



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

TERIANNE S. NEWELL, P.E.
Deputy Director of Planning and Investment

LISA J. WILSON, P.E.
Deputy Director of Engineering and Operations

November 21, 2025

TO: Owners, Area Operators, and other interested parties

FROM: Brian L. Allen

SUBJECT: 12/1/2025 Passenger Ropeway Safety Committee meeting at UDOT and Google meets

The next Utah Passenger Ropeway Safety Committee meeting will be at **3:00 p.m. on Monday, December 1, 2025**. You're welcome to attend either in the UDOT Lester Wire conference room or electronically through Google meets. The electronic appointment contains the links necessary to join the meeting and also includes a link to the agenda. You will be able to join by phone or computer. Video and non-video are both supported.

Contact Information:
Email: brianallen@utah.gov
Cell: 801-633-6408

AGENDA

- ITEM 1. APPROVAL OF MINUTES
November 3, 2025 Meeting
- ITEM 2. Qualified Engineer application: Ryan Livingston
- ITEM 3. Air space exception request: Wasatch Peaks Ranch Gondola
- ITEM 4. Open Discussion

UTAH PASSENGER ROPEWAY SAFETY COMMITTEE MEETING

Monday, December 1, 2025 - 3:00 p.m.
UDOT Lester Wire Conference Room
and
Electronic Meeting (Google Meets)

AGENDA

- ITEM 1. APPROVAL OF MINUTES
November 3, 2025 Meeting
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- ITEM 4. Open Discussion

#

**Utah Passenger Ropeway Safety Committee Meeting
Agenda Fact Sheet**

Meeting Date: 12-1-25

Agenda Item: 1

Subject: Approval of Minutes – November 3, 2025

Background:

Exhibits:

Draft minutes

Committee Action Requested: Review and approve the meeting minutes with changes recommended by the Committee.

Pending approval

UTAH PASSENGER ROPEWAY SAFETY COMMITTEE MEETING

November 3, 2025

UDOT Lester Wire conference room & Google Meets

Committee members at UDOT:	Russ Oberlander, Vice-chairman, Engineer Patrick Cowley, UDOT ex-officio member
Committee members Google Meets:	Steve Thygerson, Public Representative Seth Wallace, U.S. Forest Service Representative Jeff West, Ski Area Representative
Committee members absent:	Rich Taxwood, Chairman, Ski Area Representative
Staff:	Brian Allen, UDOT Rhett Arnell, UDOT
Others (at UDOT):	Kiel Mapes, Doppelmayr Lee Furhken, Doppelmayr Mike Campanella, Doppelmayr
Others (Google Meets):	Brad Hansen, Utah Olympic Park Danny McRae, Powder Mountain Jason Davis, Alta Skyler Bair, Nordic Valley Steve Kirner, Alterra Nick Dana, Park City Resort Gustavo Gonzales, MCP Troy Matthews, Deer Valley Resort Zach Doyle, Brighton Dan Cusack, Brian Head

Call to order

The meeting was called to order at 1:00 pm.

I. Approval of Minutes

The minutes of the September 8, 2025 meeting were reviewed.

Following the review Steve Thygerson made a motion to approve the minutes and Seth Wallace seconded the motion. The motion passed unanimously.

II. 2026 UPRSC meeting schedule

The meeting schedule for 2026 was announced. The meetings are scheduled for:

- January 5, 2026
- March 2, 2026
- May 11, 2026
- September 14, 2026
- November 2, 2026

III. Exception requests: direct drive lifts

There are three direct drive lifts being installed in Utah this year. Section 3.1.2.6.1 of ANSI B77.1-2022 states “The service brake shall not act on the same braking surface as the bullwheel brake.” A direct drive lift only has one surface for the brakes to act on. The committee members reviewed the design of lifts and the reduced potential for contamination of the bullwheel braking surface for a direct drive lift. The exception requests are each for an annual exception to the ANSI B77 requirement.

Following the discussion Russ Oberlander made a motion to approve the applications and Seth Wallace seconded the motion. The motion passed unanimously.

IV. Exception request: Deer Valley East Village Gondola, vertical clearance

A shipping container has been placed between towers 2 and 3 of the Deer Valley East Village Gondola. The container will provide a pedestrian walkway to the loading station of the gondola. The container will prevent pedestrians carrying ski equipment from contacting the gondola cabins.

The clearance from the gondola cabin to the top of the container is 4 feet. The expected rope sag of a fully loaded cabin is 2.5” lower than an unloaded cabin. Rope lines will be used to prevent access to the low clearance area. Snow will be removed when the lift is not in operation.

Following the discussion Seth Wallace made a motion to approve the applications and Steve Thygerson seconded the motion. The motion passed unanimously.

IV. Forest Service, Area, and Manufacturer Updates

Those present gave a brief update on the recent activities at the resort.

V. Open Discussion / Questions

The meeting was adjourned at 1:25 pm.

**Utah Passenger Ropeway Safety Committee Meeting
Agenda Fact Sheet**

Meeting Date: 12-1-25

Agenda Item: 2

Subject: Qualified Engineer application: Ryan Livingston

Background:

The application, CV, and other certifications are attached. I would recommend his approval based on that information.

He has been working on a service brake modification for the Apollo lift at Nordic Valley. It is a Hall lift. The existing drum brake has been temperamental. The proposed disc brake should be more reliable. The modification needs to be stamped by a qualified engineer prior to a registration being issued. It is anticipated that the change will be completed and tested about the middle of December.

Attachments:

Application

CV

Letters and certifications

Committee Action Requested:

Item	Action	Completed



Application for Approval Qualified Engineer and Ropeway Inspector

Utah Department of Transportation
Passenger Ropeway Safety Committee
4501 S Constitution Blvd.
Taylorsville, UT 84119

I. Discipline(s) for which applicant requests approval



a. Qualified Engineer



Construction



Manufacture



Design



b. Ropeway Inspector

II. General Information

Name: Ryan David Livingston

Address: 3266 Oak Hill Rd, Williston, VT 05495

Present Position: Engineer, Co-Owner, PE

Date of Application: 07/20/2025

III. Professional Engineer Licensing

Date of licensing: 07/20/2025

Utah license #: 14215868-2202

Licensed by examination? No

If no, how? Committee

Is license current? Yes

Has license ever been revoked? No

If yes, why?

Other State(s) or Country(ies) you are licensed in: CT, MA, VT, IA, OR, NH, MI, MD, PA, ME, ID, NY

IV. Experience Record



Attach an Experience Record for each discipline checked in section I above. Specify professional experience in accordance with the requirements stated in R920-50-12 of the Utah Ropeway Operations Safety Rules.

V. Certifying Statement

"I certify that the information supplied in this Application and the accompanying Experience Record is true and correct. I also certify that I have read and understand the Utah Ropeway Operations Safety Rules. I believe I am qualified to perform services in each discipline listed, in accordance with the ANSI B77.1 Standard, Utah Code, and the Utah Ropeway Operations Safety Rules."

Applicant Signature:

Ryan Livingston

Date: 07/20/2025

Chairperson UPRSC Signature:

Date Approved: 07/20/2025

Experience Record
Qualified Engineer and Ropeway Inspector
(Reference R920-50-12)

1.	Name and address of employer at time experience was obtained: Elevation Engineering PLLC 908 Cochran Rd, Richmond, VT 05477
2.	Type of training and by whom trained in design, construction, manufacture or inspection: Ross Stevens, PE of Stevens Engineering. Design engineering, construction engineering, inspection, and acceptance/dynamic tests.
3.	Approximate dates when experience and training occurred: October 2023 to present
4.	Types of tramways the experience and training reported above pertained to: Fixed grip and detachable chair lifts and gondolas, T-Bars, conveyors, ropetows, and funiculars.
5.	Name and current address of three references that are familiar with work completed by applicant as listed herein: a. Ross Stevens, P.E., P.O. Box 1945 New London, NH 03257 - 603-491-3959 b. Robert Farrell, 1773 Texas Hill Rd, Hinesburg, VT 05461 - 802-291-0623 c. Neville Sachs, P.E., 44 Cottage Drive, Jamesville, NY 13078 - 315-436-1257



November 10th, 2025

UDOT Traffic and Safety Division
Att. Brian Allen
4501 South 2700 West P.O. Box 143200
Salt Lake City, UT 84114

Subject:
Ryan D Livingston
Statement of Experience
Ropeway Engineering

Dear Mr. Allen and Members of the Committee,

Please accept this letter as a detailed statement of my experience and qualifications in support of my application to the Utah Passenger Ropeway Safety Committee to be certified as a Qualified Engineer and Ropeway Inspector. I have been actively working as a ropeway engineer for the past two years, culminating in my current role as a Principal Engineer (PE) and Co-Owner at Elevation Engineering.

From October 2023 to April 2025, I worked under the direct mentorship of Ross Stevens, PE, of Stevens Engineering, an industry leader with approximately 40 years of experience. This period was crucial for specializing my foundational knowledge in mathematics and physics. My education focused on the practical application of these principles to ropeway systems, including specific requirements for lift relocations, surface lift loads, and tubing hill designs. This training emphasized adherence to ANSI B77.1 and B77.2 standards, industry best practices, and critical lessons drawn from historical industry errors.

My expertise is formally reinforced by my certifications and professional involvement. I received in-depth training on load testing, acceptance testing, and inspections under Mr. Stevens. I recently demonstrated my competency by passing the rigorous Pennsylvania Tramway Inspector Test. Furthermore, I currently serve as an inspector for MountainGuard Insurance in the New England region, which keeps me current on maintenance and operational requirements. On a regulatory level, I am a non-voting member of the ANSI Committee, where I actively participate in the deliberation and approval of proposed changes to the B77 standard.



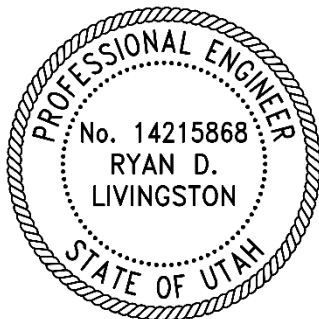
I have my PE license in the following states:

CT	38724
MA	59936
VT	18.0136227
IA	P29787
OR	107010PE
NH	18812
MI	6201314892

UT	14215868-2202
MD	65063
PA	PE097113
ME	PE19116
ID	4571679
NY	111403

For your thorough review, I have attached my comprehensive Curriculum Vitae (CV), detailing my full educational and professional history. As an addendum to this cover letter, I have also included a sample of projects completed over the past nine months since the acquisition of Stevens Engineering and the formation of Elevation Engineering.

I sincerely appreciate the Committee's time and consideration of my qualifications. I look forward to the opportunity to contribute my specialized expertise to passenger ropeway safety.



Sincerely,

Ryan D. Livingston PE, Co-Owner
Elevation Engineering



Sample of Projects from April 2025 -November 2025

Elevation Engineering, Ryan Livingston, PE

Facility: Unnamed, 2025 – Triple Fixed Grip Return Terminal Redesign

A return terminal design from a different manufacturer failed. Elevation Engineering was hired to engineer a replacement return terminal utilizing the existing concrete. Completed steel calcs, anchor bolt calcs, concrete calcs, line calcs, etc. Installed in Oct 2025.

Facility: 2025 – Boones Ridge Detachable Gondola

Hired to be the qualified engineer on the project for the new MND Gondola at Boones Ridge in Kentucky. This is a 34 tower 3 station triangular gondola system. We have designed the steel tower structures in accordance with applicable AISC and ANSI B77.1. And will complete the concrete design as well as review the equipment for conformance with ANSI B77.1 and conduct the final acceptance testing and inspections.

Facility: Woods Valley, 2025 – Fixed Grip Quad Relocation

All Ski Lifts LLC completed original design for relocation. Elevation Engineering completed all the calculations, concrete design, stamped the drawings, reviewed the electric drive and low voltage control design and submitted the package to the State of NY.

Facility: Johnstown Incline: 2025 – 38 ton Funicular Recertification and Load test

Completed a site visit and wrote a report on items that required updating to comply with ANSI B77.2. Worked with the contractor on the items being upgraded. Returned and completed an acceptance test on one of the oldest and largest Funiculars in the US.

Facility: Mt Crescent, 2025 – Drive Terminal Replacement

All Ski Lifts LLC sourced a new drive terminal. Elevation Engineering completed the design calculations and concrete calculations for installation, stamped the drawings, and submitted them to the state.

Facility: Blue Hills, 2025 – Designed one rope tow and one handle tow

Completed all calculations, and grading for one rope tow and one handle tow. Load test and submittal pending.

Facility: Multiple locations, 2025 – Tubing hill design or redesign

Completed profiles, grading, and calculations for tubing hills at multiple locations. In most instances the design for the handle tow or conveyor was also completed.

Facility: Gunstock, 2025 – Three Drive Upgrades

Reviewed the Nidec drive upgrades being installed in three older Doppelmayr lifts. Submitted applications to the NH Tramway Board. Conducted load tests (2/3 pending).



Facility: Denton Hill, 2025 – Bid Spec

Completed a site visit to ensure placement of lift was appropriate for the area. Generated lift requirements and lift profile design.

Facility: Waterville Valley, 2025 – Tbar Design

Hired to be the qualified engineer on the project for the new MND T-bar at Waterville Valley in New Hampshire. We have designed the concrete as well as reviewed the mechanical and electrical equipment for conformance with ANSI B77.1 and completed the NH Tramway Board application process. We will conduct the final acceptance test and inspection when construction is complete.

Facility: Ragged Mountain, 2025 – Electric Drive and Low Voltage Control Upgrade

Reviewed the drive and controls upgrade design for conformance with ANSI B77.1. Submitted applications to the NH Tramway Board. Will conduct acceptance test when installation is complete.

Additional: 2025

Tower lighting mount design (frame design, tower and concrete loading analysis), conveyor profile design, size calculations and state applications (over 12 completed) concrete repair specifications, anchor bolt repair specifications.

Ryan Livingston, PE

908 Cochran Rd, Richmond Vermont 05477 – (802) 356-1657 – rl@elevationengineeringvt.com

Personal Statement

Licensed Professional Engineer (PE). Master's degree in mechanical engineering. Thirteen years of professional engineering work including four years of international experience in the medical industry.

Education and Licenses

Professional Engineering License (VT) January 2025

Aalto University, Espoo Finland September 2013

Master of Science in Mechanical Engineering

Graduate thesis: Processability and physical environmental protection methods of natural fiber thermoset composites

Studies included concentrations in advanced fatigue and fracture mechanics and project based mechatronics.

Northeastern University, Boston USA May 2011

Bachelor of Science in Mechanical Engineering

GPA: 3.50, Honors: Dean's List

Undergraduate thesis: designed and manufactured an extendable lightweight ladder from aluminum, carbon fiber, Kevlar, and fiberglass that could extend twenty seven feet from an initial two feet winning the thesis design competition.

Professional Work Experience and research

Elevation Engineering, Richmond VT – Ropeway Engineering October 2023-Present

Ropeway Engineer – Design and Inspection

- Structural FEA in SolidWorks on structural components such as towers and work baskets
- Design and inspection in accordance with ANSI B77, AWS, ASME, ACI, and OSHA
- Wind calcs, turnover moments, anchoring strength,
- Ropeways worked on: Conveyors, Lifts, Funiculars, Handle Tows, T-bars, Rope Tows
- Reviews of brake upgrades, drive upgrades, low voltage control system upgrades
- Load testing and inspections in multiple states
- Concrete repair procedures
- Rust repair procedures

NRG Systems, Hinesburg VT – Renewable Energy and Wildlife Conservation April 2021–Sept. 2023

Senior Mechanical Engineer – Bat Deterrent and Exclusion Systems - Technical Lead

- Structural FEA in SolidWorks on Ultrasonic vibrating components
- Work with Product manager to forecast and productize our Bat Exclusion System
- Compliance work for international products, CE, RoHS, IEC 61010
- Reliability test design and data analysis
- Design for product manufacturability and refurbability
- Project management

Husky Injection Molding Systems, Milton VT – Industrial manufacturing industry January 2018–March 2021

R&D Engineering Specialist – Injection Molding System, Hot Runner design and analysis

- Thermal and Structural FEA in Ansys and design of Hot Runner systems and components
- Design and analysis of 3D printed DMLS components
- Cost/data analysis - design and manufacturing for cost efficiency
- Lead risk assessments/FMEAs, design brainstorming sessions, and manufacturability reviews

Synoste Oy, Espoo Finland – Medical industry October 2013–December 2017

Principal Mechanical Engineer – Responsible for mechanical behavior and stability of implantable medical devices

- Mechanical design, FEM, and analysis of Synoste nail and test fixtures
- Product requirements and test criteria development from Design inputs
- Verification and validation (V&V) project management of the SYNOSTE Nitinail
- Quality Control Procedure management, Installation qualification, and Operation qualification
- Mechanical, electrical, and thermal tests on a mechanical testing machine

- Guest speaker for Instron at an advanced user event

Aalto Light Weight Structure Laboratory, Espoo Finland

May 2012–August 2013

Researcher and Graduate Thesis– Processability, short term mechanical properties, and moisture absorption prevention using commercial coatings of NFR composites

- Created dozens of laminates of varying orientations and thicknesses acquiring a thorough understanding of laminate manufacturing
- Performed short term mechanical property tests and moisture sorption tests with multiple coatings

Draper Laboratory, Cambridge MA USA – Defense industry

January 2010–August 2011

Mechanical Engineer Co-op – Precision inertial guidance System

- Worked on proof of concept and prototyping for a new accelerometer to be used in satellites and Intercontinental Ballistic Missiles (ICBM)
- Worked in a clean room assembling, testing and doing failure analysis on the accelerometers
- Thermal and mechanical analysis in Ansys Classic on the current Pendulating Integrating Gyroscopic Accelerometer (PIGA) for the Trident missile
- Designed a new piezo electric pre-load system to eliminate bias on the new accelerometer
- Tested and analyzed bearings to find the optimal lubrication and materials for DARPA's EXACTO program

AOC Inc., Bethesda MD USA

January–June 2009

Mechanical Engineering Co-op - Defense Systems

- Worked with defense contractors and the Navy to ensure Littoral Combat Ship (LCS) to Modular Mission Package (MMP) interface validation
- Maintained Mission Ship System Interface Team (MSSIT) Interface Verification and Validation report cards
- Participated in ship checks validating interface compatibility and completing ship check reports

Ameresco, Framingham MA USA

January–July 2008

Mechanical Engineering Co-op - Energy Efficiency

- Calculated heating and cooling loads on college buildings and public housing
- Design of boiler rooms in AutoCad and Conducted field surveys and audits

October 24, 2025

Ryan Livingston, PE
Elevation Engineering
3266 Oak Hill Rd
Williston, VT 05495

Mr. Livingston,

This letter is to affirm that on this day, October 24, 2025, Ryan Livingston, PE, Elevation Engineering, has successfully completed the Pennsylvania Aerial Ropeway Exam, administered by the Authority Having Jurisdiction of the Commonwealth of Pennsylvania, Department of Labor & Industry, Bureau of Occupational and Industrial Safety.

The Pennsylvania Aerial Ropeway Exam represents an individual's ability to examine, inspect and conduct testing on Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors in the Commonwealth of Pennsylvania in accordance with the Pennsylvania Construction Code Act 45 and the Uniform Construction Code Chapter 405, §405.2 (a)(4).

In addition to successful completion of the exam, you have demonstrated to the Department your professional abilities at various worksites involving the equipment in operation within the Commonwealth, to include but not limited to, Aerial Lifts, Surface Lifts, Tows, Conveyors and Funiculars.

Sincerely,


Joseph P. Marchioni, Director
Bureau of Occupational & Industrial Safety



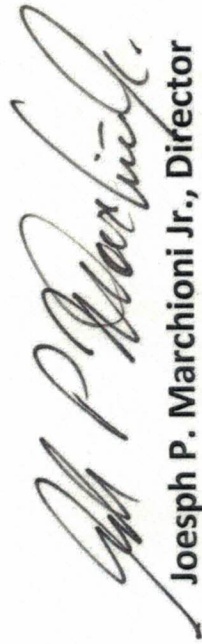
Attachment: Certificate



Bureau of Occupational & Industrial Safety
Aerial Passenger Ropeway

Ryan Livingston

This is to Certify that the above-named individual has passed the prescribed examination for Pennsylvania Aerial Passenger Ropeway, re: ANSI B77.1-2022, PCCA 45, UCC §405, administered by the PA Department of Labor & Industry, Bureau of Occupational & Industrial Safety, issued
October 24, 2025.

A handwritten signature in black ink, appearing to read "Joe P. Marchioni Jr.", written over a horizontal line.

Joseph P. Marchioni Jr., Director
Bureau of Occupational & Industrial Safety



**Utah Passenger Ropeway Safety Committee Meeting
Agenda Fact Sheet**

Meeting Date: 12-1-25

Agenda Item: 3

Subject: Air space exception: Wasatch Peaks Ranch Gondola

Background:

A cabin storage building is being constructed for the gondola. A mobile crane will be used during the construction. The crane is located outside the air space the proposed use of the crane encroaches into the air space.

Two exception requests have been submitted. One for the permanent building that will have the gondola storage, and one for the crane and temporary air space encroachments.

Attachments:

Exception requests with attachment

Committee Action Requested:

Utah Passenger Ropeway Safety Committee

Request for Exception from Standards

Operator / Area:

Name:	Wasatch Peaks Ranch
Address:	5233 North Wasatch Peaks Road, Morgan, UT 84050

Operator or Authorized Representative:

Name:	Seth Haddick
Title:	Director, Lift Maintenance.

Lift:

Name:	The Village Gondola
ID:	The Village Gondola

TYPE OF REQUEST:


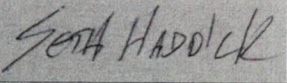
<input type="checkbox"/> Annual	<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Review		Limited, (Requested until:)	Date:
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For the season:		to	
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DESCRIPTION: (Original requests complete items 1-4, Review requests complete item 1 only.)

1.	ANSI B77 sections or R920-50 rules to which the ropeway does not conform:
	R920-10 (9) – R920-50-1.H Air Space Requirements
2.	Why does it not conform?
	Skier Services structure will be within the defined airspace
3.	Procedures that would be required to bring the lift into conformance with standards.
	Additional considerations made to conform with the guidelines for permanent structures.
4.	Reasons for requesting an exception
	The design of the Skier Services structure includes a gondola storage area which needs to be in close proximity to the lift for efficient utilization.

CERTIFICATIONS AND SUBMITTAL:

X	I certify that this ropeway has been operated safely and without any passenger ropeway incident as defined in R920-50-2-G-1 or 7, related to the feature for which exception is requested, for <u>20</u> years (at least 2 years) prior to the date of this request. (see R920-50-10-C)		
X	A certification from a qualified engineer is attached attesting that the ropeway is so designed and equipped that its devices or methods provide features that are comparable in performance and safety to requirements in standards. (see R920-50-10-C)		
	Qualified Engineer:	Jeff Peterson P.E.	
	Signature:		Date certified: 11/21/25
	Signature:		Date Submitted: 11/21/25
	Operator or Authorized Representative		

APPROVAL:

Signature:		Date Approved:	
Chairperson, UPRSC			

Utah Passenger Ropeway Safety Committee

Request for Exception from Standards

Operator / Area:

Name:	Wasatch Peaks Ranch
Address:	5233 North Wasatch Peaks Road, Morgan, UT 84050

Operator or Authorized Representative:

Name:	Seth Haddick
Title:	Director, Lift Maintenance.

Lift:

Name:	The Village Gondola
ID:	The Village Gondola

TYPE OF REQUEST:

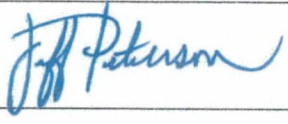
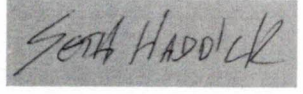
<input type="checkbox"/> Annual	<input checked="" type="checkbox"/>	Original	X	Limited, (Requested until:)	Date: 12/10/25
	<input type="checkbox"/>	Review			4/30/26

For the season: Dec. 10, 2025	to April 30, 2026
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DESCRIPTION: (Original requests complete items 1-4, Review requests complete item 1 only.)

1.	ANSI B77 sections or R920-50 rules to which the ropeway does not conform: R920-10 (9) – R920-50-1.H Air Space Requirements
2.	Why does it not conform? Scaffolding, temp fencing and potentially crane swing within the defined airspace.
3.	Procedures that would be required to bring the lift into conformance with standards. Removal of crane, temp fencing and scaffolding.
4.	Reasons for requesting an exception To allow for lift operations during the winter of 2025/2026

CERTIFICATIONS AND SUBMITTAL:

X	I certify that this ropeway has been operated safely and without any passenger ropeway incident as defined in R920-50-2-G-1 or 7, related to the feature for which exception is requested, for <u>20</u> years (at least 2 years) prior to the date of this request. (see R920-50-10-C)		
X	A certification from a qualified engineer is attached attesting that the ropeway is so designed and equipped that its devices or methods provide features that are comparable in performance and safety to requirements in standards. (see R920-50-10-C)		
	Qualified Engineer:	Jeff Peterson P.E.	
	Signature:		Date certified: 11/21/25
	Signature:		Date Submitted: 11/21/25
		Operator or Authorized Representative	

APPROVAL:

Signature:		Date Approved:	
Chairperson, UPRSC			

November 21, 2025



Mr. Brian Allen
Ropeway Safety Engineer
Utah Department of Transportation
Calvin L. Rampton Complex
4501 South 2700 West
Salt Lake City, UT 84119

RE: Proposed Skier Services Building - Request for Permanent and Temporary Airspace
Exceptions & Construction Mitigation Measures

Dear Mr. Allen,

Iron Mountain Engineering, represented by Jeff Peterson, P.E., respectfully submits this request for permanent and temporary airspace exceptions associated with the construction of the new Skier Services Building at the base of Wasatch Peaks Ranch (WPR). The new facility will house member amenities including a lounge, restrooms, ski storage, and locker rooms. It will also include enclosed gondola cabin storage to protect the cabins during inclement weather and non-operational periods. The building is located adjacent to the Village Gondola lower terminal, with the closest corner approximately 11 ft from the cabins as they pass through the terminal contour. Portions of the structure within the 35 ft airspace easement include an employee entrance, ski storage, and a member ski valet area.



This variance request includes the following:

- A.) Permanent variance for the portion of the Skier Services Building is located within Village Gondola's airspace.
- B.) Temporary variance for crane operations during construction.
- C.) Temporary construction variance and mitigation measures to segregate construction activity from members.

Permanent Airspace Request for the Skier Services Building:

A limited portion of the Skier Services Building extends into the defined 35' airspace zone of the Village Gondola (see exhibit A-1 building floorplan). At its closest point, the building canopy is approximately 9' from the edge of the cabin (approximately 13' from the haul rope) as the cabin travels through the terminal (see exhibit A-2 – building section). The building is constructed with structural steel members, light gauge steel infill wall framing with a stone veneer and metal roofing deck. The walls and roofs within the airspace will be constructed with 1-hour rated assemblies per the architectural drawings (see exhibit A-2 wall assembly detail). The building is under the control of the gondola operator/owner with staff occupying the building during all public lift operations. To meet the requirements of a permanent structure per the Utah Passenger Ropeway Safety Committee's (UPRSC) "Guidelines for Airspace Exception" R920-50-1.H, the owner has committed to the following:

- 1.) The building's fire alarm will sound directly into the operator's station and not through a security company.
- 2.) The building's alarm system will meet the current NFPA 72 Standard.
- 3.) The building will have a fire suppression system with the system meeting current NFPA 13 Standards (exhibit A-3).
- 4.) A written operating procedure will be developed to evacuate the lift in the event of a fire alarm at the Skier Services Building (see exhibit A-4).
- 5.) The structure within the airspace will be constructed with a minimum "one hour fire rating" (see exhibit A-2).
- 6.) The structure is located within the base area of the Wasatch Peak Ranch ski resort and has year-round access to the structure for fire response. The nearest fire station is located 3.9 miles from the structure (see exhibit A-5) with an approximate 12-minute travel time between the two.

Several of the items listed above are in the development phase and are design/build systems constructed by the responsible contractor. It is the owner's responsibility to notify the UPRSC and Iron Mountain Engineering if design constraints or other limitations do not allow them to meet the stated requirements and will require further review.

115T Mobile Crane Airspace Variance Request:

Construction of the future Skier Services Building is progressing, and the contractor, Big-D Signature, has accelerated work on the southernmost portion of the structure. This sequencing allowed major overhead activities near the Village Gondola loading area to be completed prior

to operations. The next phase of construction will require the use of a Liebherr LTM1095 115-ton mobile crane, provided and operated by Mountain Crane. The crane will be positioned between gridlines 9 and 10 behind the Gondola Storage Bay (see exhibit B-1), with each outrigger pad bearing on an 8 ft.×10 ft. crane mat. The crane's center pin will be approximately 160 ft from the gondola haul rope, with a maximum allowed pick radius of 135 ft. At full rotation, the crane's swing radius overlaps the gondola's airspace as defined in UPRS Rule R920-50-1.H. To prevent encroachment, the crane's TELEMATIK software system will be programmed to limit boom radius and movement. After setting up, Big-D will verify that these software limits have been properly implemented.



The maximum anticipated load (including rigging) at the maximum radius is 2,944 lbs, representing 43.9% of the crane's capacity in the proposed configuration (see exhibit B-2 & B-3). Mountain Crane has modeled the associated outrigger reactions using its crane software and determined a maximum point loading of 76,000 lbs. (see exhibit A-4). The crane pad area was previously over-excavated by 13 ft, backfilled in controlled gravel lifts, and capped with low permeability fill with the oversight of AGECE Applied Geotech. The proposed pad layout, outrigger mats, and maximum reactions were subsequently reviewed by Taylor Nordquist, P.E., who found the pad conditions acceptable and provided a stamped letter confirming his findings (see exhibit B-5).

The Liebherr 1095 crane underwent its annual inspection on May 29, 2025, by JNS Crane Inspection. The inspection certified that the crane met all applicable standards under OSHA 29 CFR 1926.1412 and ASME/ANSI B30.5 at the time of survey. All Mountain Crane operators assigned to this project will be properly licensed and trained to maintain required clearances from the Village Gondola and its associated airspace. No overhead loads will be permitted near the gondola airspace during public operations. If after-hours lifts are needed, Big-D will coordinate with Wasatch Peak Ranch and provide the required minimum 24-hour notice.

Given that the crane's reduced load ratio, engineered pad verification, software-limited swing radiuses and operational restrictions, I am confident that the proposed crane operation adjacent to the gondola airspace will not adversely affect passenger safety.

Construction Safety Measures within the Airspace Easement:

During the winter 2025/2026 operating season, Wasatch Peak Ranch will continue construction activities adjacent to and within the Village Gondola's thirty-five-foot airspace as defined by Utah rule R920-50-1 (H). Because major overhead work was accelerated, remaining work within the airspace during public operations will primarily include roofing, exterior stone installation and finish work.

Guest exposure will be minimized through the installation of a temporary 7 ft (minimum) wood fence between the gondola and the building (see exhibit C-1 image of proposed fencing). The fence will consist of embedded wood posts and solid wood panels, maintaining a minimum 4 ft clearance between the cabin edge and the fence, consistent with ANSI B77.1 terminal clearance requirements (3.1.1.5.2.3). This separation allows for the installation of scaffolding tied to the building. Scaffolding will be limited to two levels: a worker access level and an upper level supporting reinforced poly sheeting, secured to prevent displacement under wind loads, to heat the stone veneer installation area. All scaffolding will be built prior to gondola operations. Scaffolding will be tied back at each level to the structure and inspected daily prior to gondola operations start-up.

As noted in the mobile crane airspace variance section, any overhead lift near or within the airspace will be coordinated with the owner at least 24 hours in advance and will only occur while the gondola is non-operational. Three fire extinguishers will be mounted on the construction side of the fence for immediate access (see exhibit B-1 for locations).



Prior to public operations, the grade between the gondola cabins and the Skier Services Building will be raised to the loading elevation using compacted fill. The temporary fence, guardrail at the top of the stairs to the gondola storage area, and corral fencing at the rear of the terminal will be installed to marshal guests. All loading will occur at the rear of the contour, and no unloading will be permitted beyond the corral fence. Temporary stanchions will be positioned parallel to the cabins until cabin doors close to ensure guests remain within designated pathways (see exhibit C-2).

Iron Mountain Engineering respectfully requests that the Utah Passenger Ropeway Safety Committee approve the identified airspace variances for the Skier Services Building adjacent to the Village Gondola at Wasatch Peak Ranch. Based on Utah rules section R920-50-1H, I believe Wasatch Peaks Ranch has met the criteria for these exceptions and will maintain the highest standards of passenger safety and regulatory compliance throughout construction and operation.

Sincerely,

Jeff Peterson P.E.
Iron Mountain Engineering, Inc.

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING WATER LINE
- PROPOSED FORCE MAIN
- EXISTING GRAVITY SEWER
- PROPOSED SEWER LATERAL
- PROPOSED WATER LATERAL
- PROPOSED FLOW LINE
- PROPOSED GAS LATERAL
- PROPOSED PAVEMENT SAWCUT
- PROPOSED HANDRAIL
- PROPOSED BOULDER WALL. REFER TO LANDSCAPE PLANS FOR DETAILS

- PROPOSED STORM DRAIN
- EXISTING ELECTRICAL LINES
- PROPOSED PROPANE LINE
- EXISTING GRADE SPOT ELEVATION
- PROPOSED GRADE SPOT ELEVATION
- PROPOSED FLOW LINE SPOT ELEVATION
- PROPOSED ADA PATH
- PROPOSED A.C. PAVEMENT
- PROPOSED SKI RUN
- CONCRETE PAVEMENT. SEE DETAIL ON SHEET C4.01.
- PROPOSED PAVERS. REFER TO LANDSCAPE PLAN FOR DETAILS.
- PROPOSED LANDSCAPE. REFER TO LANDSCAPE PLAN FOR DETAILS.

- TW: 5845.29
- BW: 5845.29
- TBC: 5845.29
- 1 SEE STRUCTURAL STAIR DETAILS ON SHEETS C5.00-C5.02
- 2 FURNISH AND INSTALL VALLEY GUTTER PER DETAIL ON SHEET C4.01
- 3 CONTRACTOR TO ADJUST EXISTING TRANSFORMER PAD VAULT GRADE. SEE SHEET C2.02 FOR DETAILS
- 4 INSTALL TYPE G CURB AND GUTTER PER APWA DETAIL ON SHEET C4.01
- 5 INSTALL TYPE P CURB PER APWA DETAIL ON SHEET C4.00
- 6 PAVEMENT TO MATCH EXISTING PAVEMENT SECTION

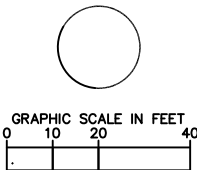
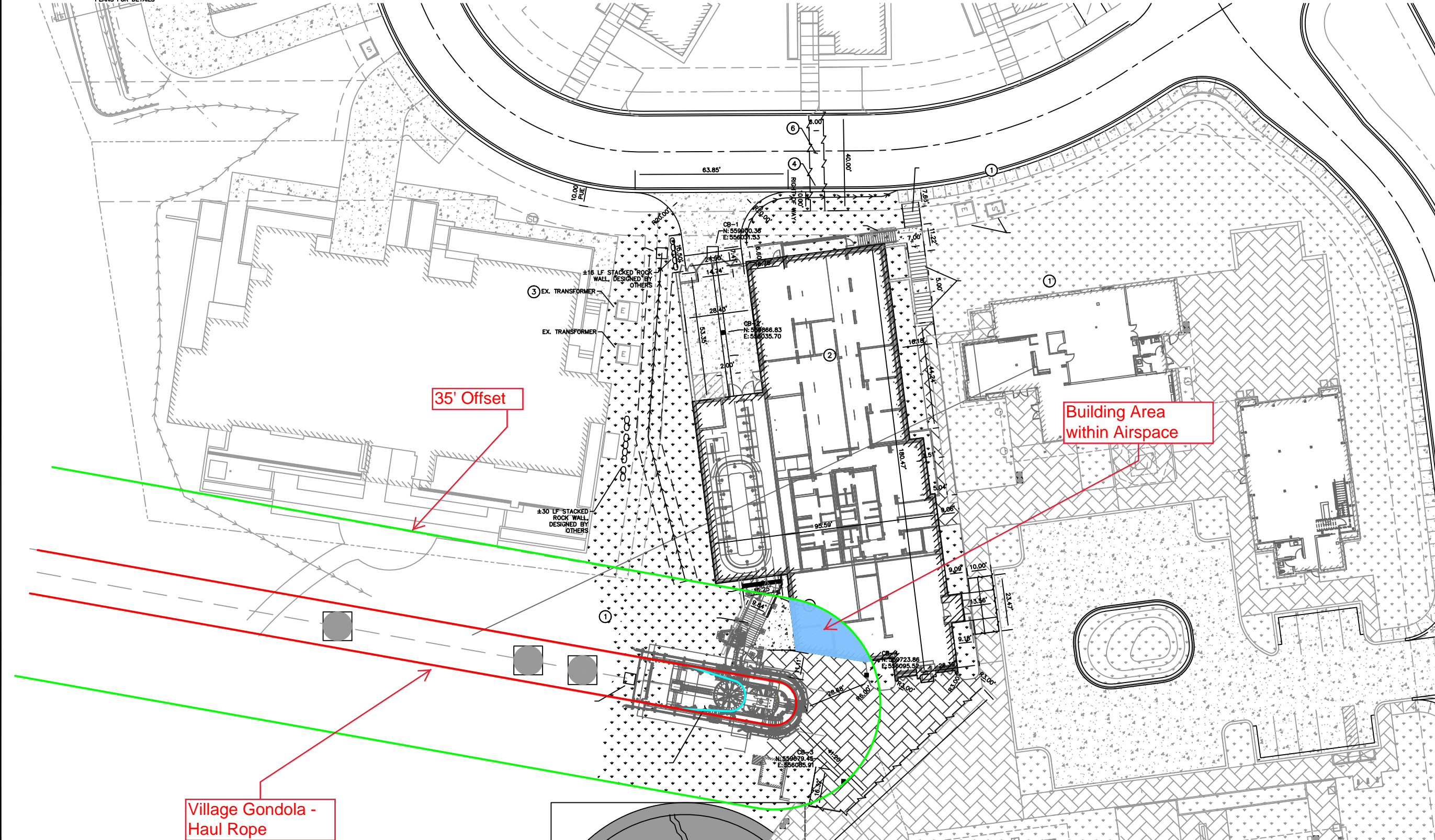


Exhibit A-1



DATE	DESCRIPTION
01/29/25	INTERM DD PACKAGE
02/28/25	100% DD PACKAGE
04/25/25	ISSUE FOR PERMIT
06/11/25	ISSUE FOR CONSTRUCTION
06/18/25	95% CD SET
08/21/25	ISSUE FOR CONSTRUCTION

Kimley»Horn

111 East Broadway, #600 | Salt Lake City, UT 84111 | Tel. No. (385) 212-3176

DATE: 08/21/2025

PROJECT #: 2202

SCALE: AS SHOWN

DRAWN BY: ZACHARY ANDREW JOHNSON

DESIGNED BY: ZACHARY ANDREW JOHNSON

CHECKED BY: ZACHARY ANDREW JOHNSON

SEAL

REGISTERED PROFESSIONAL ENGINEER

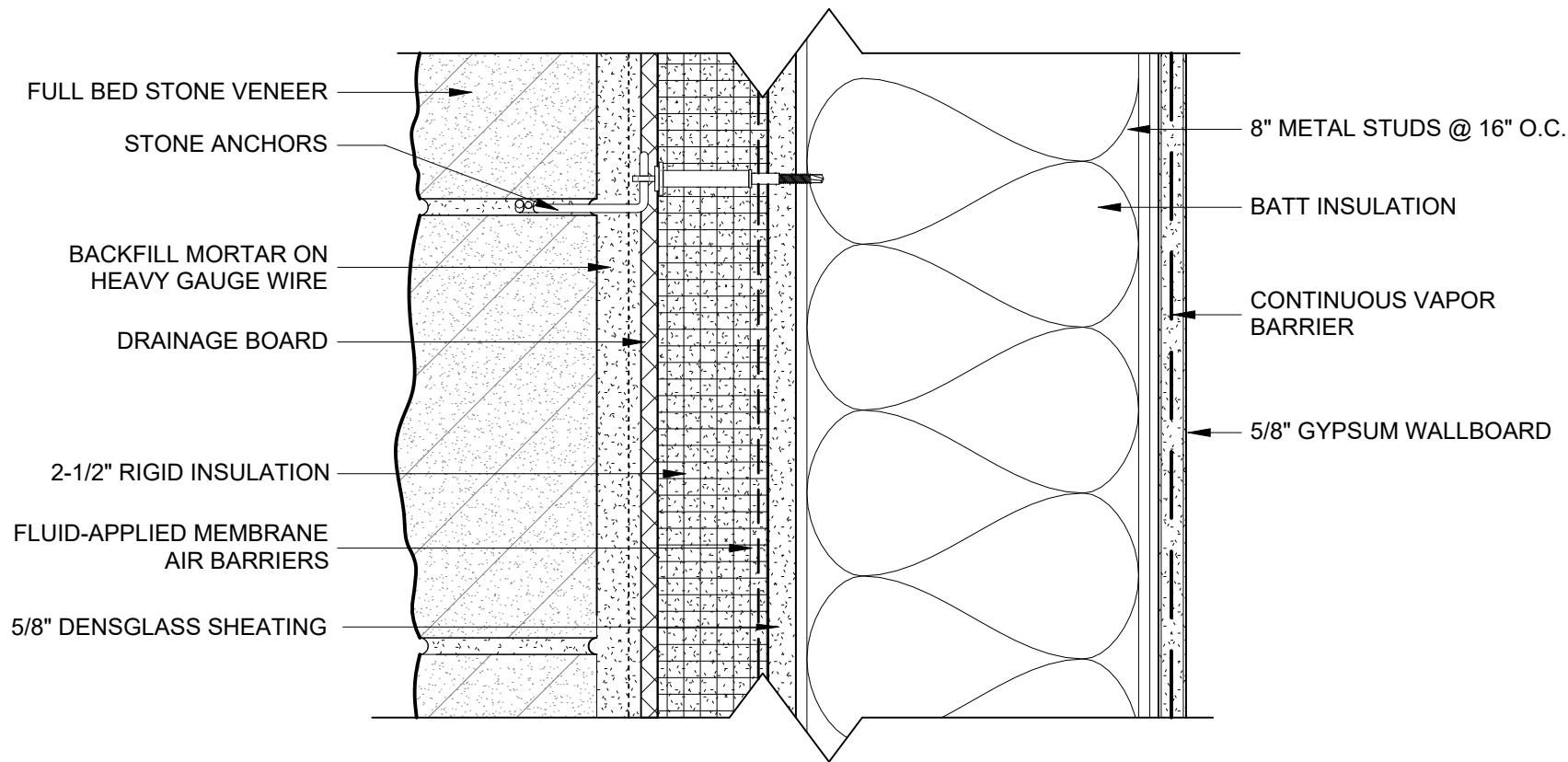
No. 9253976-2202

ZACHARY ANDREW JOHNSON

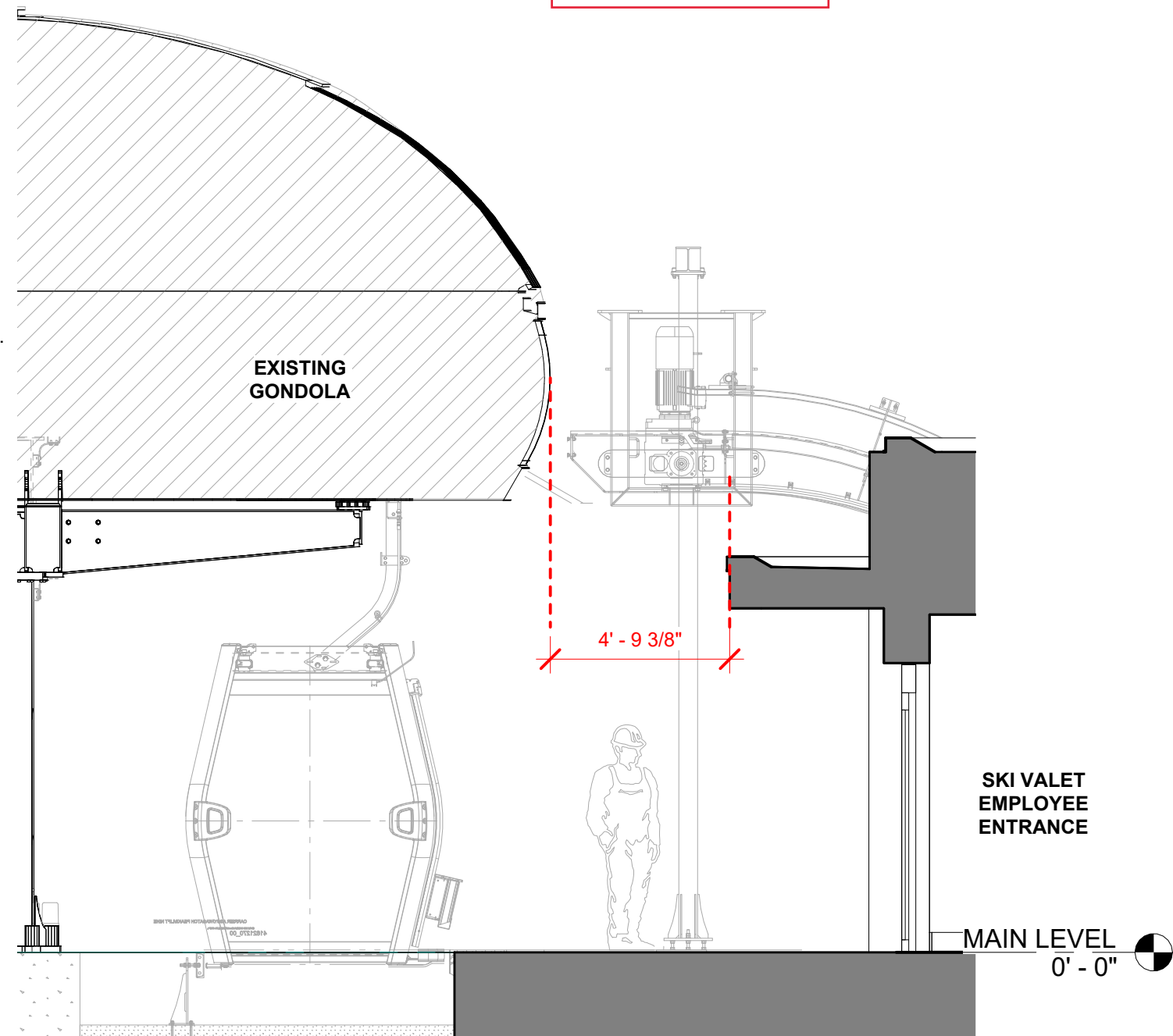
08/21/2025

STATE OF UTAH

SHEET



1 TYP. ASSEMBLY - EXT. WALL 1-HOUR RATED
3" = 1'-0"



2 SECTION THROUGH SKI VALET AND GONDOLA
1/4" = 1'-0"

Drawing Scale = As indicated



OVERLAND

203 E. JONES AVE UNIT 104
SAN ANTONIO, TX 78215

WASATCH PEAKS RANCH SKIER SERVICES

SK 004

11/18/2025

UDOT Exception - 1-hour Exterior Wall Assembly

System is Design/Build and will conform with NFPA-72 Alarm Standards & NFPA-13 Fire Suppression Standards.



Owner
Wasatch Peaks Ranch LLC.
4213 N Morgan Valley Dr
Peterson, UT 84050
TEL (907) 819-1377

Architect
Overland Partners Architects
203 E Jones Ave Ste. #104 San Antonio,
Texas 78215
TEL (210) 829-7003
FAX (210) 829-0844

Interior Design
Alder and Tweed Design Co.
4554 N Forestdale Dr #A1,
Park City, UT 84098
TEL (435) 847-3030

Civil Engineer
Kimley Horn
111 East Broadway, #600
Salt Lake City, UT 84111
TEL (385) 212-3176

Structural Engineer
Thornton Tomasetti
820 Gessner Rd
Houston, TX 77024
TEL (972) 764-6262

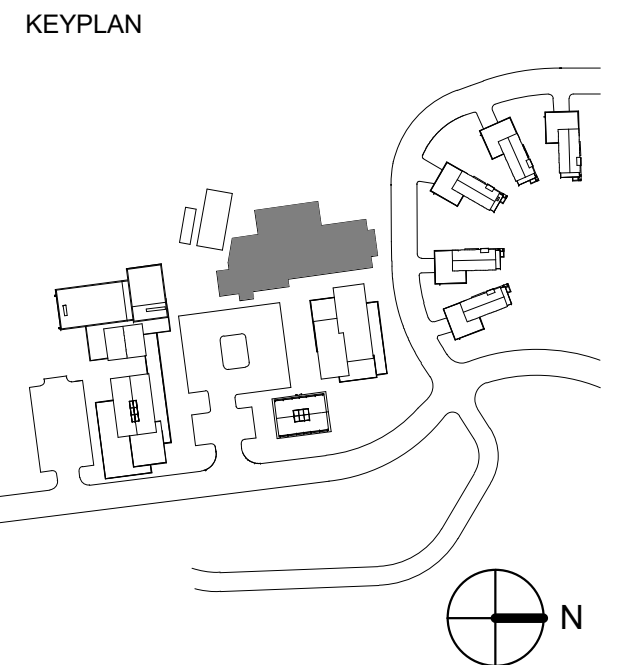
MEP
RTM Engineering Consultants
251 Linden Street, #200,
Fort Collins, Colorado 80524
TEL (970) 221-5691

Lighting Consultant
LS Group
525 Basalt Avenue Unit I-300
Basalt, CO 81621
TEL (970) 927-5133

Technology Consultant
Sigt Solutions
1894 Homestead Road
Glenwood Springs, CO 81601
TEL (970) 822-8084

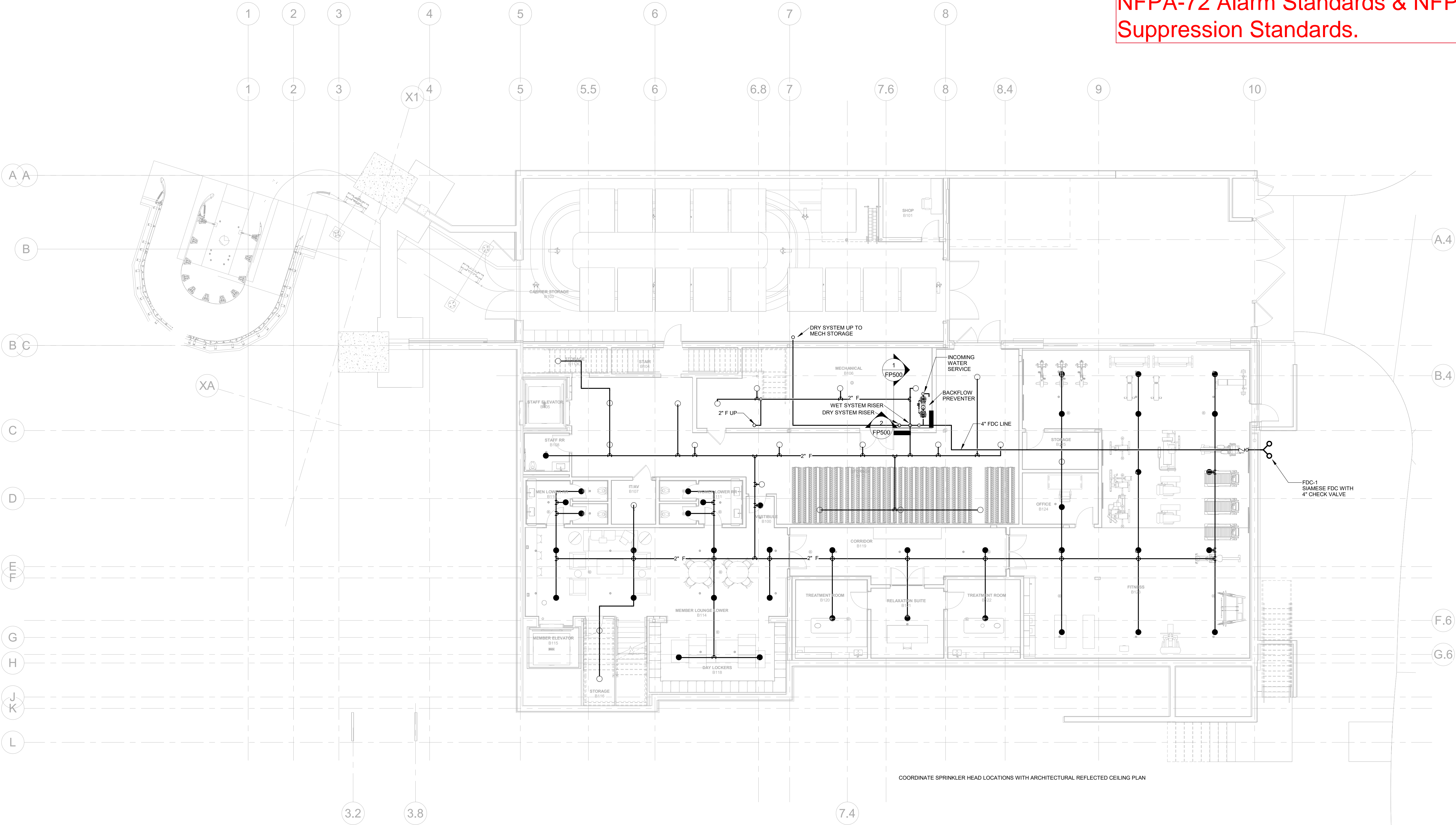
Technology Consultant
ATU/Solus
925 West 100 North, Suite E
North Salt Lake, UT 84054
TEL (435) 608-1363

100% IFC SET		
No.	Date	Description



FIRE PROTECTION FLOOR PLAN - LOWER LEVEL

Project number	1950.9
Date	08/22/2025
Drawn by	JRB
Checked by	JRB



FIRE PROTECTION FLOOR PLAN - LOWER LEVEL
SCALE: 1/8" = 1'-0"

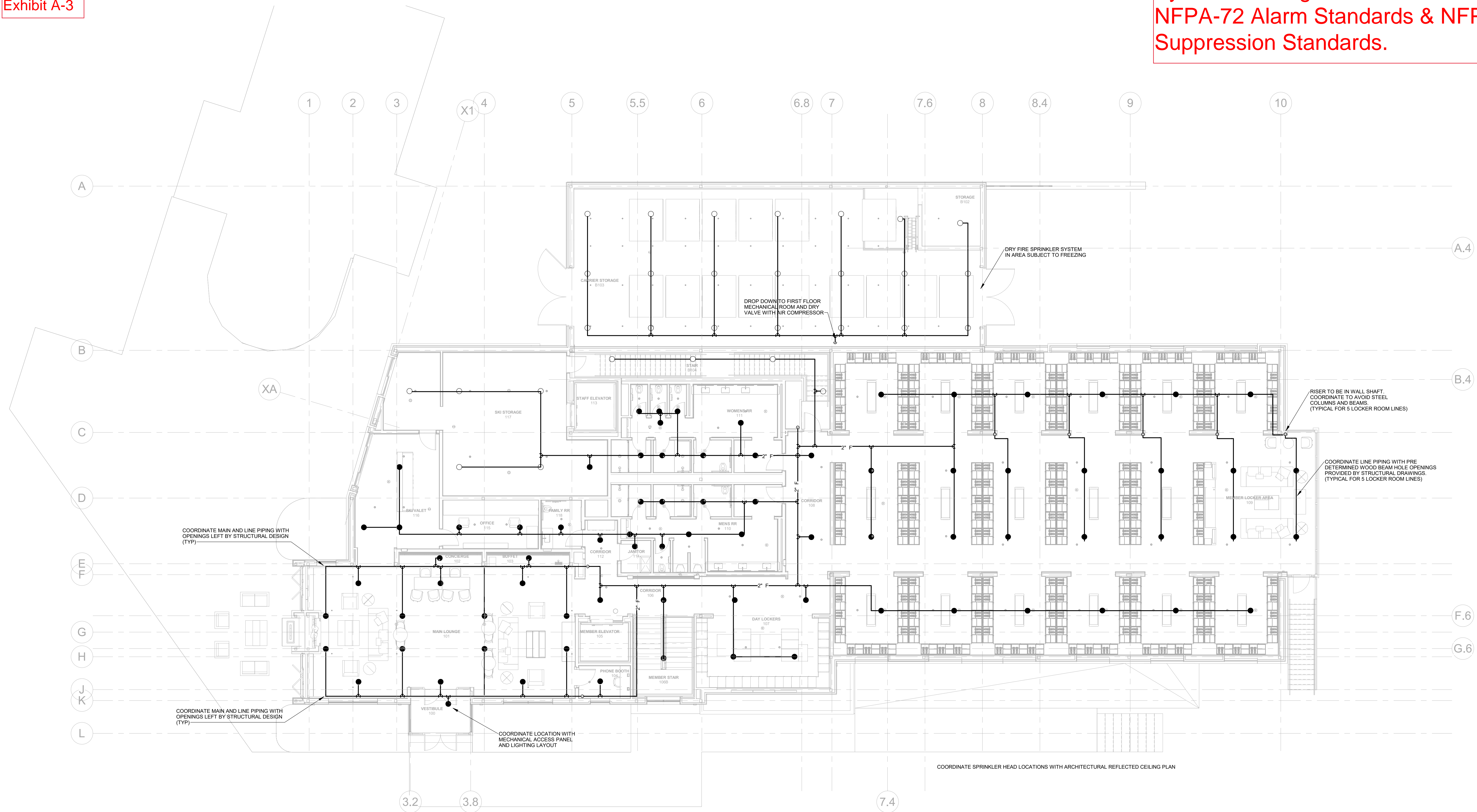


Technology Consultant
ATI/Solus
925 West 100 North, Suite E
North Salt Lake, UT 84054
TEL (435) 608/-1363

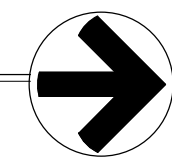
No.	Date	Description
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FIRE PROTECTION
FLOOR PLAN - MAIN
LEVEL

FP120



FIRE PROTECTION FLOOR PLAN - MAIN LEVEL
SCALE: 1/8" = 1'-0"





Lift Emergency Procedures

Fire

- **KEEP THE LIFT RUNNING!**
- Stop loading members and employees and clear the line, following Closing Procedures.
- Call Lift Maintenance
- Call Dispatch
- Know where your fire extinguisher is located and how to use it (by the doors)
- Try to put the fire out.
- **KEEP THE LIFT RUNNING!**

Rollback

- Push normal stop button
- Push the emergency stop button.
- Push the service stop button.
- Call Lift Maintenance
- Call Dispatch

Lightning/ Thunder

- If you encounter lightning or thunder, Call Dispatch on the radio.
- If lightning strikes the lift, note chair or tower. (**KEEP THE LIFT RUNNING**).
- Dispatch calls for all lift closure, leads will copy to the lift closing and then follow Closing Procedure.
- **Power down lift when line is clear. (Following the closing procedures)**
- Dispatch will then start a 20-minute timer. If we have no lightning strikes within that time, Dispatch will reopen the lifts. If lightning strikes, we will restart the 20-minute timer.
- **Monitor Lift house operator radio for communication. (stay inside the lift house)**
- **As a rule of thumb, we will close the lift if lightning is within 10 miles, direction pending.**

Earthquake

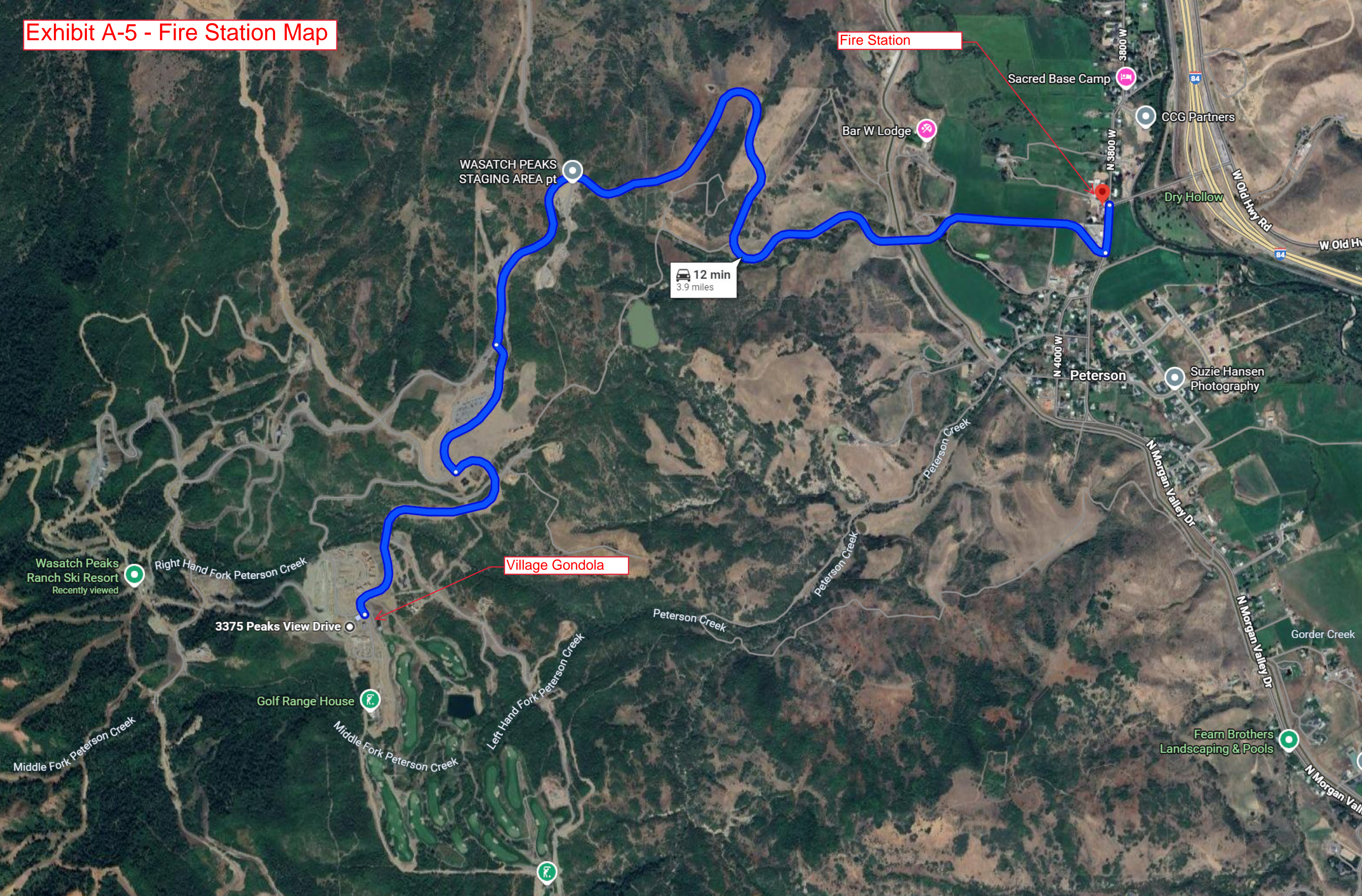
- **STOP THE LIFT IMMEDIATELY**
- Let Dispatch know "(Lift Name) has stopped for an Earthquake"
- Maintenance will then ski the line, checking towers and the ropes, and any disturbance around the area.
- If Maintenance finds a serious issue the lift line will close. Patrol will then ski down to do their seat evacuation protocol. Lifts will then follow Closing Procedure.
- If Maintenance does not find an issue, Leads will call "(Lift Name) has operational and mechanical clearance". Dispatch will then clear the lift to open.
- **Be alert for the aftershocks and tremors**

Wind Advisory, Watch, and Hold

- Lift Operators & Technicians will pay special attention to chair swing/stall and load/unload difficulties. Weather can impede visibility to operate the lift.

- Slow or stop the lift as necessary (Call lift lead/Supervisor or Technician)
- Wind Advisory is a wind/weather situation that can warrant reduced speed or closures.
- Wind Watch is an intensifying wind/weather situation that warrants reduction of lift speed and potential for closure.
- A wind hold is based upon speed and direction.
- Prior to having the lift on hold, be in contact with Ski Patrol so they can cycle to the top.
- A lift going on wind hold is for the safety of the lift as well as the people riding it.
- A lift on Wind Hold is closed to everyone! With the line cleared and on wind hold for 30 min watch. Watch the wind trends. Evaluate and update dispatch every half hour and at the top of every hour.
- During a wind/weather hold, the Lift Technician or Lift Lead will report over the radio to Dispatch. "(Lift Name) will be going on wind or weather hold and we will keep you updated"
- It is expected that, if possible, ski/ ride the lift line to ensure the hold is valid.

Exhibit A-5 - Fire Station Map



Fire Station

Sacred Base Camp

Bar W Lodge

CCG Partners

WASATCH PEAKS
STAGING AREA pt

Dry Hollow

12 min
3.9 miles

Peterson

Suzie Hansen
Photography

Village Gondola

3375 Peaks View Drive

Wasatch Peaks
Ranch Ski Resort
Recently viewed

Right Hand Fork Peterson Creek

Golf Range House

Middle Fork Peterson Creek

Left Hand Fork Peterson Creek

Peterson Creek

Peterson Creek

Peterson Creek

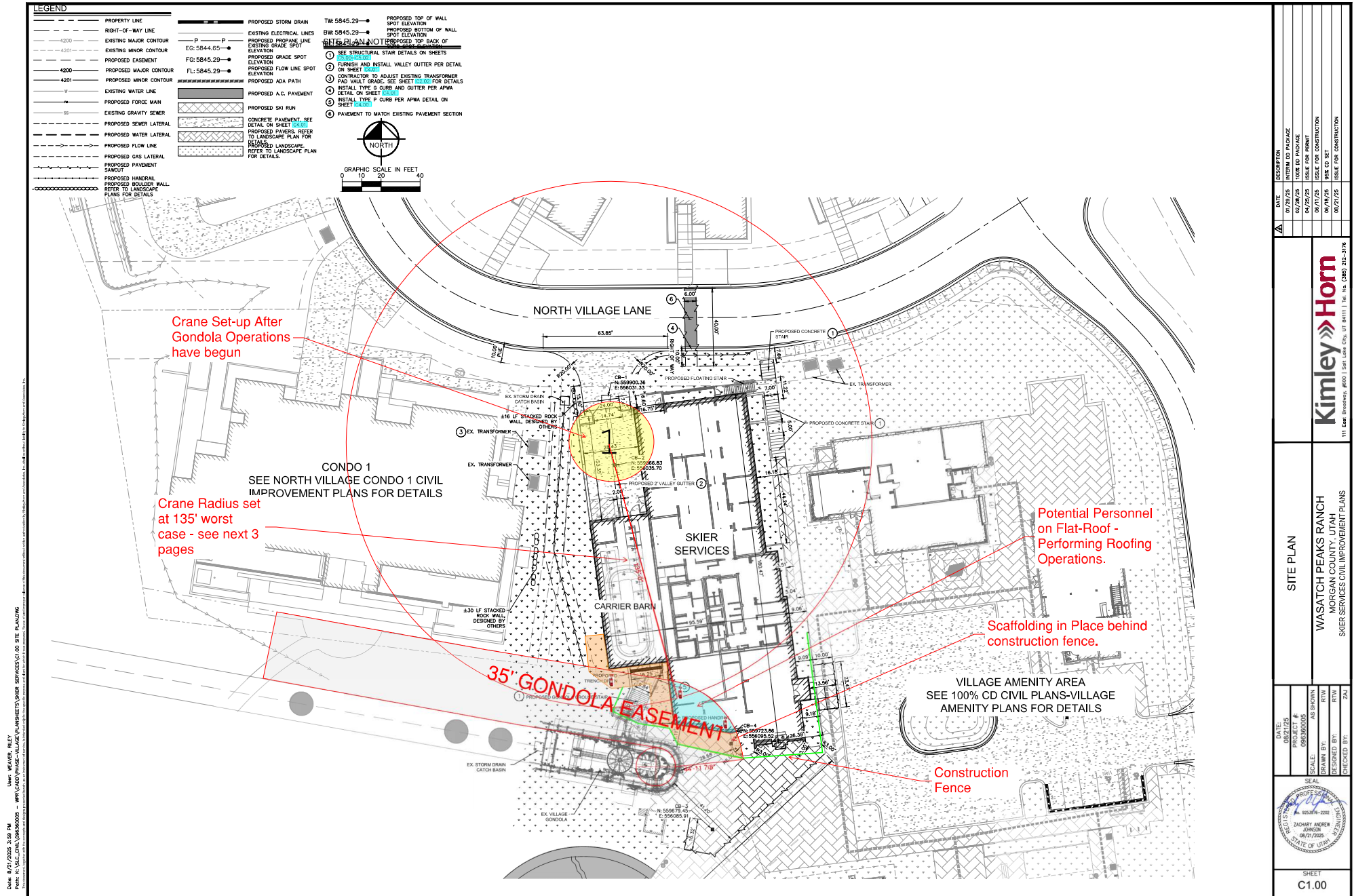
N Morgan Valley Dr

N Morgan Valley Dr

Fearn Brothers
Landscaping & Pools

N Morgan Valley Dr

Gorder Creek



CRANE INFORMATION (ALL DATA IN FT. OR LBS.)

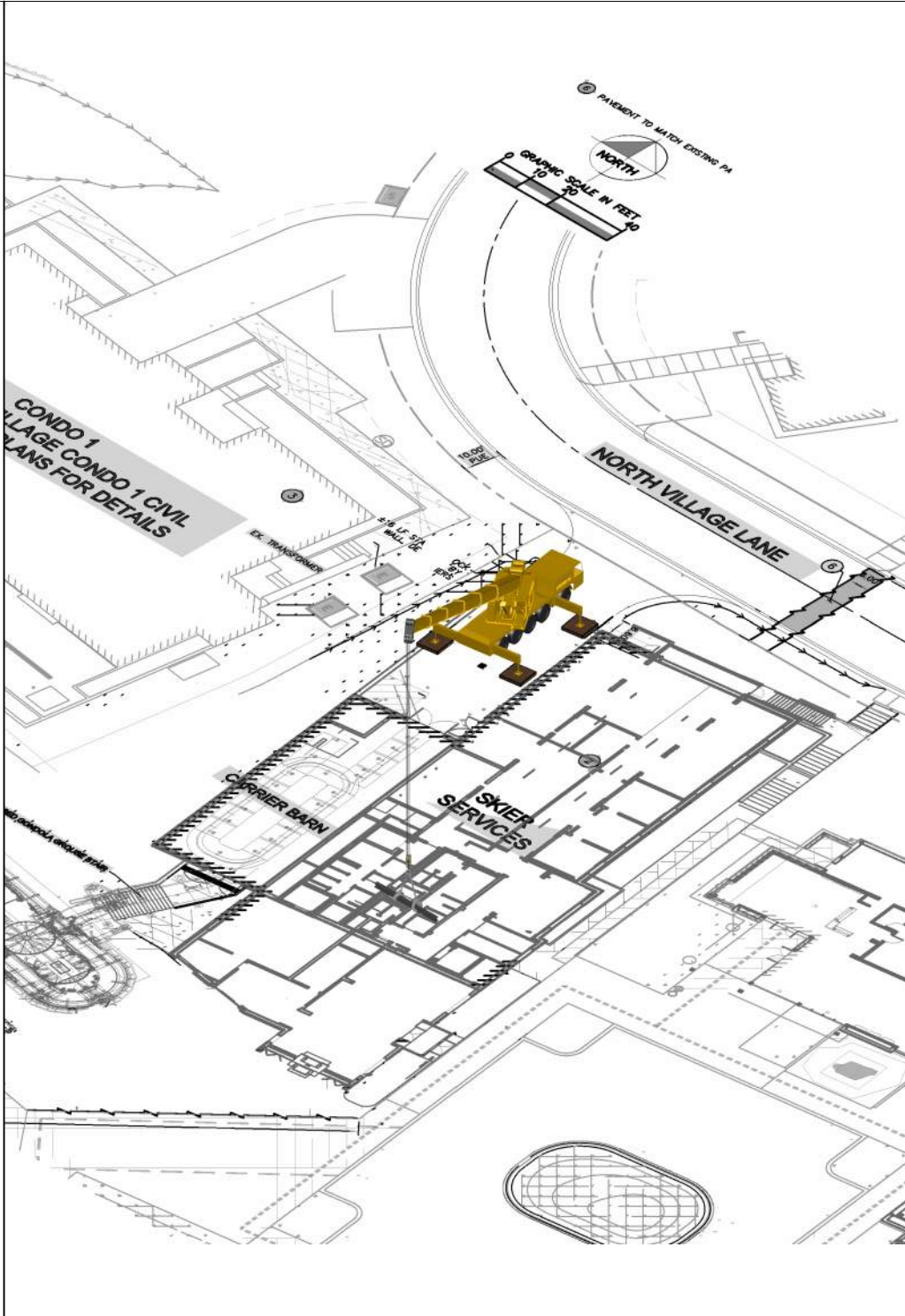
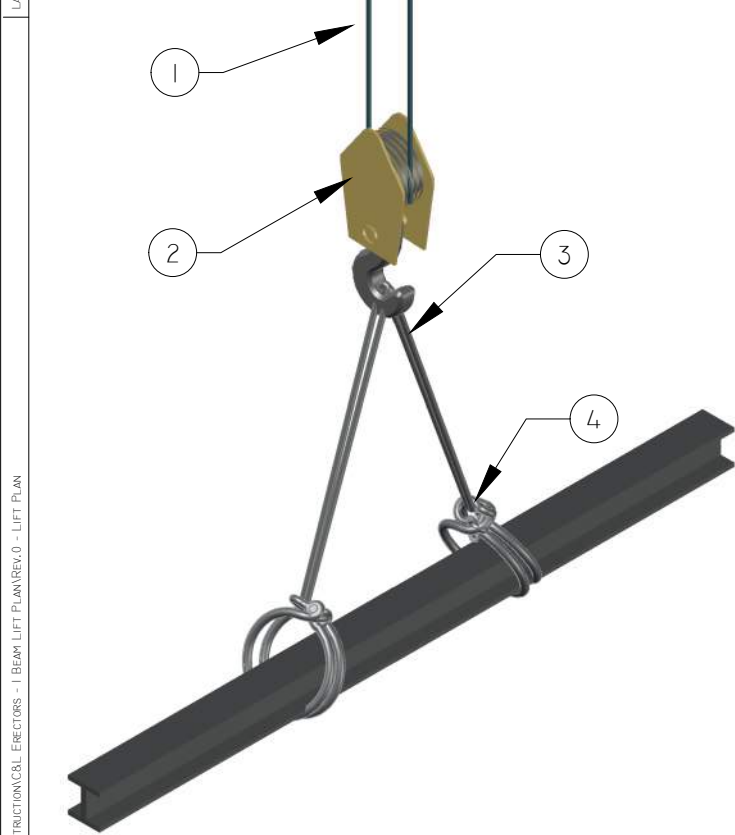
LIFT	CRANE ONE
CRANE TYPE:	LTM 1095
COUNTERWEIGHT:	50700
TAIL SWING RADIUS	12.8'
MAT SIZE/TYPE:	10' x 8'
CHART RATING:	360 DEGREES
OUTRIGGERS / TRACKS:	OUTRIGGERS (100%)
CT WT ACCESSORY:	NA
BOOM LENGTH:	165
JIB/LUFFER:	NA
LIFT RADIUS:	135
LINE PULL:	12820
LINE PARTS:	2
LINE CAPACITY:	25640
CRANE CAPACITY:	6700

LOAD INFORMATION

LOAD :	1500
RIGGING SCHEDULE TOTAL:	46
HOOK/BLOCK:	992
HEADACHE BALL:	308
LOAD LINE WEIGHT:	98
EFFECTIVE JIB WEIGHT:	NA
AUX. BOOM HEAD:	NA
ADDITIONAL WEIGHT:	0

LIFT INFORMATION

TOTAL LIFT WEIGHT:	2944
PERCENT CAPACITY:	43.9%

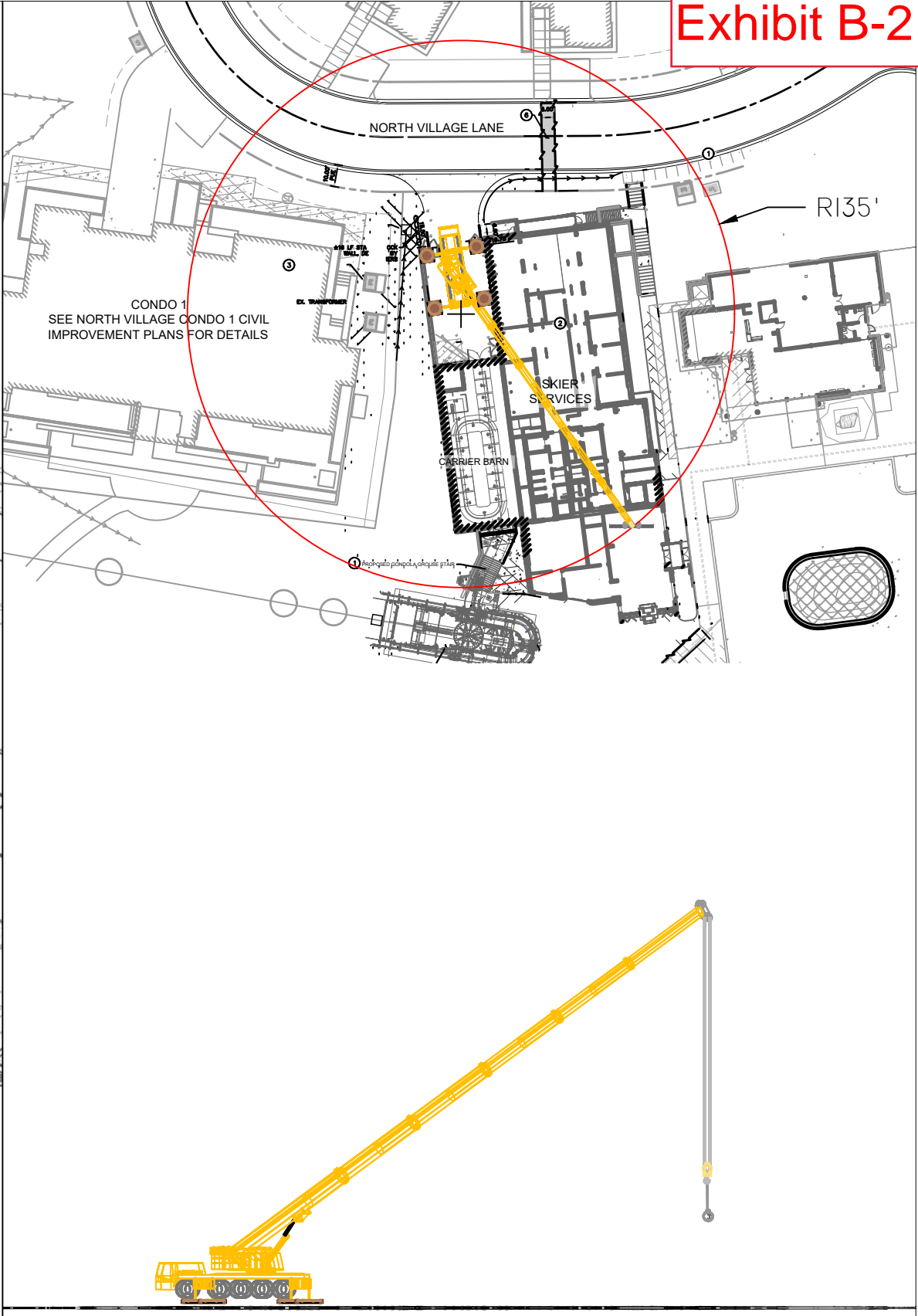


RIGGING SCHEDULE							
#	RIGGING DESCRIPTION	PARTS	LENGTH	HOOK	CAP. PER PART	TOTAL CAP.	%
1	MAIN LOAD LINE	2	75'- 0"	-	12,820 lbs	25,640 lbs	7%
2	MAIN LOAD BLOCK	-	-	SINGLE	-	84,400 lbs	2%
1	HEADACHE BALL & WHIP LINE DEDUCTION	-	-	-	-	-	-
-	STOWED JIB DEDUCTION	-	-	-	-	-	-
#	RIGGING DESCRIPTION	QTY	LENGTH	ANGLE	CAPACITY EA.	TOTAL CAP.	%
3	3/4"x20" WIRE ROPE SLING (CHOKED)	2	20'- 0"	60°	7,101 lbs	14,202 lbs	11%
4	3/4" SHACKLE (4-3/4 TON)	2	'- 0"	60°	8,487 lbs	16,974 lbs	9%


JOB #:					TBD
REV	DATE	REQUESTED BY	CHANGED BY	CHANGES MADE	
# 0	11/20/25(AK)	SO	AK	CREATED	

1. THE CRANE CAN BE MOVED, AT OPERATORS DISCRETION, DUE TO FIELD CONSTRAINTS AS LONG AS CRANE OPERATING PARAMETERS ARE WITHIN THE DATA SHOWN
2. OPERATING WIND CONDITIONS ARE AT THE OPERATORS DISCRETION OR NOT TO EXCEED MANUFACTURER RECOMMENDATIONS
3. OPERATORS/RIGGERS AND RIGGING CERTIFICATIONS AVAILABLE UPON REQUEST
4. CURRENT CRANE INSPECTIONS ARE AVAILABLE UPON REQUEST
5. ENSURE THAT TAIL SWING IS CLEAR AND BARRICADED PRIOR TO HOISTING
6. STRUCTURAL INTEGRITY OF THE LIFT POINTS OF THE LOAD ARE THE RESPONSIBILITY OF THE OWNER/MANUFACTURER UNLESS OTHERWISE SPECIFIED
7. THE CONTROLLING ENTITY IS RESPONSIBLE FOR ENSURING THE GROUND IS SUITABLE FOR SUPPORTING THE APPLIED LOADS OF THE CRANE
8. LARGER CRANES MAY BE SUBSTITUTED AS LONG AS THE PERCENT OF CHART PRESSURE DOES NOT EXCEED WHAT IS SHOWN AND THE APPLIED GROUND BEARING PRESSURE HAS BEEN ACCOUNTED FOR
9. LARGER RIGGING MAY BE SUBSTITUTED AS LONG AS THE RIGGING SIZE AND CONFIGURATION HAS BEEN APPROVED AND ACCOUNTED FOR
10. THE TECHNICAL DATA PROVIDED FOR THE LOADS LIFTED ARE RESPONSIBLY OF THE CUSTOMER/OWNER

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OR WITH MOUNTAIN CRANE SERVICE'S EXPRESS WRITTEN PERMISSION. DRAWINGS ARE PROVIDED FOR REFERENCE ONLY & SHOULD BE VERIFIED TO ACTUAL SITE EQUIPMENT & PROCEDURES.
MOUNTAIN CRANE SERVICE ACCEPTS NO RESPONSIBILITY FOR ANY CHANGES, ADDITIONS OR OMISSIONS MADE BY OTHERS.
UTILIZATION OF INFORMATION CONTAINED ON THIS DRAWING ASSUMES FULL AGREEMENT WITH THE ABOVE.



PROJECT NAME:		BEAM LIFT PLAN	
DRAWING TITLE:			
JOB LOCATION:		UTAH	
CUSTOMER:		C&L ERECTOR	
DATE:	11/20/2025	SHEET #:	01 OF 01
DRAWN BY:	AK	CHECKED BY:	DE



PRELIMINARY

Lifting capacities Forces de levage

Exhibit B-3

<div> <div>41 – 190 ft</div> <div></div> <div></div> <div>50700 lbs</div> <div>85%</div> </div>													
ft	41 ft	54 ft	68 ft	82 ft	96 ft	110 ft	123 ft	137 ft	151 ft	165 ft	178 ft	190 ft	ft
	*												
10	188.2	139.5	139.5										10
11	179.9	139.5	139.5										11
12	167.1	139.5	139.5	128.8									12
13	153.8	139.5	138.9	128.4	107								13
14	149.3	139.5	135.1	126.7	106.9								14
15	145.2	139.5	130.6	122.1	106.9	84.4							15
16	141.4	134.1	127	118	106.9	84.4							16
17	138	127.7	123.8	115.2	106.9	84.4	72.4						17
18	133	121.7	120.6	111.7	105.9	84.4	72.1						18
19	125.9	116.1	116.9	108.5	102.6	84.4	71.6						19
20	118.3	110.7	111.6	105.5	99.5	84.4	71	49.4					20
22	105.6	101	101.8	100.1	93.8	84.4	69.7	49.4					22
24	95	92.1	93.1	93	89	83.9	68.4	49.4	43.5				24
26	86.1	83.7	84.7	84.9	84.2	81.4	66.8	49.4	42.8	33.8			26
28	78.5	76.5	78.2	77.7	78.3	74.8	64.6	49.2	41.7	33.3			28
30	72	70.3	72	71.5	72.7	68.8	62.3	48.1	40.5	32.8	25		30
32	66.3	64.9	66.8	66	67.1	63.4	60.1	46.3	39.2	32.1	25		32
34			61.9	62	62.1	58.5	57.2	44.6	37.8	31.4	24.7	20	34
36			57.4	58.2	57.6	54.5	54	42.8	36.4	30.7	24.3	19.8	36
38			53.5	54.3	53.7	52.2	50.6	41.1	35.2	29.9	23.9	19.6	38
40			50.1	50.8	50.2	50	47.4	39.6	33.9	29.1	23.4	19.3	40
45			42.9	43.6	43	43.1	40.9	35.9	31.1	26.9	22.2	18.6	45
50				37.7	37.9	37.6	35.4	32.6	28.6	24.9	20.9	17.9	50
55				34	34.2	33	31.1	29.2	26.2	23.1	19.7	17	55
60					30.1	29.3	27.4	26.5	24.3	21.4	18.6	16	60
65					26.8	26.2	24.4	24.6	22.2	19.9	17.5	15.2	65
70					23.8	23.4	21.9	22.4	19.7	18.5	16.5	14.4	70
75						20.9	20.7	20.3	18	17.2	15.5	13.6	75
80						18.8	19.5	18.4	16.8	15.8	14.6	12.9	80
85						16.9	17.9	16.8	15.5	14.3	13.7	12.3	85
90							16.2	15.3	14.6	12.9	12.9	11.6	90
95							14.8	13.8	13.8	12.2	12	11	95
100								12.5	12.9	11.5	10.9	10.5	100
105								11.5	11.7	10.7	9.9	10	105
110								10.9	10.7	10	9.3	9.3	110
115									9.8	9.6	8.8	8.6	115
120									8.9	8.9	8.4	7.9	120
125										8.2	7.9	7.2	125
130										7.6	7.3	6.6	130
135										6.9	6.7	6	135
140											6.1	5.4	140
145											5.5	4.8	145
150											5	4.2	150
155												3.8	155
160												3.3	160
165													165
170													170
175													175

* over rear · en arrière

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Ground Bearing

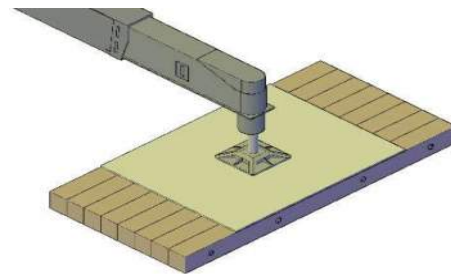


Description of Lift

Load Description	Steel
Weight	2,944 lbs

Crane Specifications

Crane Make	LIEBHERR
Crane Model	LTM 1095
Counterweight	50,700 lbs
Radius	135 ft
Boom position	Worst Case
Max Outrigger Loading (P)	76,000 lbs



Out Rigger Float/Transition Mat Data

Width	2.5 ft
Length	2.5 ft

Crane Mat Data

Width (<i>b</i>)	8.0 ft
Length (<i>c</i>)	10.0 ft
Depth (<i>d</i>)	0.750 ft
GBP @ <i>n</i> ' below mat (not required) (<i>n</i>)	ft

Calculated Ground Bearing Pressure Results

Ground Bearing Pressure (<i>q</i>)	950 lb/ft ² (psf)
Weight of Crane Mats	37 lb/ft ² (psf)
Total GBP Below Mats	987 lb/ft ² (psf)
Total GBP @ <i>n</i> ft Below Mats	lb/ft ² (psf)





November 20, 2025
Revised November 21, 2025

Wasatch Peaks Ranch Development Company
36 South State Street, Suite 500
Salt Lake City, Utah 84111

Attention: Kyle Griffith
EMAIL: kgriffith@wprdevco.com

Subject: Geotechnical Consultation
Crane Support
Skier Services Building
Wasatch Peaks Ranch
Peterson, Utah
Project No. 1250243

Mr. Griffith:

Applied Geotechnical Engineering Consultants, Inc. (AGEC) was requested to provide consultation regarding support for a crane proposed to be used for construction of the Skier Services Building currently under construction at Wasatch Peaks Ranch in Peterson, Utah.

PREVIOUS STUDIES

We conducted a geotechnical investigation for the project, and provided our conclusions and recommendations in a report dated August 27, 2024 under AGECE Project Number 1240436.

We provided additional geotechnical consultation regarding the over-excavation to reduce the potential effect of expansive soils at the site in a letter dated June 26, revised June 30, 2025 under AGECE Project No. 1250243. We observed the excavation for the foundation of the building and submitted our conclusions and recommendations in a letter dated November 20, 2025 under AGECE Project No. 1250243.

PROPOSED CRANE

We understand an 115-ton, Liebherr LTM 1095 crane is proposed to be used to assist in construction for the building. We understand it is proposed to bear on the structural fill placed in the driveway area north of the carrier barn portion of the building, with a maximum outrigger load of 76,000 pounds. We understand crane mats with dimensions of 8 feet wide by 10 feet long are proposed to be used to support the outriggers.

Wasatch Peaks Ranch Development Company
November 20, 2025
Revised November 21, 2025
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RECOMMENDATIONS

In our professional opinion, the structural fill in the area is suitable to support the proposed crane, with a maximum allowable bearing pressure of 1,600 pounds per square foot.

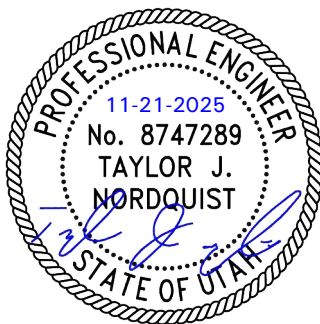
LIMITATIONS

This letter has been prepared in accordance with generally accepted soil and foundation engineering practices in the area and is for the use of the owner. The information included in this letter is based on information presented in the above-referenced geotechnical report, our understanding of the proposed construction and crane, our observations at the site, results of in-place moisture and density testing and our experience in the area. If conditions, proposed construction, or the proposed crane are significantly different from what is described above, we should be notified to reevaluate the recommendations given.

If you have any questions or we can be of further service, please call.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Taylor J. Nordquist P.E.

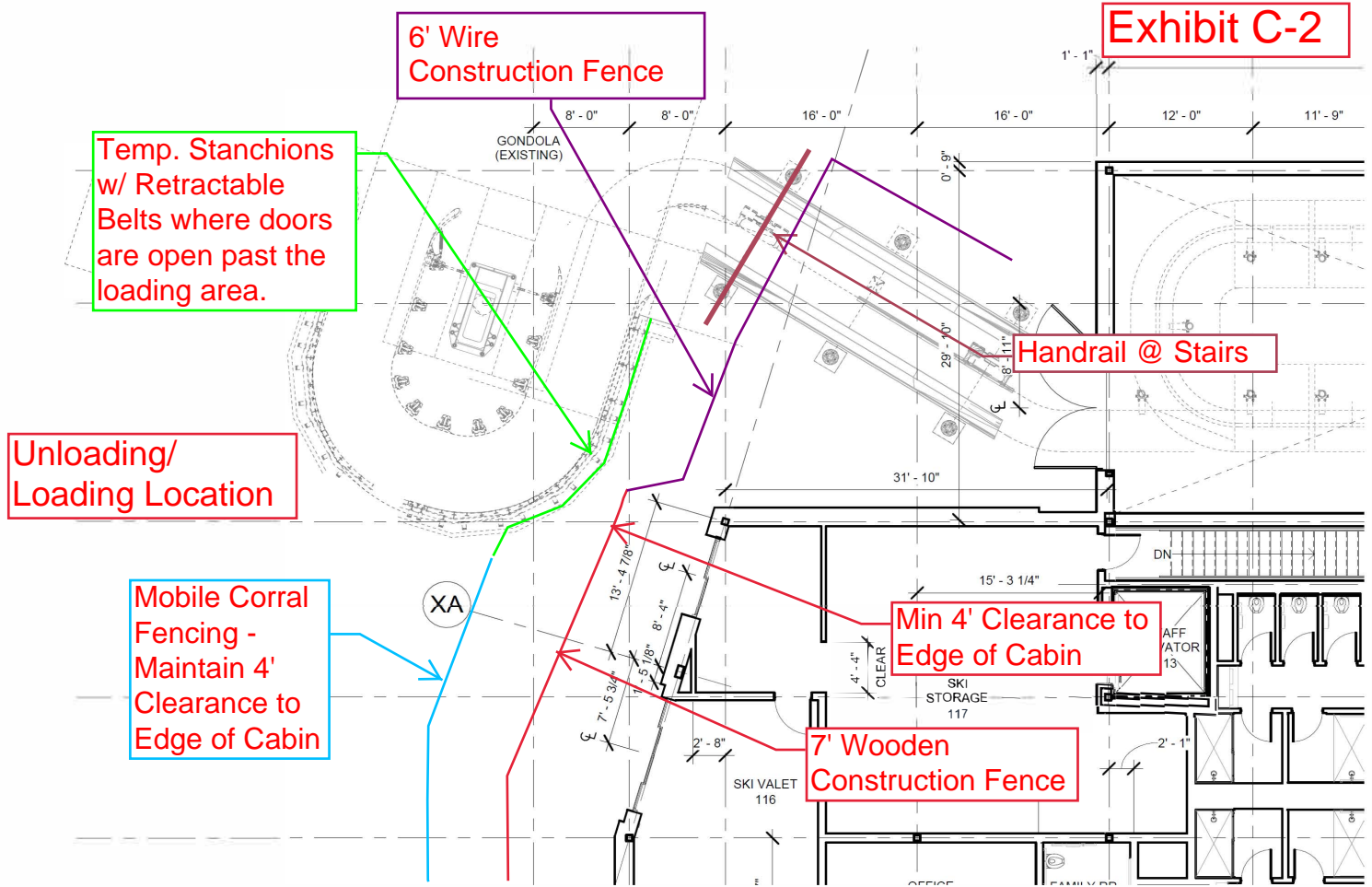
Reviewed by JEN, P.E., D.GE
TJN/rs

Exhibit C-1



7' Minimum Wood
Construction
Barrier Fence

Exhibit C-2



**Utah Passenger Ropeway Safety Committee Meeting
Agenda Fact Sheet**

Meeting Date: 12-1-25

Agenda Item: 4

Subject: Safety Topic / Open Discussion / Questions

Background:

Exhibits:

Committee Action Requested: