediately north of the hoist engine. Large bolts protrude from the pad in several places. The north edge of the pad is located approximately 12 feet north of the north edge of the hoist engine pad. This feature may have been associated with the headframe structure. Most of the pad is covered with soil and could not be examined.
>
> The foundation of the hoist plant is little more than a trace, with some irregular rocks visible at the ground surface level. More of the foundation may be intact below the ground surface. (Bowes et al. 2000:79–80)

Existing conditions were described in the 2001 HPP Summary as follows:

> The hoist building is no longer standing, but some pieces of lumber and roofing material can be seen on the ground within the area defined by the hoist building foundations. These items are badly deteriorated and mixed with forest detritus. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed. An interpretive sign for the Quincy Mine is located across a ski run approximately 400 feet to the northeast.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 57–60):

- As noted in the 2000 HPP, only the foundation, hoist, and building elements (including scrap metal, bricks, and concrete) remain (Bowes et al. 2000:79–82). These elements are all in poor condition.
  - The portions of mortared brick are severely deteriorated, including mortar loss and the displacement of bricks.
  - Concrete is also deteriorated, including cracking and scaling.
  - Metal elements of the hoist are corroded.
  - Other building elements are dispersed throughout the undergrowth and were visible only to a limited extent.
  - Extensive plant growth has occurred throughout the site, with plants often growing directly on or through building elements; in some cases, this plant growth has resulted in heaving or displacement.

Work Required to Meet 2001 HPP Summary Recommendations

- None. Work recommendations from the 2001 HPP Summary have been fulfilled.

Additional Recommended Work

- Although the condition of the hoist plant is poor, the level of difficulty in stabilizing an already extremely decayed resource likely makes most treatment options unfeasible. Possible treatment options to assist in the long-term preservation of resources include the following:
  - Pruning plants to prevent additional damage to building elements and to make existing resources more visible to visitors. However, this option may result in theft or vandalism of the remaining materials.
  - Conducting additional archaeological survey to fully record the site. This option would be time- and cost-intensive and was not required by the 2001 HPP Summary.
  - Implementing treatments to stabilize extant resources, such as repairing concrete or replacing and repointing brick. This option would be time- and cost-intensive and was not required by the 2001 HPP Summary.

Figure 57. Overview of Quincy Mine Hoist Plant, facing west.

Figure 58. Overview of Quincy Mine Hoist Plant brick foundations, facing west.

Figure 59. Overview of Quincy Mine Hoist Plant, facing south.

Figure 60. Overview of Quincy Mine Hoist Plant, facing northwest.

Quincy Mine Shaft and Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Quincy Mine Shaft and Waste Dump, which is excerpted here:

> The Quincy Mine shaft is located in the middle Empire Canyon area, directly above the Daly-West Mine site. Little remains of the shaft, since it has been filled in. However, the fill has settled, and a depression clearly shows where the shaft is located. The shaft is directly adjacent to the remains of the hoist plant.
>
> The waste dump at the Quincy Mine is located in the middle Empire Canyon area, directly above the Daly-West Mine site. From a distance, it is the most visible feature of the Quincy Mine. (Bowes et al. 2000:83–84)

Existing conditions were described in the 2001 HPP Summary as follows:

> The shaft has been filled in and concavity exists over the filled shaft to suggest its location adjacent to the hoist plant. The basic form of the waste dump remains intact. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- Revegetation efforts at the top of this mine dump have already started.
- The upper slopes have also been mulched.
- There is a good population of pine trees on the slope of the dump and efforts to cover the steep slope of the dump have been restricted by the trees.
- A seed mix that consists of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance was used.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed. An interpretive sign for the Quincy Mine is located across a ski run approximately 400 feet to the northeast.
- The slope of the waste dump is entirely revegetated with grass, forbs, and pine trees.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 61–64):

- The ground above the shaft has subsided, leaving a depression marking the original location of the shaft.
- No serious condition issues (such as erosion) were noted.

Work Required to Meet 2001 HPP Summary Recommendations

- None. Work recommendations from the 2001 HPP Summary have been fulfilled.

Additional Recommended Work

No additional work is recommended at this time.

Figure 61. Overview of Quincy Mine Shaft site, facing south.

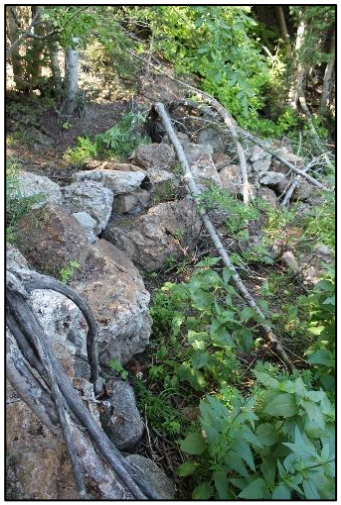

Figure 62. Overview of Quincy Mine Shaft, facing west.

Figure 63. Overview of Quincy Mine Shaft, facing south.

Figure 64. Overview of Quincy Mine Waste Dump, facing southeast.

Little Bell Mine Ore Bin

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Little Bell Mine Ore Bin, which is excerpted here:

> The Little Bell ore bin or "bunker" is a historic structure in middle Empire Canyon, located on the east-facing slope of the Little Bell Mine waste dump and approximately 175 feet east of the Little Bell Mine shaft.
>
> A modern ski slope is located approximately 15 feet east of the ore bin, and two water pipes used for snow-making operations are located about ten feet northeast of the structure. The ski slope occupies the area where the mine's boarding house once stood, and also covers a road that once passed in front of the ore bin. Preliminary research on the Little Bell Mine suggests a construction date of ca. 1900.
>
> The ore bin was used for short-term storage and redistribution of ore from the Little Bell mine, sometimes called “staging.” Ore car tracks, now gone, went from the shaft works to the top of the ore bin. Ore cars were tipped to dump their loads into the ore bin, which would hold the ore until the next horse-drawn ore wagon arrived, at which time the gates at the bottom of the ore bin were opened to allow the ore to pour into the wagon. From there, the wagons transported the ore to beneficiation facilities, such as a mill or smelter. . . .
>
> The ore bin is constructed of wood, excepting the steel-and-iron loading gate doors, nails, steel bracing rods, and other fasteners. The wood is probably a fir species that was imported from the Pacific Northwest. It was quite common at that time to import wood from out of state, since the area's mining operations had used up most of the mature trees in the area for mine timbers and building surface works.
>
> The footprint of the structure measures 12' x 24'. For descriptive purposes, the structure can be divided into two basic components: the ore bin itself and the support structure. The ore bin itself is approximately 17'4" high, plus the height of the support structure. The front wall of the ore bin, including the support structure, is approximately 24 feet high from the top of the front footing. The back wall of the ore bin is approximately 17'4" high from the top of the rear footing.
>
> The support structure consists of a framework of rough-sawn timbers. The front portion of the support structure consists of seven vertical posts, six cross-braces, and a beam across the top, which is in two pieces, joined by a shiplap joint at the center. The timbers in the front portion of the support structure consist of 8" x 8" posts, beams, and cross braces, with slight dimensional variations in their cross sections. The cross braces lean toward the center of the front of the structure (i.e., the three cross braces on the left side lean to the right, and vice-versa). This assembly rests upon a 16" x 16" timber footing.
>
> It is not known if anything lies below this footing. The rear section of the support structure consists of a timber footing placed in the side of the mine waste dump. Owing to the condition of the rear footing, it is difficult to ascertain the original dimensions of the timbers or if anything lies behind or below them. The front and rear sections of the support structure are joined by seven 8" x 8" beams laid front-to-rear, which rest on the top beam of the front support assembly and on the rear footing. Each of these seven

> beams are supported by a 6" x 8" cross brace between the mid point of the beam and the intersection of the corresponding front vertical support post and the front footing.
>
> The ore bin itself is a single-cell structure that has a steeply slanted floor (approximately 45 degrees) that allows the ore to slide down toward the two loading gates that are located at the bottom of the front wall. Its basic construction consists of a timber framework that is lined with wooden planks to form the ore storage cavity. The ore bin uses a greater variety of rough-sawn dimensional lumber than the support structure. Its construction is relatively simple, and all elements are visible, with the exception of certain internal joint structures, such as mortise-and-tenon joints. The preliminary inspection revealed no evidence of paint, varnish, shellac, or other finish coating on the structure. . . .
>
> Seven steel or iron rods are used to secure the front and rear walls against the outward force of ore in the bin. These rods are located about two-thirds of the way up the front wall of the ore bin, and join the front and rear wall posts together. The ends of the rods are threaded and secured with a nut and a cast-iron washer. One of the rods is broken (missing a section inside the bin), but its ends are intact.
>
> The two gate doors were operated by a rack-and-pinion mechanism that raised and lowered them inside a cast-iron track mounted inside the jambs. Two cast-iron rack gears are still riveted to each of the steel gate doors, but the pinion assemblies are missing. (Bowes et al. 2000:88–90)

Existing conditions were described in the 2001 HPP Summary as follows:

> The overall effect of the damage to the ore bin is that the entire structure is supported only by the central support posts and cross braces at the front and rear of the structure, making its support base effectively much smaller and creating a precarious and dangerous situation. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- With the first phase of Flagstaff development the Little Bell Ore bin will be provided permanent shelter in the form of all weather roofing.
- Interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
- Additional building stabilization will occur in summer 2001. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed.
- The 2001 recommendation relating to the installation of a roof over the ore bin has not been addressed.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 65–72):

- Stabilization measures have been taken, such as the replacement of rotted wood posts and the installation of concrete footings for the posts. The posts have also been excavated; soil no longer touches the wood structural members. All sagging and displacement have been corrected.

- Lack of a roof (installation/construction of which was included in the 2001 HPP Summary work recommendations) likely contributes to deterioration. Rain infiltrates the base and walls of the structure, and it fills with snow during the winter. Due to the high walls, snow likely remains for an extended time, resulting in extensive moisture infiltration and damage to lower structural elements, such as the floor joists.
- Other wood boards are weathered and cracked. Some boards have been lost.
- If left untreated, these conditions may result in further deterioration and eventual collapse of the bin.

Work Required to Meet 2001 HPP Summary Recommendations

- Work recommendations in the 2001 HPP Summary relating specifically to the interpretive sign have been fulfilled.
- An all-weather roof has not yet installed or constructed over the ore bin. To reduce or eliminate snow accumulation and further moisture damage on the bin interior, the addition of a flat covering remains a recommendation; this covering could consist of weathered boards with gaps between them, or it could consist of a more impermeable roof concealed under boards or set slightly below the wall tops on the bin interior to minimize visual changes. Adequate ventilation must be maintained on the bin interior.
- The majority of serious structural issues relating to the wood posts have been corrected to meet the 2001 recommendations.

Additional Recommended Work

- Rotted joists or other structural members should be monitored and replaced in kind when their condition threatens the structural stability of the ore bin.
    - Rotted or damaged wood members should be consolidated and retained to the greatest extent possible, using epoxy or another appropriate compound. If retention of the original materials does not prove feasible, rotten sections of wood should be replaced in kind with treated lumber, whereas sound sections should be retained to the maximum extent possible.
- Missing boards or wall elements should be replaced in kind when required to preserve the physical or structural integrity of the ore bin.

Figure 65. Overview of Little Bell Mine Ore Bin, facing northwest.

Figure 66. Overview of Little Bell Mine Ore Bin, facing southwest.

Figure 67. Overview of Little Bell Mine Ore Bin, facing southeast.

Figure 68. Overview of Little Bell Mine Ore Bin, facing east.

Figure 69. Overview of Little Bell Mine Ore Bin, facing west. Note deteriorated boards at top of walls.

Figure 70. Concrete footings and repaired wood posts supporting Little Bell Mine Ore Bin, facing south.

Figure 71. Deteriorated structural member, north end of Little Bell Mine Ore Bin, facing northwest. Note the 1-foot-long probe illustrating depth of rot.

Figure 72. Close up of north gate for Little Bell Mine Ore Bin, with damaged and missing boards visible, facing west.

Little Bell Mine Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Little Bell Mine Waste Dump, which is excerpted here:

> The Little Bell Waste dump is located in middle Empire Canyon, adjacent to the Little Bell ore bin and shaft and south of the Quincy Mine. The mine shaft has been filled in and very little remains of that feature, but the dump is still visible. (Bowes et al. 2000:94)

Existing conditions were described in the 2001 HPP Summary as follows:

> The dump is essentially unaltered part of a mining landscape. Vegetation has been growing up on portions of the dump, although there is still a considerable area of bare material exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- This feature has been partially revegetated.
- Efforts will continue by adding mulch and available soil to the surface.
- A seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed.
- The slope of the waste dump is mostly revegetated (approximately 90 percent) with grass and low forbs.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 73–75):

- No serious condition issues (such as erosion) were noted.

Work Required to Meet 2001 HPP Summary Recommendations

- None. Work recommendations from the 2001 HPP Summary have been fulfilled.

Additional Recommended Work

No additional work is recommended at this time.

Figure 73. Overview of Little Bell Mine Waste Dump, facing southwest.

Figure 74. Overview of Little Bell Mine Waste Dump, facing west.

Figure 75. Overview of Little Bell Mine Waste Dump, facing northwest.

White Pine Mine Log Structure

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the White Pine Mine Log Structure, which is excerpted here:

> The remains of a log structure are located below the White Pine Mine and above the Anchor Mine. It has been suggested that this structure may have been a miner's cabin associated with the White Pine Mine. Further research would be necessary to determine its history.
>
> The structure consists of a one-room, one-story log [structure], with a footprint of approximately 16' x 22'. The highest point of the remaining structure is the northwest corner, which is about nine feet above the current ground level.
>
> The structure once had an attic or loft, as evidenced by notches cut into logs at ceiling height and the remains of some of the loft's floor joists that are visible in and above the debris. The door opening is at the north side of the structure, facing downslope, possibly in consideration of an escape route in the event of an avalanche. Each of the other three walls have one window opening.
>
> The wall logs were built with V-notch construction, also known as "sharp notch," and vary somewhat in size, typically ranging from about 8 to 11 inches in diameter. The sides of a number of the wall logs, both inside and outside of the structure, have been hewn to form a slightly flattened surface. An initial inspection of a few of the flattened areas showed no evidence of the use of an adz to create the flat sides, which were probably hewn with an axe. Chinking strips, split from logs, were nailed into the interstices between the log courses. Other supplementary chinking materials, such as cement or clay, would have been used to seal the joints, but the actual material(s) used are unknown at this time. The cabin uses cut nails in its construction, which were still in common use until the late 1880s or early 1890s, when wire nails began to take over in popularity as the result of cheaper mass-production methods.
>
> The foundation structure, if any, is unknown. It was typical for simple log structures such as this to have been built upon leveled sill logs, although stone foundations were not unusual. (Bowes et al. 2000:105)

Existing conditions were described in the 2001 HPP Summary as follows:

> The roof is missing and may have fallen in. The attic or loft has fallen down, and a few of its remaining structural elements are still visible, mixed in among the debris inside the structure. These components are in poor condition, due to normal processes of weathering and decay. (SWCA 2001)

Work recommendations in 2001 were as follows:

- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has been addressed.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 76–79):

- The structure is largely collapsed. The roof is no longer extant, and the logs making up the walls have partially shifted and fallen out of their original configuration. According to the 2000 HPP, this condition was present during of original recordation (Bowes et al. 2000:105).
- The lower logs were damp at the time of survey. Given that the structure's location is set into a steep slope, moisture may infiltrate down the slope and collect at the sill logs at the rear of the structure.
- The structure is surrounded by thick vegetation, which increases moisture retention in the logs and accelerates decay.

Work Required to Meet 2001 HPP Summary Recommendations

- None. Work recommendations from the 2001 HPP Summary have been fulfilled.

Additional Recommended Work

- Methods to divert moisture and runoff from the structure, to dry soil, and to prevent further deterioration of log sills should be considered. Possible methods for doing so include the following:
  - Regrading the hill around the cabin to direct waterflow away from the structure
  - Removing low vegetation (such as bushes) surrounding the structure

Figure 76. Overview of White Pine Mine Log Structure, facing northeast.

Figure 77. Overview of White Pine Mine Log Structure, facing east.

Figure 78. Overview of White Pine Mine Log Structure, facing southwest.

Figure 79. Detail of logs and notching, White Pine Mine Log Structure, facing east.

White Pine Mine Waste Dumps

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the White Pine Mine Waste Dumps, which is excerpted here:

> **Ridge-Line Waste Dump** – This waste dump is located on a saddle at the ridge line at the top of Empire Canyon. This feature has sometimes been attributed to the Utah Mine. However, it appears to be located on the White Pine claim, whereas the Utah claim is located to the south, on the other side of the ridge line. A map by Gorlinski (1893) depicts a shaft on the Utah claim, but does not show a shaft at the ridge line on the White Pine claim, although if the White Pine shaft was inactive at that time, it may not have been included for that reason. However, a 1901 USGS survey (published 1903) does show a shaft on the ridge line that appears to be in the White Pine claim. Hence, it appears that the ridge-line shaft and associated waste dump are probably associated with the White Pine Mine. In any case, the shaft has been filled and is no longer visible, and its associated waste dump has been heavily disturbed and/or recontoured.
>
> **Downslope Waste Dump** – This feature is located a short distance downslope and to the north of the ridge-line waste dump. It has been attributed to the White Pine operation, although it is apparently adjacent to an adit portal, rather than a shaft. A 1901 USGS survey (published 1903) shows an adit portal at what appears to be the correct location. This adit might lead to the White Pine Mine shaft, but this has not been ascertained. This waste dump is located on the War Eagle claim, which became part of the Anchor Mining Company group of claims, probably in 1885. The relationship of the War Eagle claim to the White Pine claim prior to 1885 has not been determined. This waste dump appears to be intact and basically unaltered from its historic form, other than some minor erosion. (Bowes et al. 2000:103)

Existing conditions were described in the 2001 HPP Summary as follows:

> The ridge-line waste dump has been altered significantly by recontouring operations and other work in the area. The downslope waste dump appears to be intact and in stable condition. (SWCA 2001)

Work recommendations in 2001 were as follows:

- This small mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Progress toward fulfilling the 2001 HPP Summary work recommendations is as follows:

- The 2001 recommendation relating to the installation of an interpretive sign has not been addressed for either waste dump.
- The slope of the Ridgeline Waste Dump is not revegetated; the waste dump remains open and bare of any vegetation.
- The slope of the Downslope Waste Dump is partially revegetated (approximately 30-40 percent). Grasses cover portions of the waste dump, and a number of spruces are also growing on the slope; the majority of the waste dump remains barren.

Conditions and changes observed during the 2019 condition assessment are as follows (Figures 80–86):

- For the Ridgeline Waste Dump, no serious condition issues (such as erosion) were noted; the flat grade of the dump likely precludes significant erosion.
- The majority of the Downslope Waste Dump appears to be stable, but a significant erosional gully was observed on the east side of the slope.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Ridgeline Waste Dump and for the Downslope Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

- Regrade the east side of the Downslope Waste Dump to prevent additional or ongoing erosion.

Figure 80. Overview of White Pine Mine Ridgeline Waste Dump, facing southeast.

Figure 81. Overview of White Pine Mine Ridgeline Waste Dump, facing north.

Figure 82. Overview of White Pine Mine Ridgeline Waste Dump, facing south.

Figure 83. Overview of White Pine Mine Downslope Waste Dump, facing east.

Figure 84. Overview of White Pine Mine Downslope Waste Dump, facing northeast.

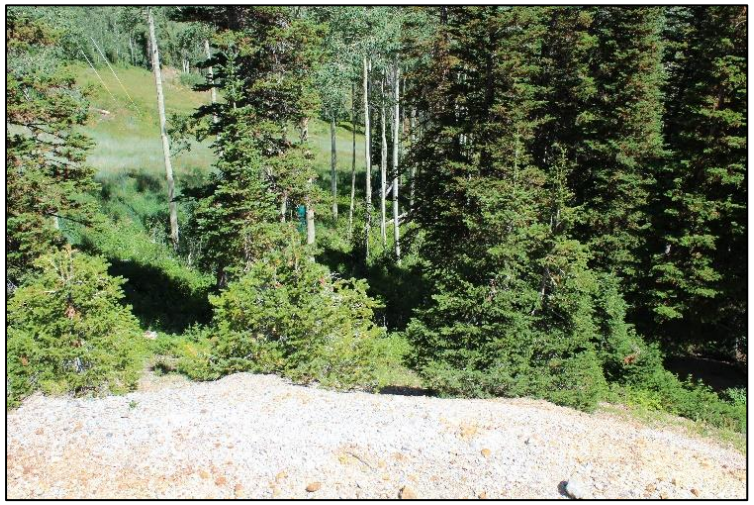

Figure 85. Overview of White Pine Mine Downslope Waste Dump, facing northwest.

Figure 86. Erosion on east side of White Pine Mine Downslope Waste Dump, facing northeast.

Flagstaff Mine Waste Dumps

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Flagstaff Mine Waste Dumps, which were discussed as a single resource. The description is excerpted here:

> The Flagstaff Mine waste dump is located near the top of Flagstaff Mountain, between Ontario Canyon and Empire Canyon. It is not a tall feature, but is spread over a fairly wide area around the shaft location. It is probably in its original form. (Bowes et al. 2000:113)

Existing conditions were described in the 2001 HPP Summary as follows:

> The basic form of this waste dump appears to be intact and more or less in its original form. Some vegetation is grown on parts of the waste dump, but there is still a considerable amount of bare material exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- A seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Per initial direction from EPMOA, this site was not included in field survey. Subsequent ownership review determined that portions of the mine dumps for this mine are on lands subject to Flagstaff Development Agreement. EPMOA advises that revegetation efforts have not been completed on this site and interpretive signage has not been installed.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Flagstaff Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

No additional work is recommended at this time.

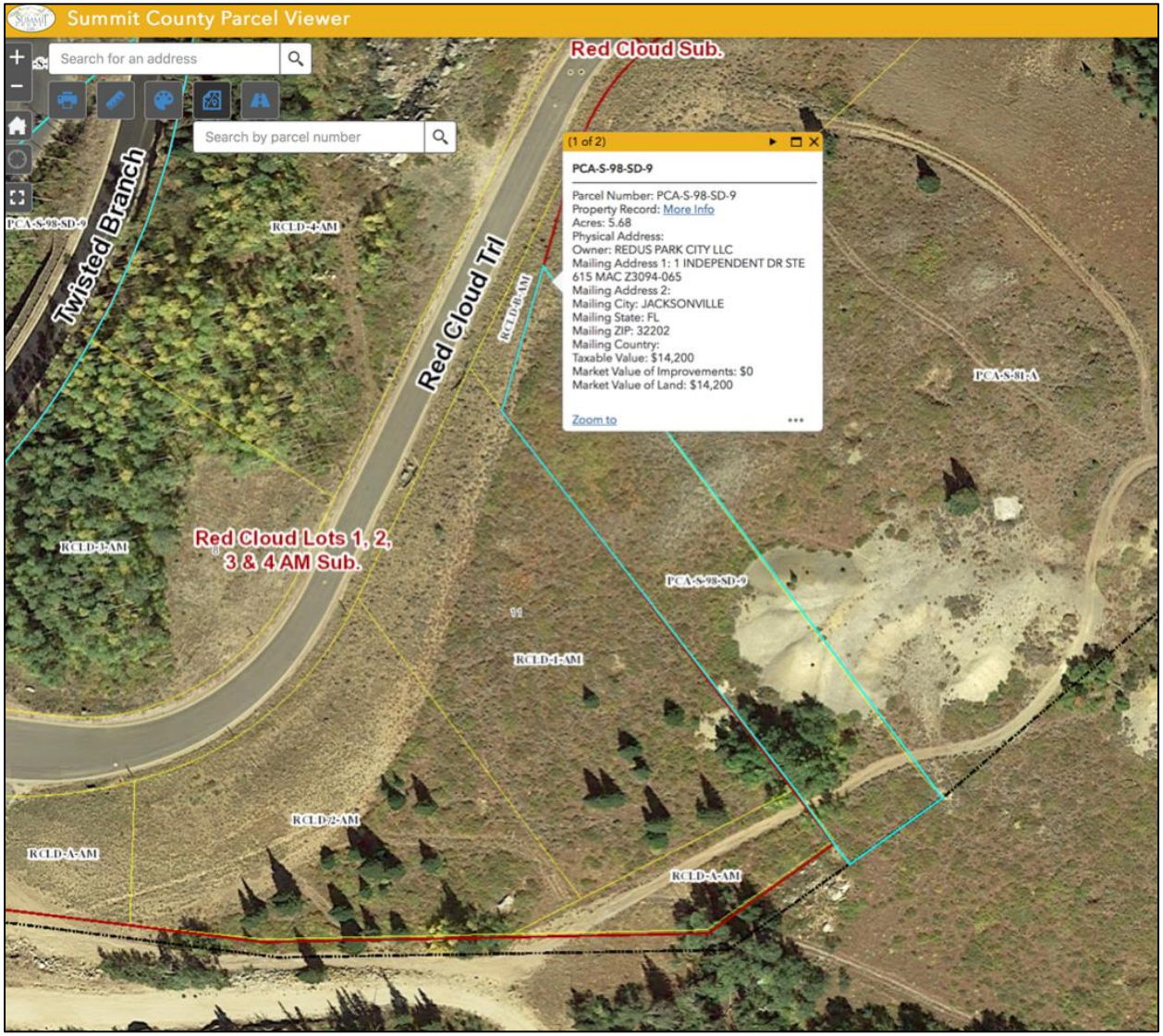

Figure 87. Aerial imagery showing portion of mine dump on property owned by the EPMOA. Image provided by EPMOA.

Naildriver Mine Waste Dump

Summary of 2000–2001 Existing Conditions and Work Recommendations

The original HPP provides a detailed description of the Naildriver Mine Waste Dump, which is excerpted here:

> The Naildriver Mine waste dump is located in the eastern portion of the Flagstaff Mountain Resort project area. It is the only significant remaining historic feature of the Naildriver Mine. The Naildriver shaft was plugged with concrete in 1980 and no historic features of the shaft remain visible. One item of note is that the Naildriver shaft was 2,980 feet deep—more than the height of two Empire State Buildings. (Bowes et al. 2000:115)

Existing conditions were described in the 2001 HPP Summary as follows:

> The dump has not been significantly altered. Some vegetation is growing on parts of the waste dump, but there is still a considerable amount of bare material exposed to view. (SWCA 2001)

Work recommendations and observations in 2001 were as follows:

- This mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used.
- However access is restricted and an evaluation will need to be completed to assess the merits of establishing access to the mine dump to revegetate it.
- With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. (SWCA 2001)

2019 Condition Assessment

Per initial direction from EPMOA, this site was not included in field survey. Subsequent ownership review determined that portions of the mine dumps for this mine are on lands subject to the Flagstaff Development Agreement. EPMOA notes that revegetation efforts have not been completed on this site and interpretive signage has not been installed.

Work Required to Meet 2001 HPP Summary Recommendations

- An interpretive sign specifically for the Naildriver Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary.
- Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.

Additional Recommended Work

No additional work is recommended at this time.

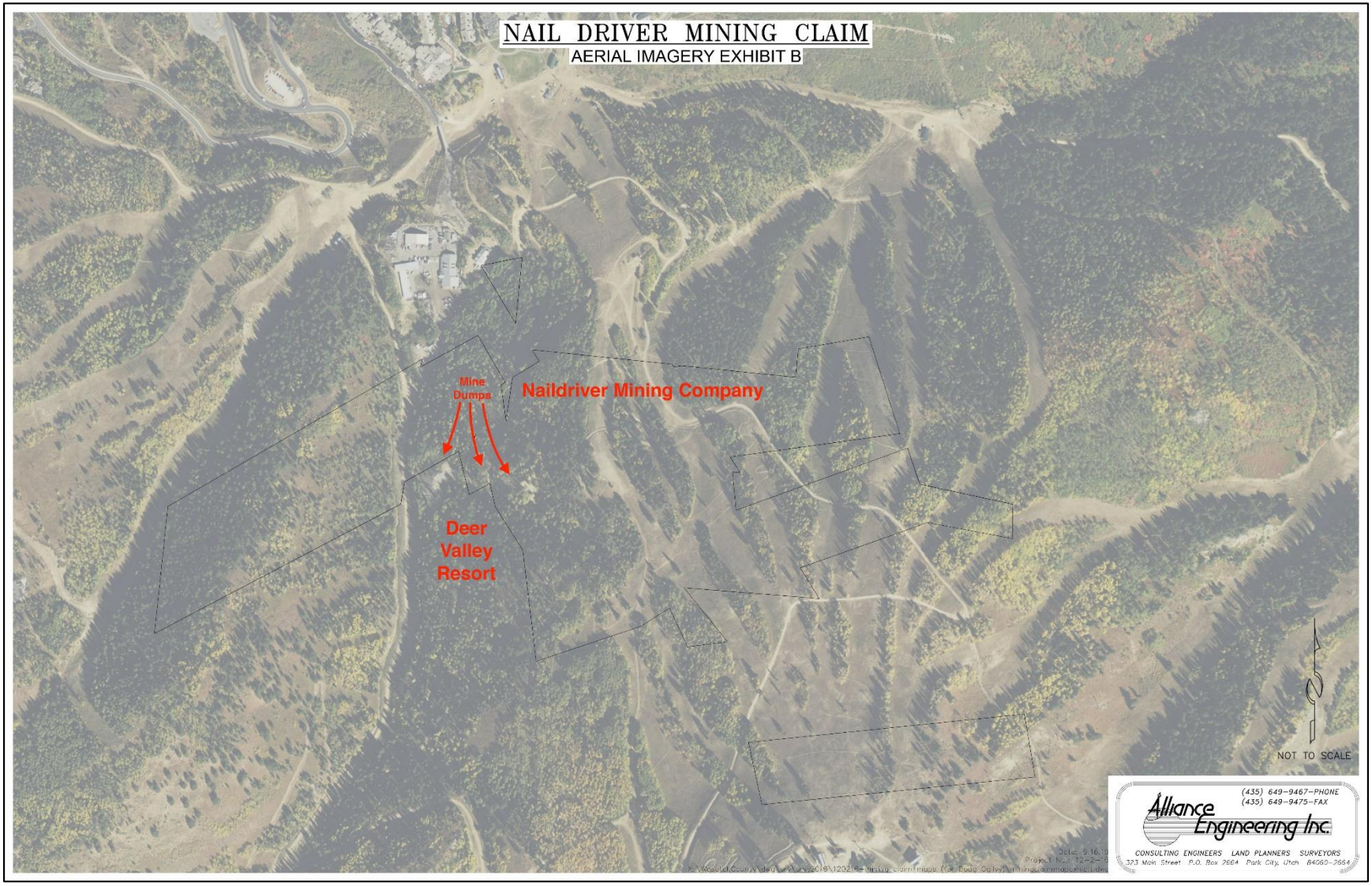

Figure 88. Aerial imagery showing location of Nail Driver Waste Dump and land ownership. The area in the black border is owned by the Naildriver Mining Company. Image by Alliance Engineering, Inc.

SUMMARY AND CONCLUSIONS

In summary, the mining resources addressed in this HPP Update are dispersed across 19 sites and include 10 buildings or structures, four shafts, and 13 waste dumps (Table 2). All buildings and structures are abandoned and are generally in fair to poor condition. However, except for the Judge Mining and Smelting Company Office, the treatments recommended in the 2001 HPP Summary typically involved the creation and installation of interpretive signage and did not include stabilization or restoration. Interpretive signage has not yet been installed at most of these sites (see Table 2). Additional treatment recommendations in this update are not required by the terms of the Development Agreement between the EPMOA and PCMC but are suggested as measures that will stabilize and preserve the resources in their current condition.

The shafts generally could not be observed but are presumed to be in good condition. The waste dumps are generally in good condition as well. Treatments recommended in the 2001 HPP Summary involved both the installation of interpretive signage and the mulching and seeding of waste dumps. Signage has not been installed at most sites, but efforts at revegetation have been made with some success (see Table 2).

The results of the HPP Update are more fully summarized in Table 3, which presents the resources in order of treatment priority. For each resource, the treatment recommendations are also prioritized according to which are most important for ongoing preservation. The 2019 Treatment Completion Summary column identifies whether the treatment recommendations stipulated in the 2001 HPP Summary have been addressed.

Table 2. Sites Included in the 2019 HPP Update and 2001 HPP Summary Work Recommendation Fulfillment Status

Sites Included in the 2019 HPP Update	Resource Type	2001 HPP Summary Work Recommendations Fully Met?
Judge Mining and Smelting Company Office	Building	No
Anchor (Daly-Judge) Drain Tunnel	Structure	No
American Flag Mine Waste Dump	Waste dump	No
Ontario Mine Shaft No. 3	Shaft	No
Daly Mine No. 1 Waste Dump	Waste dump	No
Daly Mine No. 2 Shaft	Shaft	No
Daly-West Mine Headframe, Shaft, and Hoist	Structures (2) and shaft	No
Daly-West Mine Fire Hydrant Shacks	Structures (3)	No
Daly-West Mine Waste Dump	Waste dump	No
Diamond-Nemrod Mine Waste Dumps	Waste dump (2)	No
Anchor Mine Waste Dump	Waste dump	Yes
Quincy Mine Hoist Plant	Structure	Yes
Quincy Mine Shaft and Waste Dump	Shaft and waste dump	Yes
Little Bell Mine Ore Bin	Structure	No
Little Bell Mine Waste Dump	Waste dump	Yes
White Pine Mine Log Structure	Structure	Yes
White Pine Mine Waste Dumps	Waste dump (2)	No
Flagstaff Mine Waste Dumps	Waste dump (2)	No

Sites Included in the 2019 HPP Update	Resource Type	2001 HPP Summary Work Recommendations Fully Met?
Naildriver Mine Waste Dump	Waste dump	No

Table 3. Summary of Treatment Recommendations

Resource	2001 Work Recommendation (SWCA 2001)	2019 Condition	2019 Treatment Recommendations	2019 Treatment Completion Summary
Judge Mining and Smelting Company Office	The building site will be cleaned of debris in summer 2001. With the first phase of Flagstaff development the restoration of the building will be initiated, interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. After restoration, the building is anticipated to serve as office and recreation uses for the Flagstaff development.	The building has a number of moderate to severe condition issues (see the 2019 Condition Assessment section for this resource for a detailed description). The most serious issues are the build-up of debris and soil at the foundation and against the walls, wall movement, and the collapse of the roof. Less serious issues include a detached metal cornice, spalling concrete on the walls, damage to the boards blocking windows and doors, and the build-up of animal refuse in the interior.	The building should be stabilized in its current condition. Walls should be monitored for movement yearly, and a treatment plan should be created if severe movement is noted (McMullin 2019). The roof should be repaired; bracing should also be installed, as indicated in the engineer's report (McMullin 2019). The roof system should be fully documented with drawings and photographs before and after treatment. Portions of the detached metal cornice should be reattached or be replaced in kind as necessary. Damaged boards blocking windows and doors should be replaced. Spalling concrete of main walls should be treated by improving site drainage through the removal of soil and debris and by repairing the roof; however, removing soil has the potential to destabilize the slope and is not a recommended treatment unless ongoing structural damage to walls is noted (McMullin 2019). Animal refuse should be removed from the interior of the building. Interpretive sign explaining the history and function of the building should be created and installed to meet recommendations in the 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. The 2001 HPP Summary recommendation relating to the restoration and reuse of the building did not take place. Instead, measures have been taken to stabilize the building in its current condition. Additional work required to achieve stabilization is detailed in this HPP Update.
Little Bell Mine Ore Bin	With the first phase of Flagstaff development the Little Bell Ore bin will be provided permanent shelter in the form of all weather roofing. Interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. Additional building stabilization will occur in summer 2001.	Stabilization measures have been taken, such as the replacement of rotted wood posts and the installation of concrete footings for the posts. The posts have also been excavated; soil no longer touches the wood structural members. All sagging and displacement have been corrected. Lack of a roof (installation/construction of which was included in the 2001 HPP Summary work recommendations) likely contributes to deterioration. Rain infiltrates the base and walls of the structure and it fills with snow during the winter. Due to the high walls snow likely remains for an extended time, resulting in extensive moisture infiltration and damage to lower structural elements, such as the joists. Other wood boards are undergoing weathering and cracking. Some boards have been lost.	A noninvasive all-weather roof should be installed or constructed over the ore bin to meet recommendations in 2001 HPP Summary. This covering could consist of weathered boards with gaps between them, or it could consist of a more impermeable roof concealed under boards or set slightly below the wall tops on the bin interior to minimize visual changes. Adequate ventilation must be maintained on the bin interior. Rotted joists or other structural members should be replaced in kind. Rotted or damaged wood members should be consolidated and retained to the greatest extent possible. If retention of the original materials does not prove feasible, rotten sections of wood should be replaced in kind with treated lumber, and sound sections should be retained to the maximum extent possible. Missing boards or wall elements should be replaced in kind.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed. The 2001 HPP Summary recommendation relating to the installation of a roof over the ore bin has not been addressed.
Daly-West Mine Headframe, Shaft, and Hoist	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity.	The headframe, shaft, and hoist are all still present at the site. The headframe collapsed in 2018 and now lies on its side near the other resources. The metal structural members of the headframe are deformed as a result of the collapse. A wood fence has been erected around the headframe, shaft, and hoist to prevent access to the area; this fence replaces a chain-link security fence present in 2000 (Bowes et al. 2000:70). The wood fence blocks view of resources and changes site layout from 2001 configuration. The shaft is no longer operable and is now covered with a metal grate. There is plant growth surrounding the shaft. The hoist, which is in the open, is corroded and the concrete pad has minor amounts of spalling.	If possible, the headframe should be returned to its original upright configuration; however, if returning it to its upright configuration is unfeasible, it should be left as-is. Areas of corrosion on the hoist mechanism should be scraped to a sound surface, and the painted sections should be repainted to match current color scheme. Plant growth should periodically be removed from around the shaft opening. Concrete should be monitored for further deterioration; if deterioration becomes severe or pervasive, it should be repaired using NPS (2007) preservation standards. The current wood fence, which blocks the view of visitors to the site, should be removed and replaced with a fence allowing greater visibility while also providing security, such as a chain-link or metal post fence. Interpretive sign specifically for the Daly-West Mine Headframe, Shaft, and Hoist should be created and installed to meet recommendations in the 2001 HPP Summary. The interpretive sign should explain its original use and the circumstances of its collapse.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed.

Resource	2001 Work Recommendation (SWCA 2001)	2019 Condition	2019 Treatment Recommendations	2019 Treatment Completion Summary
Daly-West Mine Fire Hydrant Shacks	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	The Fire Hydrant Shacks were subject to a range of conditions, including the following: • Wood shingles and corrugated metal roofing missing and detached from roof • Vertically displaced wood sills and walls • Weathered wood and missing boards on walls • Plant growth against walls and inside building • Missing doors • Rodent holes at foundation • Signs of insect activity (bore-holes) in wood of walls and roof	Detached or missing roofing materials should be reattached or replaced in kind. Foundations should be stabilized for Shacks No. 1 and No. 3. Detached, missing, or deteriorated building elements, such as wood wall boards, should be reattached or replaced in kind. Vegetation should be cleared from around buildings. Doors similar in design and materials to that of Shack No. 1 should be installed for Shacks No. 2 and No. 3. Interpretive sign specifically for the Daly-West Mine Fire Hydrant Shacks should be created and installed to meet recommendations in the 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed.
White Pine Mine Log Structure	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	The structure is largely collapsed. The roof is no longer extant, and the logs making up the walls have partially shifted and fallen out of their original configuration. According to the 2000 HPP, this condition was present during the original recordation (Bowes et al. 2000:105). The lower logs were damp at the time of survey. Given that the structure's location is set into a steep slope, moisture may infiltrate down the slope and collect at the sill logs at the rear of the structure. The structure is surrounded by thick vegetation, which may also cause moisture retention.	Methods to divert moisture and runoff from the structure, to dry soil, and to prevent further deterioration of log sills should be considered. Possible methods for doing so include regrading the hill around the cabin to direct waterflow away from the structure and removing low vegetation (such as bushes) surrounding the structure.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed.
Quincy Mine Hoist Plant	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	As noted in the 2000 HPP, the foundation, hoist, and building elements (including scrap metal, bricks, and concrete) remain (Bowes et al. 2000:79–82). All remaining building elements are in poor condition.	Although the condition of the hoist plant is poor, the level of difficulty in stabilizing an already extremely decayed resource likely makes most treatment options unfeasible. Possible treatment options to assist in the long-term preservation of resources include the following: • Trimming back plants to prevent additional damage to building elements and to make existing resources more visible to visitors • Conducting additional archaeological survey of the site to record resources • Implementing treatments to stabilize extant resources, such as repairing concrete or replacing and repointing of brick	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed.
Ontario Mine Shaft No. 3	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. The steepness of the slope of this feature will restrict and lengthen the revegetation process. Stabilization of some of the mine waste will likely be necessary. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity.	The hoist house, headframe, and shop buildings remain in good condition and are still in use. The hoist remains operable. Slope of waste dump is partially revegetated (approximately 70 percent); portions of the slope remain bare. No serious condition issues (such as erosion) were noted; it is likely that the vegetation prevents or limits erosion.	Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation. Interpretive sign specifically for the Ontario Mine Shaft No. 3 and Waste Dump should be created and installed to meet recommendations in the2001 HPP Summary. Additional signage describing nonoriginal site elements, such as the square-set timbering and tram tower, would also facilitate interpretation of the Ontario Mine Shaft No. 3.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.
White Pine Mine Waste Dumps	This small mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	For the Ridgeline Waste Dump, no serious condition issues (such as erosion) were noted; the flat grade of the dump likely precludes significant erosion. The majority of the Downslope Waste Dump appears to be stable, but a significant erosional gully was observed on the east side of the slope.	Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation. The east side of the Downslope Waste Dump should be regraded to prevent additional or ongoing erosion. Interpretive signs specifically for both waste dumps should be created and installed to meet recommendations in the 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Slope of Ridgeline Waste Dump is not revegetated; the waste dump remains open and bare of any vegetation. Slope of Downslope Waste Dump is partially revegetated (approximately 30–40 percent). Grasses cover portions of the waste dump, and a number of spruces are also growing on the slope; the majority of the waste dump remains barren.

Resource	2001 Work Recommendation (SWCA 2001)	2019 Condition	2019 Treatment Recommendations	2019 Treatment Completion Summary
Quincy Mine Shaft and Waste Dump	Revegetation efforts at the top of this mine dump have already started. The upper slopes have also been mulched. There is a good population of pine trees on the slope of the dump and efforts to cover the steep slope of the dump have been restricted by the trees. A seed mix that consists of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance was used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	The ground above the shaft has subsided, leaving a depression marking the original location of the shaft. No serious condition issues (such as erosion) were noted.	No additional work is recommended at this time.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed. Work recommendations from the 2001 HPP Summary have been fulfilled regarding revegetation. Slope of waste dump is entirely revegetated with grass, forbs, and pine trees.
Diamond-Nemrod Mine Waste Dumps	These mine dumps will be mulched with a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. However, access to these sites is limited and the merits of establishing access for the purpose of revegetating the mine dumps will have to be made prior to any work. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related features in the immediate vicinity.	Slope of Diamond Waste Dump is partially revegetated (approximately 30 percent); large portions of the slope remain bare. The exposed sections are likely unvegetated due to the steepness of the slope. Slope of Nemrod Waste Dump is partially revegetated (approximately 50 percent); large portions of the slope remain bare. The exposed sections are likely unvegetated due to the steepness of the slope. A mountain bike trail parallels the northwest side of the slope of Diamond Waste Dump. A large hole (approximately 12 feet in diameter) is present in the ground at the northwest corner of Nemrod Waste Dump; the cause of the hole is unclear but may be mining related. No serious condition issues (such as erosion) were noted.	Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation. Interpretive signs specifically for both waste dumps should be created and installed to meet recommendations in the 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed for either waste dump. Work recommendations from the 2001 HPP Summary have been partially fulfilled regarding revegetation.
American Flag Mine Waste Dump	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. The steepness of the slope of this feature will restrict and lengthen the revegetation process. Stabilization of some of the mine waste will likely be necessary. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with the other historic mining-related feature s in the immediate vicinity.	Slope of waste dump is partially revegetated (approximately 50 percent); the rest of the slope remains bare. No serious condition issues (such as erosion) were noted; it is likely that the vegetation and the rock retaining wall at the base of the slope prevent or limit erosion.	Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed. Work recommendations from the 2001 HPP Summary have been partially fulfilled regarding revegetation.
Little Bell Mine Waste Dump	This feature has been partially revegetated. Efforts will continue by adding mulch and available soil to the surface. A seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature describe its relationship with other historic mining-related features in the immediate vicinity.	Slope of waste dump is mostly revegetated (approximately 90 percent) with grass and low forbs. No serious condition issues (such as erosion) were noted.	No additional work is recommended at this time.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed. Work recommendations from the 2001 HPP Summary have been mostly fulfilled regarding revegetation.

Resource	2001 Work Recommendation (SWCA 2001)	2019 Condition	2019 Treatment Recommendations	2019 Treatment Completion Summary
Daly-West Mine Waste Dump	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	The dump has been regraded. Portions of the waste dump are in use as dirt roads. The dump has also been regraded for use as a ski slope. An artificial stream and pond have been constructed on the west side of the dump. No serious condition issues (such as erosion) were noted; it is likely that the vegetation prevents or limits erosion.	Interpretive sign specifically for the Daly-West Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary. Due to the partial revegetation and the use of portions of the waste dump for ski runs and roads, no additional revegetation efforts are recommended.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Slope of waste dump is partially revegetated (approximately 50 percent); the rest of the slope remains bare.
Flagstaff Mine Waste Dumps	A seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature describe its relationship with other historic mining-related features in the immediate vicinity.	Per initial direction from EPMOA, this site was not included in field survey. Subsequent ownership review determined that portions of the mine dumps for this mine are on lands subject to the Flagstaff Development Agreement. EPMOA advises that revegetation efforts have not been completed on this site and interpretive signage has not been installed.	Interpretive sign specifically for the Flagstaff Mine Waste Dumps should be created and installed to meet recommendations in the 2001 HPP Summary. Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Work recommendations from the 2001 HPP Summary have not been fulfilled regarding revegetation.
Naildriver Mine Waste Dump	This mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. However access is restricted and an evaluation will need to be completed to assess the merits of establishing access to the mine dump to revegetate it. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	Per initial direction from EPMOA, this site was not included in field survey. Subsequent ownership review determined that portions of the mine dumps for this mine are on lands subject to Flagstaff Development Agreement. EPMOA advises that revegetation efforts have not been completed on this site and interpretive signage has not been installed.	Interpretive sign specifically for the Naildriver Mine Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary. Revegetation efforts, including the broadcasting of mulch, should continue in order to support ongoing revegetation.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Work recommendations from the 2001 HPP Summary have not been fulfilled regarding revegetation.
Daly Mine No. 1 Waste Dump	Revegetation efforts have already begun on this mine site. A mulch has been spread over the dump and a seed mix used that contained species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	Stands of aspen and spruce, along with bushes and forbs, cover the entire slope. Due to recontouring, recent residential development to the northeast, and revegetation, the slope is no longer easily identifiable as a waste dump. No serious condition issues (such as erosion) were noted; it is likely that the vegetation prevents or limits erosion.	Interpretive sign relating specifically to the waste dump should be created and installed to meet recommendations in 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed. Slope of waste dump is almost entirely revegetated (approximately 90–100 percent).
Anchor (Daly-Judge) Drain Tunnel	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	Some evidence of water infiltration (such as staining and minor cracks in concrete) is present, but no evidence of significant or ongoing damage is visible. The shed-roofed portal protecting the entrance to the tunnel was installed in 2008 (as evidenced by the date inscribed on the metal posts supporting the roof); roofline partially obscures historic inscription panel over tunnel entrance. Tunnel continues to be maintained by the municipality as part of Park City's culinary water system.	Interpretive sign explaining the history and function of the tunnel in relation to the Judge, Anchor, and Daly Mines and its ongoing function as the water source for Park City should be created and installed to meet recommendations in the 2001 HPP Summary.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed.
Daly Mine No. 2 Shaft	Much of this mine feature has been covered. A thick soil cover will be placed on this mine dump. This will be followed by the addition of a seed mix that will consist of species a close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	The Daly Mine No. 2 Shaft could not be found during survey.	For work recommendations, the 2001 HPP Summary conflates the Daly Mine No. 2 Shaft with the Daly Mine No. 1 Waste Dump. Interpretive sign specifically for the Daly Mine No. 1 Waste Dump should be created and installed to meet recommendations in the 2001 HPP Summary. Given the distance between the estimated locations of the Daly Mine waste dump and shaft, the unclear present location of the shaft, and the lack of extant resources, no separate interpretive sign for the Daly Mine No. 2 Shaft needs to be installed. The installation of a sign for the Daly Mine No. 1 Waste Dump that incorporates a discussion of the shaft will adequately meet the 2001 HPP Summary recommendations.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has not been addressed.

Resource	2001 Work Recommendation (SWCA 2001)	2019 Condition	2019 Treatment Recommendations	2019 Treatment Completion Summary
Anchor Mine Waste Dump	Some revegetation has already taken place on this mine feature. This is one of the largest mine features in the Flagstaff Project. The steep long slopes of the mine dump will make any revegetation efforts difficult. The surface of the dump will be covered with soil as it is available. The top of the steep slopes will be mulched and seeded with a mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.	Terracing was observed on the slope; the cause is unclear but may be intentional and represent regrading. No serious condition issues (such as erosion) were noted.	No additional work is recommended at this time.	The 2001 HPP Summary recommendation relating to the installation of an interpretive sign has been addressed. Slope of waste dump is almost entirely revegetated (approximately 90 percent) with low grass. The exposed sections are likely unvegetated due to the steepness of the slope.

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McMullin, Paul W.

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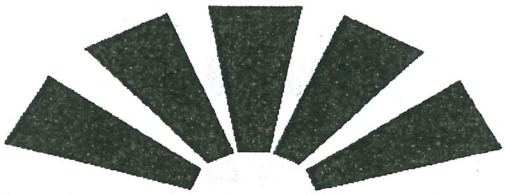
APPENDIX A

2001 Historic Preservation Plan Summary: Exhibit 6



FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

HISTORIC PRESERVATION PLAN

EXHIBIT 6

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

HISTORIC PRESERVATION PLAN

Prepared for

FLAGSTAFF MOUNTAIN RESORT

Plan Summary

Exhibit 6

May 2001
Revised and Approved December 2001

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Historic Preservation Plan dated August 2000 is a 127-page detailed document produced for Flagstaff Mountain by SWCA, Inc., Environmental Consultants. The document describes in great depth the history of the area and the historic sites found within the Flagstaff Mountain Annexation Boundary.

Accompanying this plan summary is a chart that reviews the same information in an abbreviated format. It includes a brief description of every important site within the Boundary, together with a short history, an overview of the existing conditions, and recommendations for preservation work associated with each. Additionally, the chart includes information regarding a proposed phasing timeline for restoration or remediation of the sites together with a proposed signage format.

Figure A is a map depicting the Historic Sites and is intended as an aid to the reader in locating each site within the Flagstaff Mountain Annexation Boundary.

Concurrent with the first CUP authorizing construction of residential units, FMP will submit to Staff a plan detailing the repairs and stabilization of the historic structures and public protection plan for these structures and mining features. The maintenance and ongoing protection efforts for those buildings, which are not part of an ongoing operation, will become the responsibility of the master homeowners association.

FLAGSTAFF MOUNTAIN

Historic Sites and Preservation Plan

CHART – 5 PAGES

NAME	HISTORY	DESCRIPTION	EXISTING CONDITIONS	WORK RECOMMENDATION
Ontario Mine Shaft No.3	The shaft was used to haul ore and waste rock from the workings and to transport miners and equipment in and out of the mine. It also served as an extra exit point and ventilation shaft.	The No.3 shaft is located in the middle Ontario Canyon, west of and adjacent to State Road 224. The associated complex is situated atop a large historic mine waste dump. All of the surface works were replaced in 1970s and consist of a complex of metal buildings that houses offices, a workshop or garage, concentrator equipment, conveyors, the shaft works, and the Silver Mine Adventure museum in the shaft works building. This site is located on 6.19 acres.	The No.3 shaft and the modern surface works appear to be in good overall condition. Despite the end of the mining activities in the area, the shaft is still operational, and still serves the needs of underground work crews who continually maintain several miles of drain tunnels that supply water to the Park City Culinary water system and to the Jordanelle Water Conservancy district.	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. The steepness of the slope of this feature will restrict and lengthen the revegetation process. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Anchor (Daly-Judge) Drain Tunnel	The tunnel and its portal are associated with ventilation, water drainage, ore haulage, and access for equipment, utilities, and employees.	The drain tunnel is located approximately one mile up Empire Canyon. The portals covered extension is directly adjacent to the east wall of the judge Mining & Smelting Company office building. Access to the tunnel is secured with a hinged steel grating that allows ventilation. A doorway in the changing room in the rear section of the office building connects directly to the tunnel. This opening is covered with steel grating. The portal itself is of concrete construction, and its covered extension is a wood frame structure with galvanized corrugated steel panels.	The portal appears to be in generally good condition. The tunnel is being maintained as part of Park City' culinary water system, and it is assumed that this feature is still structurally sound. However, there are some wooded patches on the east wall of the portal extension that may need to be secured. The condition of the sills and the bottoms of the wooden posts in the east wall is unknown. There are some loose corrugated roofing panels at the northeast corner of the roof of the Judge Mining & Smelting Company Office building, this problem would be addressed by deficiency mitigation work on that structure.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Judge Mining & Smelting Company Office	The building housed administrative offices for the Judge Mining & Smelting Company operations, which include mining, milling, and smelting operations, and their continued maintenance. It also provided shower and lavatory facilities for mine workers.	The office is located adjacent to the extension of the Anchor (Daly-Judge) Drain tunnel portal. It is a simple, front-gabled, one-story, concrete-walled structure that is divided into two functional areas. The front section was used as an office and is subdivided into six rooms. The rear section consists of a large Changing Room for miners that connects with the Anchor (Daly-Judge) Drain tunnel via a doorway in its east wall. A small shedroofed extension on the west side of the building serves as an entry to the rear section.	All of the building's walls, plus at least one internal wall, are constructed of poured concrete. The exterior walls are finished with stucco, which shows no obvious evidence of paint and retains its natural appearance. The stucco appears to be original and has the logo "J.M. & S. Co. -1920" incised into the front gable above to the original entrance. All of the windows, with the exception of three windows on the east wall of the Changing Room, are wood-framed, double-hung windows, without counterweights or springs. The building appears to be in fair condition, but is in need of some repairs.	The building site will be cleaned of debris in summer 2001. With the first phase of Flagstaff development the restoration of the building will be initiated, iterpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. After restoration, the building is anticipated to serve as office and recreation uses for the Flagstaff development.

NAME	HISTORY	DESCRIPTION	EXISTING CONDITIONS	WORK RECOMMENDATION
Explosives Bunker	The bunker was used to store explosives, which is clear from the large incised sign on the façade.	This feature is located against a hillside, a few hundred feet north of the Judge Mining & Smelting Company office building. It consists of a concrete explosives bunker that appears to have been used by the Judge Mining & Smelting Company.	This bunker appears to be in excellent condition and unaltered, with the possible exception of some hasps or locking hardware that might be original, but could have been welded to the steel door at a later date. However, the interior of the structure was not available for inspection, so its condition is unknown.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
American Flag Mine Waste Dump	This dump represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	This feature is located one mile up Empire Canyon, on the east side of the canyon and opposite the site of the Daly-Judge Mill. Very little remains of the American Flag Mine itself, although it may have some potential to yield archaeological remains. This site is located on .60 acres.	The basic form of the waste dump has been significantly altered by landslides and other activities in the area. Vegetation has been growing up on portions of the dump.	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. The steepness of the slope of this feature will restrict and lengthen the revegetation process. Stabilization of some of the mine waste will likely be necessary. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Daly Mine No.1 Waste Dump	This dump represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The dump is located in upper Empire Canyon, About a half mile further up the canyon than the Anchor (Daly-Judge) Drain Tunnel portal. This site is located on .51 acres.	This basic form of the waste dump remains intact. Some recontouring has taken place in portions of the dump. It is a highly visible feature of a mining land landscape. Vegetation has grown up on portions of the dump, although there is still a small amount of bare material exposed to view.	Revegetation efforts have already begun on this mine site. A mulch has been spread over the dump and a seed mix used that contained species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Daly Mine No.2 Shaft	The shaft was used to haul ore and waste rock from the workings and to transport miners and equipment in and out of the mine. It also served as an extra exit point and ventilation shaft.	The shaft is located in upper Empire Canyon, About a half mile further up the canyon than the Anchor (Daly-Judge) Drain Tunnel portal. Little remains today from these operations, except some scattered rock foundations or retaining walls, composed of coursed and uncoursed rough stone.	The rock walls are in poor condition and the area has been heavily disturbed.	Much of this mine feature has been covered. A thick soil cover will be placed on this mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Daly - West Mine Headframe, Shaft and Hoist	The headframe, shaft, and hoist was used to haul ore and waste rock from the workings and to transport miners, equipment, and supplies in and out of the mine. It also served as an extra exit point and ventilation shaft.	The headframe, shaft, and hoist are located in upper Empire Canyon, about a quarter of a mile above the Daly No.2 Shaft.	These features are still in operable condition and are maintained as an emergency exit and ventilation source for the drain tunnels.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.

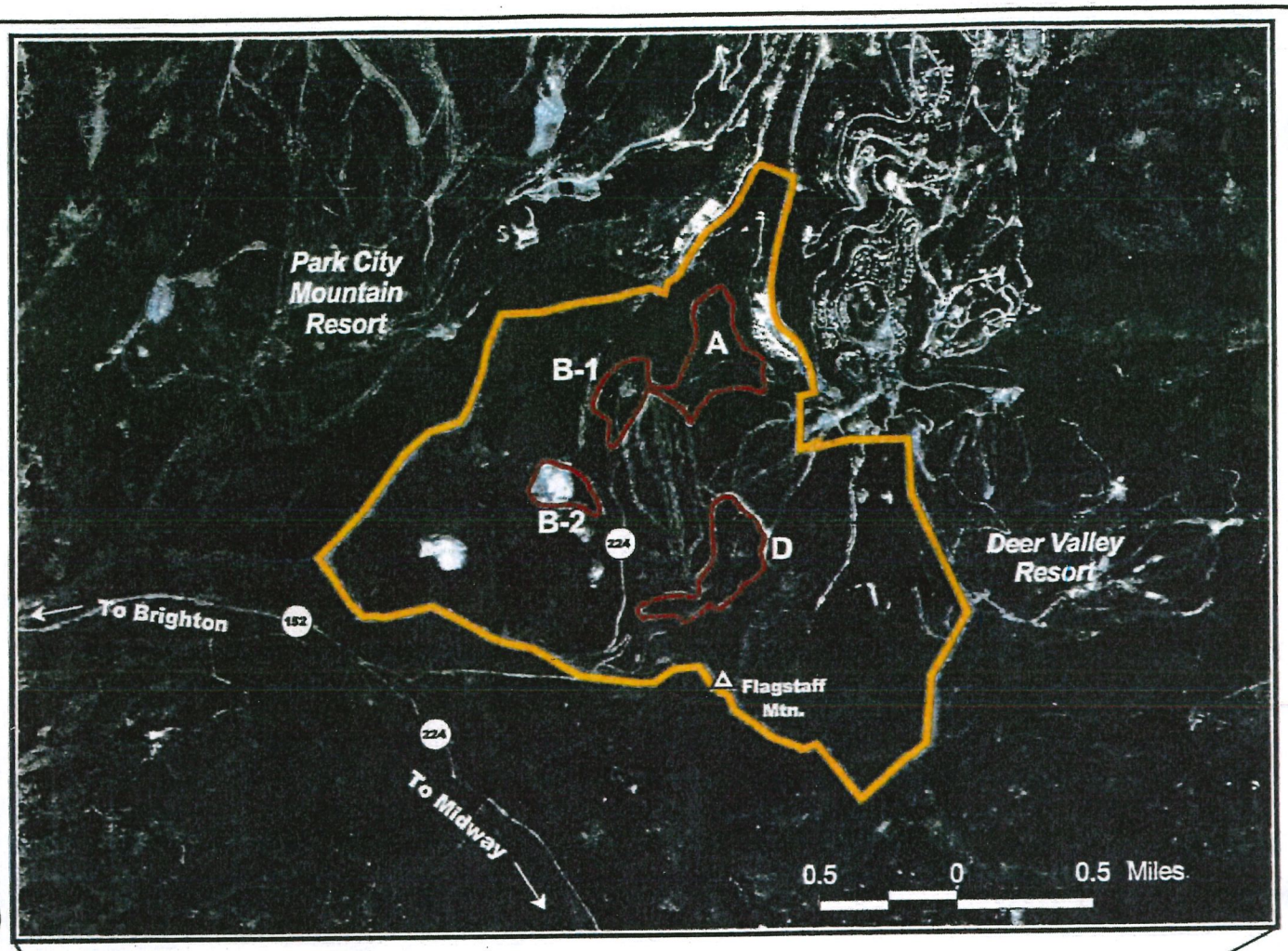
NAME	HISTORY	DESCRIPTION	EXISTING CONDITIONS	WORK RECOMMENDATION
Daly - West Mine Fire Hydrant Shacks	These features provided sources of pressurized water for fire fighting or other purposes.	These three fire hydrant or water connection shacks are located at the Daly-West Mine, just upslope from the headframe. One shack has a fire hydrant inside and the others have smaller water pipes and valves. All are painted red with white trim, perhaps as a requirement to indicate their function as water sources for fire fighting.	Other than some missing galvanizing roofing panels and typical weathering, these sheds are in reasonably good condition and do not appear to have been significantly altered over time.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Daly - West Mine Waste Dump	The dump represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	This feature is a large wasted dump in the middle part of the Empire Canyon that is associated with the Daly-West mine. This site is located on 14.55 acres.	This basic form of the waste dump remains intact. Some recontouring has taken place in portions of the dump. It is a highly visible feature of a mining land landscape. Vegetation has grown up on portions of the dump, although there is still a large amount of bare material exposed to view.	Revegetation of this mine feature will involve, from time to time, broadcasting mulch from the top and bottom of the mine dump. This will be followed by the addition of a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Quincy Mine Hoist Plant	The boiler and hoisting engine were used to operate the Quincy Mine shaft equipment, which was used to carry miners, equipment, and supplies in and out of the mine workings, and to haul ore out of the mine.	This feature consists of the remains of the hoist plant for the Quincy Mine Shaft. It is located in middle Empire Canyon, just upslope of the Daly-West Mine. A rectangular area and traces of rock foundations define the area that was occupied by the hoist building.	The hoist building is no longer standing, but some pieces of lumber and roofing material can be seen on the ground within the area defined by the hoist building foundations These items are badly deteriorated and mixed with forest detritus.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Quincy Mine Shaft and Waste Dump	The shaft was used to haul ore and waste rock from the workings and to transport miners, equipment, and supplies in and out of the mine. It also served as an extra exit point and ventilation shaft. The dump was used to discard waste rock that was removed from a mine in order to access high-garage ore deposits.	These two features are located in the middle Empire Canyon area, directly above the Daly-West Mine site. Little remains of the shaft, since it has been filled in. However, the fill has settled, and a depression clearly shows where the shaft is located. This site is located on 1.92 acres.	The shaft has been filled in and concavity exists over the filled shaft to suggests its location adjacent to the hoist plant. The basic form of the waste dump remains intact.	Revegetation efforts of the top of this mine dump has already started. The upper slopes have also been mulched. There is a good population of pine trees on the slope of the dump and efforts to cover the steep slope of the dump have be en restricted by the trees. A seed mix that consists of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance was used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Little Bell Mine Ore Bin	The ore bin was used for short-term storage and redistribution of ore from the Little Bell mine, sometimes called "staging."	The bunker is located in middle Empire Canyon, on the east-facing slope of the Little Bell Mine waste dump and approximately 175 feet east of the Little Bell Mine shaft. The ore bin is constructed of wood, excepting the steel-and-iron loading gate doors, nails, steel bracing rods, and other fasteners. The footprint of the structure measures 12' x 24'.	The overall effect of the damage to the ore bin is that the entire structure is supported only by the central support posts and cross braces at the front and rear of the structure, making its support base effectively much smaller and creating a precarious and dangerous situation.	With the first phase of Flagstaff development the Little Bell Ore bin will be provided permanent shelter in the form of all weather roofing, and interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity. Additional building stabilization will occur in summer 2001.

NAME	HISTORY	DESCRIPTION	EXISTING CONDITIONS	WORK RECOMMENDATION
Little Bell Mine Waste Dump	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The waste dump is located in middle Empire Canyon adjacent to Little Bell ore bin and shaft and south of the Quincy Mine. The mine shaft has been filled in and very little remains of that feature, but the dump is still visible. This site is located on 2.82 acres.	The dump is essentially unaltered part of a mining landscape. Vegetation has been growing up on portions of the dump, although there is still a considerable area of bare material exposed to view.	This feature has been partially revegetated. Efforts will continue by adding mulch and available soil to the surface. A seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Diamond-Nemrod Mine Waste Dumps	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The dump is located high on the steel hillside above the Daly-West Mine, and are clearly visible from a distance.	The basic form of the dump remains relatively intact. Vegetation has been growing up on portions of the dump, although there is still some bare material exposed to view.	These mine dumps will be mulched with a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. However, access to these sites is limited and the merits of establishing access for the purpose of revegetating the mine dumps will have to be made prior to any work. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Anchor Mine Waste Dumps	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The dump is a massive feature located in upper Empire Canyon. It is clearly visible from a great distance and is one of the largest and best preserved of the dumps in Empire Canyon.	The basic form of the dump remains relatively intact. It is a large waste dump and a highly visible part of a Mining land landscape, although there has been major recontouring of the east side of the dump for a ski run. Vegetation has been growing up on portions of the dump, although there is still a considerable area of bare material exposed to view.	Some revegetation has already taken place on this mine feature. This is one of the largest mine features in the Flagstaff Project. The steep long slopes of the mine dump will make any revegetation efforts difficult. The surface of the dump will be covered with soil as it is available. The top of the steep slopes will be mulched seeded with a mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
White Pine Mine Log Structure	The original purpose of this structure has not been determined. It may have been a residence, or it could have functioned as an administrative building.	The remains of the log structure are located below the White Pine Mine and above the Anchor Mine. The structure consists of a one-room, one story log building, with a footprint of approximately 16' x 22'. The highest point of the remaining structure is the northwest corner, which is about nine feet above the current ground level.	The roof is missing and may have fallen in. The attic or loft has fallen down, and a few of its remaining structural elements are still visible, mixed in among the debris inside the structure. These components are in poor condition, due to normal processes of weathering and decay.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
White Pine Mine Waste Dumps	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The Ridge-Line Waste Dump is located on a saddle at the ridge line at the top of Empire Canyon. The Downslope Waste Dump is located a short distance downslope and to the north of the ridge-line waste dump. This site is located on .43 acres.	The ridge-line waste Dump has been altered significantly by recontourinig operations and other work in the area. The downslope waste dump appears to be intact and in stable condition.	This small mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.

NAME	HISTORY	DESCRIPTION	EXISTING CONDITIONS	WORK RECOMMENDATION
Flagstaff Mine Shaft	The shaft was used to haul ore and waste rock from the workings and to transport miners, equipment, and supplies in and out of the mine. It also served as an extra exit point and ventilation shaft.	The shaft is located near the top of the Flagstaff Mountain, which lies between Empire Canyon and Ontario Canyon. The shaft has been capped with a concrete slab and very little remains of the mining operation other than its waste dump and some scattered materials.	The structural integrity of the slab is unknown. Some dilapidated fencing surrounds the concrete slab, but is no longer protecting it.	With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Flagstaff Mine Waste Dumps	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The dump is located near the top of the Flagstaff Mountain, between Ontario Canyon and Empire Canyon. It is a tall feature, but is spread over fairly wide area around the shaft location. This site is located on 1.07 acres.	The basic form of this waste dump appears to be intact and more or less in its original form. Some vegetation is growing on parts of the waste dump, but there is still a considerable amount of bare material exposed to view.	This mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.
Naildriver Mine Waste Dump	This feature represents the discarded waste rock that was removed from a mine in order to access high-grade ore deposits.	The dump is located in the eastern portion of the Flagstaff Mountain Resort project area. It is the only remaining historic feature of the Nail Driver Mine. This site is located on .43 acres.	The dump has not been significantly altered. Some vegetation is growing on parts of the waste dump, but there is still a considerable amount of bare material exposed to view.	This mine dump will be mulched and a seed mix that will consist of species as close to native as possible but focusing on the ability to have sustainable growth and foster soil stability with minimal maintenance will be used. However access is restricted and an evaluation will need to be completed to assess the merits of establishing access to the mine dump to revegetate it. With the first phase of Flagstaff development interpretive signage will be installed to explain the history and function of this feature and describe its relationship with other historic mining-related features in the immediate vicinity.

APPENDIX A

FIGURES



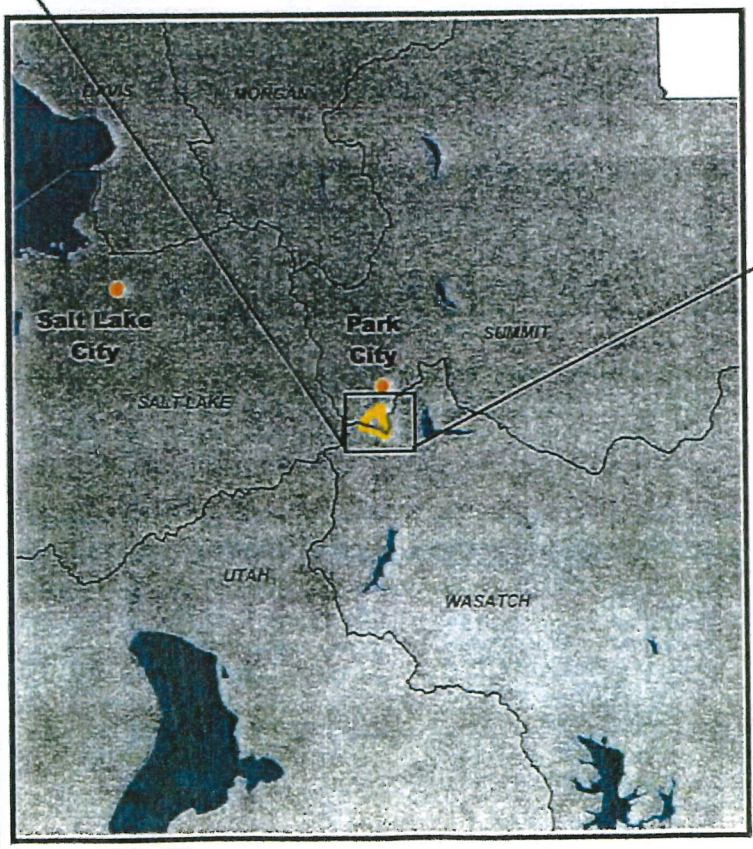
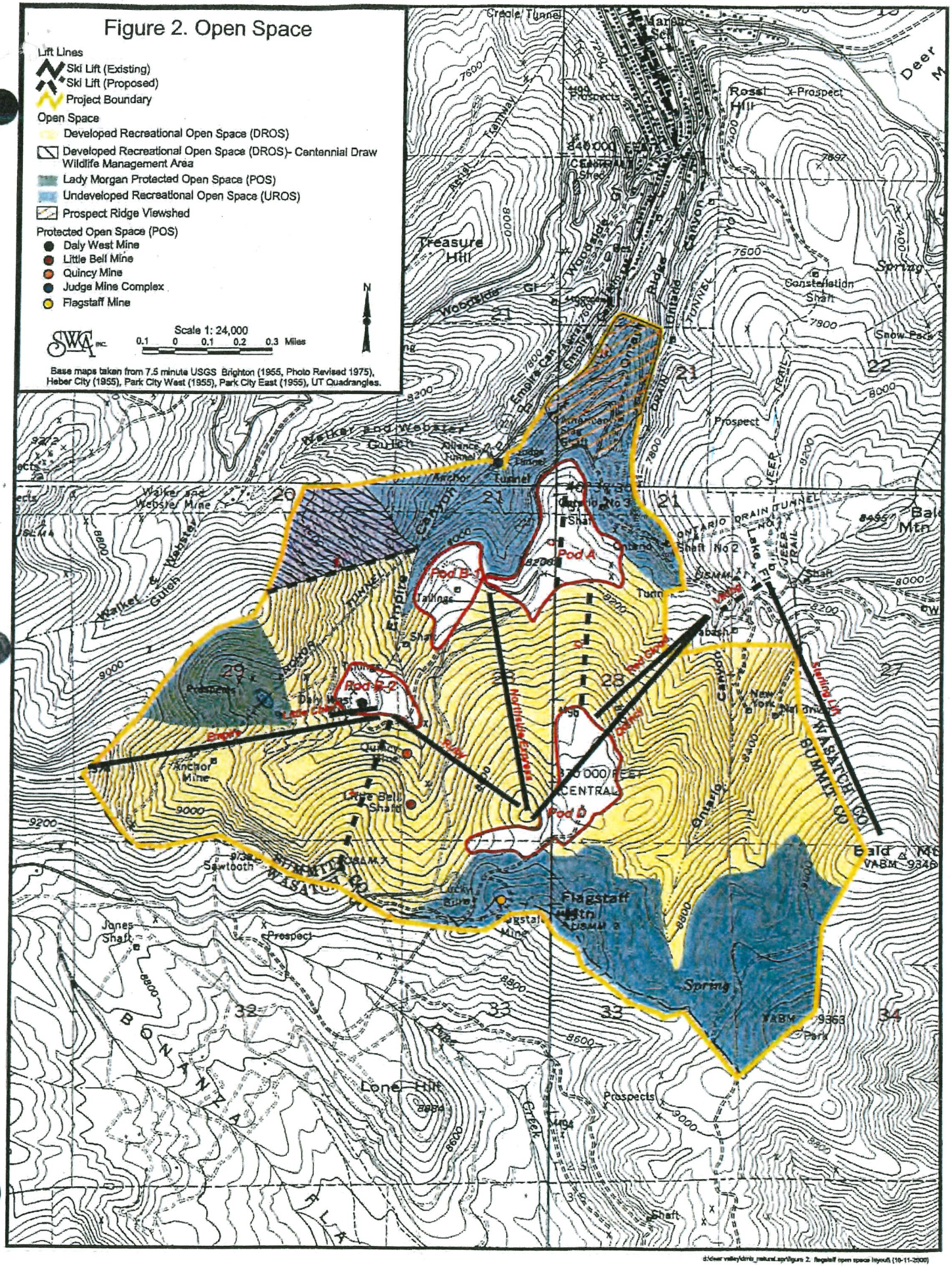


Figure 1. Location of Flagstaff Mountain Resort Plan Area, Summit County, Utah.

SWCA INC.

N

d:\deer valley\dmb_natural.apr\Figure 1. Flagstaff Project Location Layout (10-11-2000)



d:\deer valley\dmb_natural_sp\figure 2. flagstaff open space layout\ (10-11-2000)

APPENDIX B

2019 Engineering Report for Judge Mining and Smelting Company Office

October 9, 2019

JUDGE BUILDING STABILIZATION
19.077

DOUGLAS OGILVY
Empire Pass EPMOA
Park City, UT

RE—STRUCTURAL FINDINGS & RECOMMENDATIONS

DEAR DOUGLAS—

This letter summarizes the findings of our structural observations and calculations for the Judge Mine Office Building. We visited the structure on October 13, 2019 and visually observed the condition of the building and took dimensional field measurements.

Based on our observations and calculations, we have prepared roof repair drawings. These address missing, broken, and overstressed wood purlins and decking. The structural steel trusses have adequate capacity.

The walls on the south end of the structure are tipping towards the west. It appears the soil build up on the east side is pushing the east wall, which is then pushing the west wall by way of the trusses. Because the east wall may be stabilizing the slope, we do not recommend removing the soil in this area, unless a geotechnical engineer assess the slope stability. Additionally, it is unclear if the walls are continuing to move. We therefore recommend monitoring the movement of the walls each year. This can be done by a surveyor, or someone with the necessary knowledge and skill. If the walls show movement over 2-3 inches at the top, we can develop a repair plan.

There is a small, overhang on the west side of the building. The concrete has been eroded here. We do not recommend repair currently, as the concrete is hard in the wall that remains, and the roof framing cantilevers sufficiently to carry the roof loading.

Respectfully,

Paul W. McMullin, SE, PhD
Structural Engineer

10/8/2019 1:25:24 PM

GENERAL STRUCTURAL NOTES

A— General

1) Bring conflicts or omissions in the plans and specifications to the immediate attention of the Engineer.
2) By submission of bid, the contractor shall acknowledge acceptance of the contract documents as adequate definition of the scope of work. Contractor shall familiarize themselves with all contract documents and conduct a complete field survey. Change orders based on inadequate scope definition will not be accepted.
3) Written approval is required for any change to the work. Change approval does not constitute approval of a change order.
4) Shop drawing review does not relieve the Contractor, Fabricator, Erector, or other supplier from completing the work in accordance with the plans and specifications.
5) Do not scale drawings.
6) The Contractor is responsible for means, methods, procedures, techniques and sequences.
7) Perform all work in accordance with owner, local, state, and federal safety requirements.
8) Time material delivery to ensure uninterrupted work.
9) Keep all materials off the ground and protect them from deterioration.
10) Do not cut any structural member without written approval from the Structural Engineer.
11) Plan installation of new work and any modification of existing work to ensure minimal interference with facility operation. All system shutdowns shall be coordinated with the owner.

B— Quality Control

1) Report any non-conforming work immediately to the Contractor and Structural Engineer.
2) Construct work in a thorough, workmanlike manner, according to the plans and specifications.
3) The owner, or owner's agent, shall reject any sub-standard work or material at their sole discretion.
4) Check all dimensions and verify all field conditions and existing equipment locations prior to ordering materials or starting work.
5) Contractor shall ensure quality of work through in-house means or by hiring a third party.
6) Owner shall engage a third party to inspect and test work indicated in the sections below.
7) Special inspectors shall be qualified and demonstrate competence to the satisfaction of the building official or owner.
8) Distribute inspection and testing reports to the Owner, Contractor, Engineer, and jurisdiction when required, within 5 working days.
9) Correct any non-conforming work before continuing with dependent work.
10) Observation of construction work by Ingenium Design is not for approval or special inspection.

C— Basis of Design

Codes

	ASCE 7-16

The intent of this project is solely to stabilize the roof structure. It does not bring the structure to a condition that makes it inhabitable.

Risk Category

	I

Snow Loads

Importance Factor I_s	0.80
Ground Snow Load p_g	180 lb/ft²
Exposure Factor C_e	1.0
Thermal Factor C_t	1.2
Flat Roof Snow Load p_f	121 lb/ft²
Sloped Roof Snow Load p_s	73 lb/ft²

D— Timber

Conform to the latest edition of the following—

- National Design Specification for Wood Construction (NDS)
- Manual for Engineered Wood Construction
- ASTM D5456 Standard Specification for Evaluation of Structural Composite Lumber Products
- AITC A190 American National Standard for Structural Glued Laminated Timber
- ASTM AD3737 Standard Practice for Establishing Allowable Properties for Structural Glued Laminated Timber
- AWPA U1 and M4

D.1 Materials

Framing Members

	Type	Species/MOE	Grade
Sawn Lumber			
Dressed Lumber		DF	No. 2
5x and greater		DF	No. 1
Studs		DF	Stud
Blocking/Misc		DF	No. 2
LVL		2.0 E	F_b=2,750 lb/in²

Pressure treat, or wrap in tar paper, timber in contact with concrete, masonry, or soil

Other Materials

Structural Panels		
	Typical	Exposure 1
	Outside	Exterior
	High Humidity	Exterior
Wood Bolts		ASTM A307
Connection Plate		ASTM A36
Proprietary Metal Plate Connectors		Simpson™ or approved equal
Nails	All nails sizes are common	
Galvanize		
	Exterior steel	
	Steel in contact with pressure treated lumber	

D.2 Construction

Framing

Coordinate openings with other trades	
Fasteners	
	Nail as indicated in the plans
	Follow the IBC minimum nailing requirements where not indicated

Structural Panels

Orientation	
	Orient long panel dimension perpendicular to framing members
Blocking	
	Block roof and floor panels where indicated
	Block all wall panels
Nailing	
	Min spacing, 6" at edges, 12" in field
Gap	
	1/8" between panels
	½" at wall/roof edges

D.3 Quality

Inspection

Construction	Construction follows the plans and specifications
Grade Stamps	Material has grade stamps indicating conformance with the specified material grades above

nd anchor placement

E— Post Installed Anchors

E.1 Standards

Conform to the latest edition of the following—

- ACI Manual of Concrete Practice
- ACI 301 Specifications for Structural Concrete
- ACI 318 Building Code Requirements for Structural Concrete and Commentary
- ACI 355.2 Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary
- ACI 355.4 Qualification of Post-Installed Adhesive Anchors in Concrete and Commentary

E.2 Materials

Concrete Adhesive Anchors		Standard	Type
Threaded Rod		ASTM F1554	Gr 36, GALV
Adhesives			
	Hilti	ICC-ES-ESR-3814	HIT-RE 500 V3
	Simpson	ICC-ES-ESR-2508	SET-XP
		IAPMO UES ESR-263	AT-XP

E.3 Construction

1) Use post-installed anchors only where specified in details, or approved in writing.
2) Do not substitute post-installed anchors for cast-in-place anchors unless approved in writing for the specific condition.
3) Alternate manufacturers must be approved in writing by the Structural Engineer prior to use. Alternate submittals must provide minimum capacities equal to or greater than those listed above.
4) Install anchors in strict accordance with ICC Evaluation Reports and manufacturers recommendations.
5) Concrete must be 21 days old before installation of adhesive anchors.
6) Holes in unreinforced masonry shall be drilled with the hammer function off.

E.4 Quality

1) Provide special Inspection according to the ICC Evaluation Report and IBC.
2) Test 50% of non-redundant anchors (column, brace, boundary elements, hold-downs) and 10% of redundant elements.
3) Test anchors to the following loads.

Concrete Adhesive Anchors Tension Test Values

Bar Size	Anchor Diameter (in)	Embedment (in)	Test Force (pounds)
#3	3/8	6	3,500
#4	1/2	6	7,500
#5	5/8	8	11,000
#6	3/4	9	15,000
#7	7/8	11	20,000
#8	1	12	26,000
#9	1 1/8	14	31,000
#10	1 1/4	16	35,000

For embedments shorter than those listed, reduce the test force by the ratio of the actual embedment to embedment listed above

F— Abbreviations

(E)	Existing
AA	Adhesive Anchor
AB	Anchor Bolt
ABV	Above
ADDIT	Additional
ALT	Alternate
B/	Bottom of
B/B	Back to Back
BLK	Blocking
BM	Beam
BN	Boundary Nail
BOTT	Bottom
BP	Base Plate
BRCG	Bracing
BRG	Bearing
BTWN	Between
c/c	Center to center
CANT	Cantilever
CJ	Control Joint
CJP	Complete Joint Penetration
CL	Centerline
COL	Column
CONC	Concrete
CONN	Connection
CONT	Continuous
CONTR	Contractor
CTR	Center
CW	Crosswise
DBA	Deformed Bar Anchor
DBL	Double
DCW	Demand Critical Weld
DET	Detail
DIA	Diameter
DIAG	Diagonal
DIM	Dimensions
DWG	Drawing
EA	Each
EF	Each Face
EW	Each Way
EXT	Exterior
ϕ	Diameter
FLG	Flange
FLR	Floor
FND	Foundation
FS	Far Side
FTG	Footing
FV	Field Verify
ga	Gage
GALV	Galvanize
GLB	Glue-Lam Beam
GMN	General Mech Notes
GRT	Grout
GSN	General Struct Notes
HD	Hold Down
HORIZ	Horizontal
HAS	Headed Stud Anchor
HVY	Heavy
ID	Inside Diameter
INT	Interior
JST	Joist
JT	Joint
K	kip
LB	pound
LVL	Laminated Veneer Lumber
LW	Lengthwise
MAX	Maximum
MIN	Minimum
MISC	Miscellaneous
NS	Near Side
NTS	Not to Scale
oc	On Center
OD	Outside Diameter
OH	Opposite Hand
OPP	Opposite
OSB	Oriented Strand Board
PC	Piece
PEN	Penetration
PERP	Perpendicular
PL	Plate
PLF	Pounds per Foot
PNL	Panel
QTY	Quantity
R	Radius
REF	Reference
REINF	Reinforcing
REQ	Required
SCHD	Schedule
SECT	Section
SHTG	Sheathing
SIM	Similar
SP	Spaced
SS	Stainless Steel
STD	Standard
STIFF	Stiffener
STL	Steel
SW	Shear Wall
SYM	Symmetrical
T & B	Top and Bottom
T/	Top of
Thru	Through
TYP	Typical
UN	Unless Noted
VERT	Vertical
W/	With

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STATE OF UTAH

GENERAL STRUCTURAL NOTES

JUDGE ROOF STABALIZATION

Judge Mining & Smelting Building, Empire Pass (Deer Valley, Utah

REV	DESCRIPTION	DATE	BY
0	FOR CONSTRUCTION	2019-10-8	M. Gustafson

PROJECT #: 19_077
PRELIMINARY
DATE: 2019-10-8
DRAWN: M. Gustafson
ENG: P. McMullin
PHONE #: 801.413.7672

S100 0

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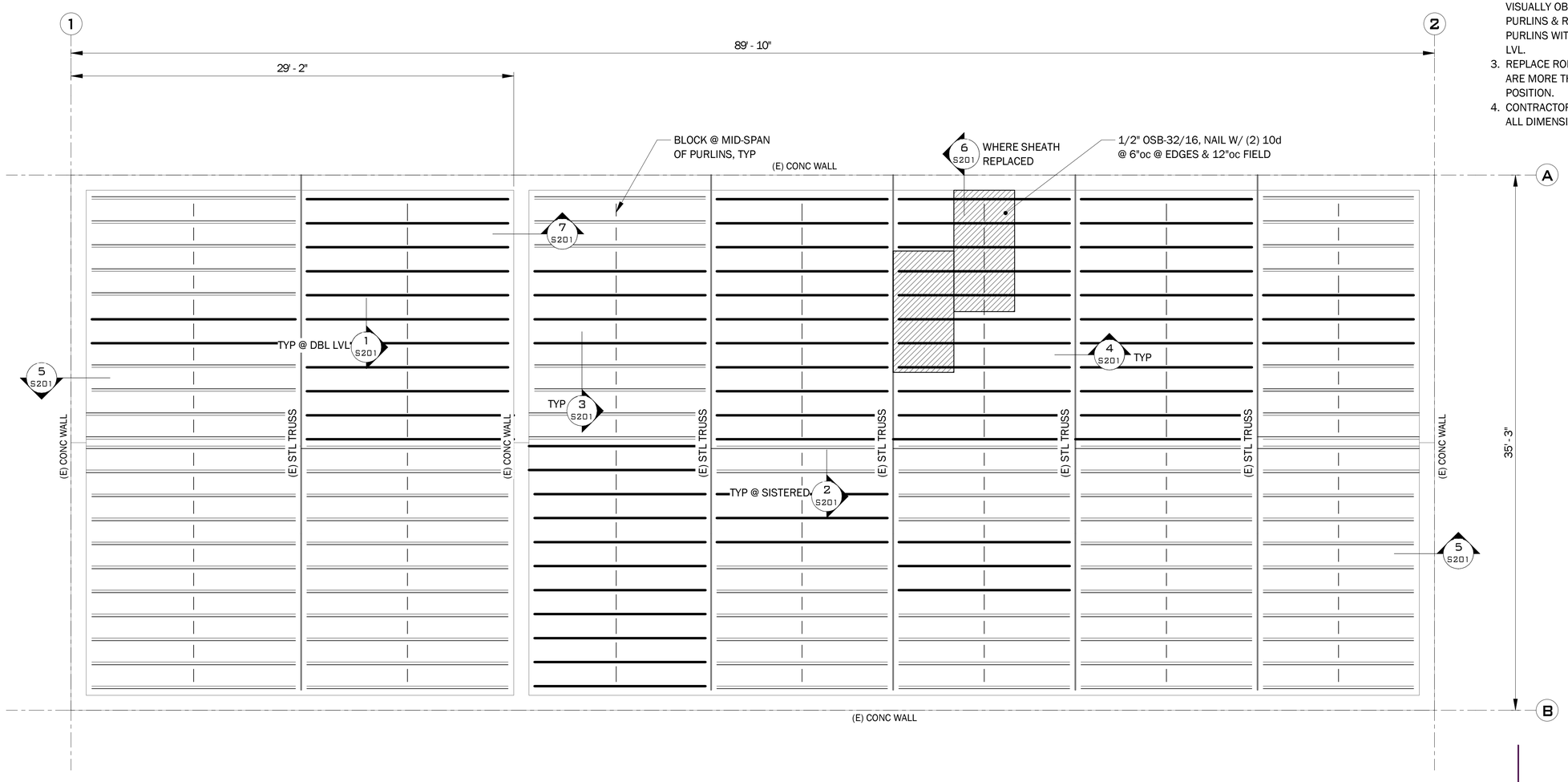

1 S200 ROOF FRAMING PLAN
1/4" = 1'-0"

PLAN NOTES & LEGEND

(2) 1 3/4"x5 1/2" LVL NAILED TOGETHER

(E) 2 1/2"x5 1/2" TIMBER NAILED TO (1) 1 3/4"x5 1/2" LVL

NOTES

1. CONTRACTORS BID TO CLEARLY INDICATE QUANTITY OF JOISTS TO BE REPLACED & JOISTS STRENGTHENED. PROVIDE UNIT COST FOR EACH.
2. JOIST REPAIR QUANTITY IS BASED ON FIELD OBSERVATIONS FROM THE GROUND. CONTRACTOR TO VISUALLY OBSERVE ALL (E) PURLINS & REPLACE ANY BROKEN PURLINS WITH (2) 1 3/4"x5 1/2" LVL.
3. REPLACE ROLLED PURLINS THAT ARE MORE THAN 15° OUT OF POSITION.
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.

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ROOF FRAMING PLAN

JUDGE ROOF STABALIZATION
JUDGE MINING & SMELTING BUILDING,
EMPIRE PASS (DEER VALLEY, UTAH

REV	DESCRIPTION	DATE	BY
0	FOR CONSTRUCTION	2019-10-8	M. GUSTAFSON

PROJECT #: 19_077
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DRAWN: M. GUSTAFSON
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PHONE #: 801.413.7672

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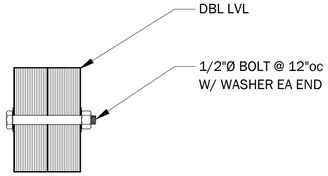
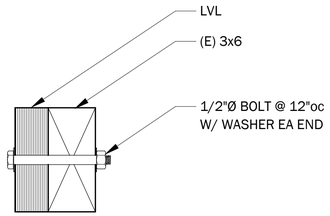


1 GANG @ DOUBLE LVL
S201 NO SCALE



2 SISTER GANG DETAIL
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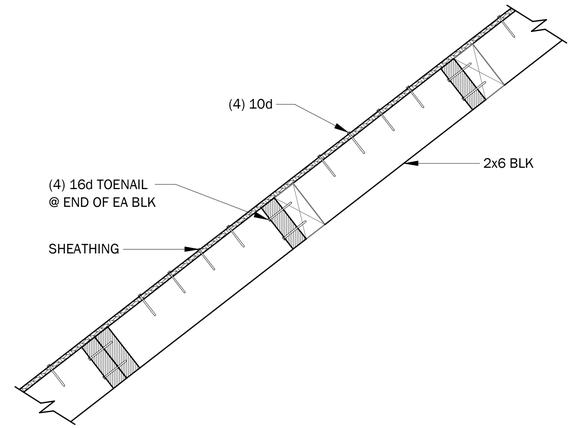
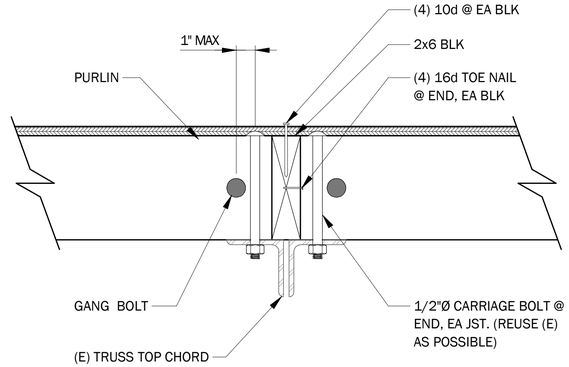
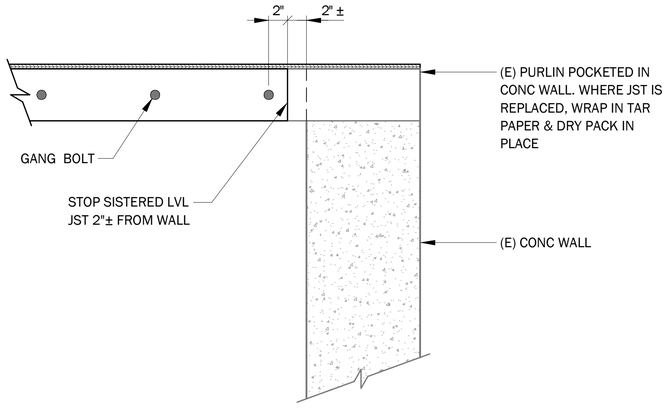


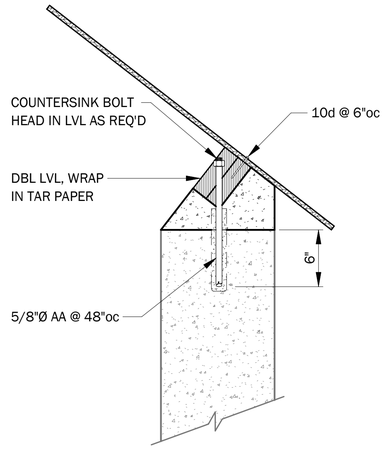
3 TYPICAL BRIDGING
S201 NO SCALE



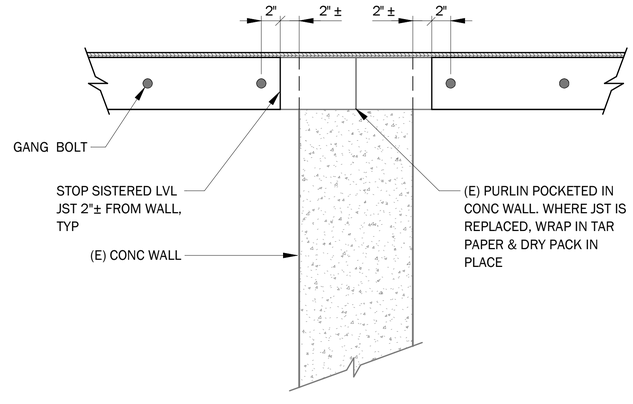
4 PURLIN CONNECTION @ TRUSS
S201 NO SCALE



5 PURLIN PERPENDICULAR TO CONCRETE WALL
S201 NO SCALE



6 JOIST PARALLEL TO CONCRETE WALL
S201 NO SCALE



7 PURLIN PERPENDICULAR TO CONCRETE WALL
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FRAMING DETAILS

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