



State of Utah

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DEPARTMENT OF TRANSPORTATION

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Deputy Director of Planning and Investment

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Deputy Director of Engineering and Operations

February 24, 2024

TO: Owners, Area Operators, and other interested parties

FROM: Brian L. Allen

SUBJECT: 3/4/24 Passenger Ropeway Safety Committee meeting at UDOT and Google meets

The next Utah Passenger Ropeway Safety Committee meeting will be at **1:00 p.m. on Monday, March 4, 2024**. 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:

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AGENDA

- ITEM 1. APPROVAL OF MINUTES
January 22, 2024 Meeting
- ITEM 2. Qualified Engineer applications
- ITEM 3.. Proposed changes to the air space requirement:
- ITEM 4. Ropeway inspector discussion
- ITEM 5. Updates: Forest Service, Areas, Manufacturers
- ITEM 6. Open Discussion

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UTAH PASSENGER ROPEWAY SAFETY COMMITTEE MEETING

Monday, March 4, 2024 - 1:00 p.m.
UDOT Lester Wire Conference Room
and
Electronic Meeting (Google Meets)

AGENDA

- ITEM 1. APPROVAL OF MINUTES
January 22, 2024 Meeting
- ITEM 2. Qualified Engineer applications
- ITEM 3. Proposed changes to the air space requirement:
- ITEM 4. Ropeway inspector discussion
- ITEM 5. Updates: Forest Service, Areas, Manufacturers
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**Utah Passenger Ropeway Safety Committee Meeting
Agenda Fact Sheet**

Meeting Date: 3-4-24

Agenda Item: 1

Subject: Approval of Minutes – January 22, 2024

Background:

Exhibits:

Draft minutes

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

Unapproved minutes

UTAH PASSENGER ROPEWAY SAFETY COMMITTEE MEETING

November 6, 2023

UDOT Lester Wire conference room & Google Meets

Committee members at UDOT:	Rich Taxwood, Chairman, Ski Area Representative Robert Miles, Ex-officio Member
Committee members Google Meets:	Russ Oberlander, Vice-chairman, Engineer Jill Koford, Public Representative
Committee members absent:	Curt Panter, U.S. Forest Service Representative Jeff West, Ski Area Representative
Staff at UDOT:	Brian Allen, UDOT
Others (Google Meets):	Brad Hansen, Utah Olympic Park Gustavo Gonzalez, Park City Resort Troy Matthews, Deer Valley Resort Jason Zakotnic, Above & Beyond Brandon Nelson, Sundance Jason Davis, Alta James Bell, SMC Construction Branden Whitman, SMC Construction Seth Wallace, Forest Service Danny McRae, Powder Mountain Seth Haddick, Wasatch Peaks Ranch

CALL TO ORDER

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

I. APPROVAL OF MINUTES

The minutes of the November 6, 2023 meeting were reviewed.

Following the review Russ Oberlander made a motion to approve the minutes of both meetings and Rich Taxwood seconded the motion. The motion passed unanimously.

II. Air Space Exception request: Deer Valley Mountaineer lift

Deer Valley has submitted the engineer's evaluation and the responses from the construction company. All of the issues identified have been addressed. It is recommended that the air space exception be approved. Opportunities were provided for the parties involved to provide additional information or ask questions. Following the discussion Jill Koford made a motion to approve the exception request and Russ Oberlander seconded the motion. The motion passed unanimously.

III. Forest Service / Area & Manufacturer Updates

The areas and manufactures present gave brief updates as to their recent activities.

IV. Open Discussion / Questions

The meeting was adjourned at 1:15 pm.

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

Meeting Date: 3-4-24

Agenda Item: 2

Subject: Qualified Engineer applications

Background:

Robert Langlands has applied to be approved as a qualified engineer for design and construction. Please review the attached information.

Attachments:

Application

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: Robert B Langlands III

Address: 6848 S Greendale Rd, Cottonwood Heights, UT 84121

Present Position: Sales Engineer

Date of Application: 02/14/2024

III. Professional Engineer Licensing

Date of licensing: 12/23/2020

Utah license #: 12072572-2202

Licensed by examination? Yes

If no, how?

Is license current? Yes

Has license ever been revoked? No

If yes, why?

Other State(s) or Country(ies) you are licensed in: None

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: Robert Langlands

Digitally signed by Robert
Langlands
Date: 2024.02.14 13:45:37 -07'00'

Date: 02/14/2024

Chairperson UPRSC Signature:

Date Approved:

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

1.	Name and address of employer at time experience was obtained: Skytrac Services Inc. 2350 W 1500 S, Salt Lake City, UT 84121
2.	Type of training and by whom trained in design, construction, manufacture or inspection: Trained in civil engineering and construction techniques by Ross Palmer, PE Completed several ski lift construction projects with Tim Nickou, PE
3.	Approximate dates when experience and training occurred: 4/24/2017 through present
4.	Types of tramways the experience and training reported above pertained to: Fixed grip chairlifts, detachable chairlifts, and surface lifts
5.	Name and current address of three references that are familiar with work completed by applicant as listed herein: a. Ross Palmer PE, 2350 W 1500 S Salt Lake City, UT 84104 b. Alan Hepner PE, 10200 Pinkham Creek Rd. Rexford, MT 59930 c. Justin Gross PE, 2746 Seeber Dr, Grand Junction, CO 81506

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

Meeting Date: 3-4-24

Agenda Item: 3

Subject: Proposed changes to the air space requirement

Background:

The proposed changes would establish a procedure to follow when an air space encroachment occurs. It would no longer be an exception to the established rule.

Page 1 contains the unchanged air space definition. Page 5 has the proposed new language. The language on page 5 is directed to be included as part of the ANSI sections. My interpretation is that the ANSI requirements still exist as a minimum that could not be encroached upon.

Attachments:

Selected pages from the proposed R920-50 rule.

Committee Action Requested:

R920. Transportation, Operations, Traffic and Safety.

R920-50. Ropeway Operation Safety.

R920-50-1. Purpose and Authority.

(1) Purpose. This rule regulates passenger ropeways in Utah, other than private residence ropeways defined in Subsection 72-11-102(11). This rule also defines the duties, responsibilities, and authority of the Utah Passenger Ropeway Safety Committee created by Section 72-11-202 (the Committee).

(2) Authority. Section 72-11-210 authorizes the Department to make this rule.

R920-50-2. Definitions.

In addition to terms defined in Section 72-11-102, the following terms are defined:

(1) "Aerial lift specialist" as used in American National Standards Institute (ANSI) B77.1 Sections 3.3.4.1 and 4.3.4.1, means a Ropeway Inspector as defined in Subsection R920-50-3(32).

(2) "Aerial tramway specialist" as used in ANSI B77.1 Section 2.3.4.1 means a Ropeway Inspector as defined in Subsection R920-50-3(32).

(3) "Air Space" means the area bounded by vertical planes commencing at a point 35 feet from the intersection of the vertical planes of the ropes and ground surface.

(4) "Annual general inspection" means an inspection of a passenger ropeway made by a Ropeway Inspector to verify preservation of original design integrity and to determine that components and systems of the passenger ropeway are in proper working order and in accordance with this rule.

(5) "Audible warning devices" means an audible warning device that signals an impending start of the aerial lift.

(6) "Auxiliary Power Unit" is a generic term to describe a gas or diesel engine generally used as a backup to the prime mover.

(7) "Bullwheel" means a large grooved wheel at a terminal that rotates continuously when the haul rope is moving and deflects the haul rope by an angle of ten degrees or more.

(8) "Carrier" means the structural and mechanical assemblage in or on which passengers or freight of a ropeway system are transported. Unless qualified, the carrier includes, for example, the carriage, grip or clip, hanger, and cabin or chair.

(9) "Conveyor specialist" as used in ANSI B77.1 Section 7.3.4 means a Ropeway Inspector as defined in Subsection R920-50-3(32).

(10) "Dynamic Testing Logs" means a record of the data collected during the dynamic test.

(11) "Experienced personnel" means an individual who has acquired knowledge and skills through study, training, or experience in ropeway maintenance, operation, or testing.

(12) "Existing ropeway" means any passenger ropeway that has been operated for passengers for more than one calendar year.

(13) "Funicular specialist" as used in American National Standards Institute (ANSI) B77.2 Section 2.3.4.1 means a Ropeway Inspector as defined in Subsection R920-50-3(32).

(14) "Grip" means the device by which carriers are attached to the haul rope.

(15) "Governing Standard" means the ANSI B77 standard that is incorporated by reference as part of Section R920-50-3.

(16) "Haul rope" means a wire rope used on a ropeway that provides motion to carrier and is powered by the drive bullwheel.

(17) "Incident inspection" means an inspection of a passenger ropeway incident made by an approved Ropeway Inspector or a qualified engineer at the request of the Committee.

(18) "Land surveyor" means an individual licensed under Section 58-22-102 as a professional land surveyor.

(19) "Modification" means any change as defined in ANSI B77.1 Section 1.2.4.4, ANSI B77.2 Section 1.2.4.4, and the replacement of a ropeway component by one that alters the certified design or construction provided by the passenger ropeway manufacturer or designer.

(20) "New ropeway" means any passenger ropeway registered for the first time for passenger operation during its first calendar year of operation.

(21) "Operational inspection" means an inspection of a passenger ropeway made by a Ropeway Inspector to determine compliance with the operation and maintenance requirements of the Governing Standard and with this rule.

(22) "Operating personnel" means persons employed by the operator to supervise the operation, or engaged in servicing, checking, inspecting or maintaining the machinery or structures of a ropeway and when on duty for such purposes on that ropeway.

(23) "Passenger" means any person riding a ropeway, other than "operating personnel."

(24) "Passenger Ropeway Incident" means:

(a) a structural, mechanical, or electrical malfunction or failure of a passenger ropeway component that results in bodily injury to any person on, or inside the load or unload zone of, a passenger ropeway;

(b) a deropement regardless of whether the passenger ropeway is evacuated;

(c) an evacuation of the passenger ropeway other than by prime mover or auxiliary power unit, regardless of cause;

(d) a fire involving a passenger ropeway component or adjacent structure;

(d) For installations before May 11, 2018 the belt transition entry stop device referred to in ANSI B77.1 Section 7.2.3.3 must include redundant, or double sensors or an equivalent system submitted by a qualified engineer to prevent operation in the faulted condition. Each sensor must be part of an independent control circuit that can initiate an emergency shutdown of the conveyor. The device must be so designed and maintained that no single point of failure can cause the entry stop device to malfunction. The device may not be remotely resettable and must require the operator to reset the device before restarting the conveyor.

(9) "Air Space Requirements." ANSI B77.1, Section 2.1.1.4, 3.1.1.4, 4.1.1.4, 5.1.1.4, and 6.1.1.4 and ANSI B77.2 Section 2.1.1.4 must also include the following: ~~[No structure may be permitted to encroach into the air space of the ropeway]~~ Encroachment into the air space shall require an evaluation by a qualified engineer to identify any required mitigation measures to provide comparable protection from unnecessary hazards in the operation of the passenger ropeway. The Committee shall be notified of the encroachment at least 7 days prior to resuming public operation of the ropeway. The evaluation shall be documented as part of the lift maintenance log. Ropeways and Structures that were both constructed before November 1, 2006 do not need to comply with this requirement.

(10) "Portable Ropeways." Portable ropeways will not be considered new ropeways when moved to different locations but remaining under the jurisdiction of the same operator.

(11) "Tows Requirements."

Handle Tows must have stop gates above and below the rope.

R920-50-10. Applicable Provisions.

Installations must comply with the "Revised and Additional Provisions" of Section R920-50-10 in the categories listed in this section, on or before the date specified. These provisions establish the minimum requirement.

- (1) The following apply to ropeways:
 - (a) New installations and relocated installations Subsection R920-50-10(1);
 - (b) Wire rope inspection Subsection R920-50-10(6); and
- (2) The following provisions apply to an Aerial Tramway:
 - (a) Auxiliary drives R920-50-10(2); effective November 1, 1994;
 - (b) Electronic speed-regulated drives R920-50-10(3); effective November 1, 1994;
 - (c) Friction type brakes R920-50-10(5); effective November 1, 1995;
 - (d) Audible warning devices R920-50-10(7); effective November 1, 2001; and
 - (e) Air space requirements R920-50-10(9); effective November 1, 2006.
- (3) The following provisions apply to a Detachable Grip Aerial Lift:
 - (a) Auxiliary drives R920-50-10(2); effective November 1, 1994;
 - (b) Electronic speed-regulated drives R920-50-10(3); effective November 1, 1994;
 - (c) Rope position monitoring R920-50-10(4); effective November 1, 1994;
 - (d) Friction type brakes R920-50-10(5); effective November 1, 1995;
 - (f) Audible warning devices R920-50-10(7); and
 - (h) Air space requirements R920-50-10(9); effective November 1, 2006.
- (4) The following provisions apply to a Fixed Grip Aerial Lift:
 - (a) Auxiliary Drives R920-50-10(2); effective November 1, 1994;
 - (b) Electronic speed-regulated drives R920-50-10(3); effective November 1, 1994;
 - (c) Friction type brakes R920-50-10(5); effective November 1, 1995;
 - (e) Audible warning devices R920-50-10(7); and
 - (g) Air space requirements R920-50-10(9); effective November 1, 2006.
- (5) The following provisions apply to a Surface Lift:
 - (a) Electronic speed-regulated drives R920-50-10(3); effective November 1, 1994;
 - (b) Friction type brakes R920-50-10(5); effective November 1, 1995;
 - (c) Air space requirements R920-50-10(9); effective November 1, 2006; and
 - (d) Audible Warning Devices R920-50-10(7)(c); effective November 1, 2022.
- (6) The following provisions apply to a Rope Tow:
 - (a) Electronic speed-regulated drives R920-50-10(3); effective November 1, 1994;
 - (b) Friction type brakes R920-50-10(5); effective November 1, 1995;
 - (c) Air space requirements R920-50-10(9); effective November 1, 2006;
 - (d) Tow requirements R920-50-10(11);
 - (e) Portable Ropeways R920-50-10(10); and
 - (f) Audible Warning Devices R920-50-10(7)(c); effective November 1, 2022.
- (7) The following provisions apply to a conveyor:
 - (a) Conveyor standards R920-50-10(8);
 - (b) Portable Ropeways R920-50-10(10); and
 - (c) Audible Warning Devices R920-50-10(7)(c); effective November 1, 2022.
- (8) The following provisions apply to a Funicular:
 - (a) Audible Warning Devices R920-50-10(7)(d); effective November 1, 2022.

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

Meeting Date: 3-4-24

Agenda Item: 4

Subject: Ropeway inspector discussion

Background:

The attached one page document is intended to identify issues to be considered, and not to establish an opinion or recommendation.

The question is how do we ensure an adequate number of inspectors while maintaining the quality of the inspection?

Attachments:

Ropeway inspector discussion

Committee Action Requested:

Ropeway Inspector discussion

Currently we require a ropeway inspector to be a licensed engineer with ropeway experience. We allow the engineer to determine the detail and the scope of the inspection. When applying they have certified that they have a knowledge of the ANSI standard and the Utah Ropeway rules. The licensed engineer requirement helps provide a minimum amount of knowledge to use when accessing the ropeway, and allows a complaint to be filed with the licensing board if someone was negligent in inspection that was performed. (Note: There are 12 qualified engineers that did not apply to be ropeway inspectors.)

Problem:

Of the approved ropeway inspectors (20) 6 seem to exclusively inspect for an insurance company. 8-9 seem to be unavailable because of working for a lift manufacturer or they are generally retired. A few live back east and it is cost prohibitive to inspect small operations. Leaving only 3 that are generally available to perform inspection without restrictions.

While it has worked so far, at times it is challenging for areas to secure a timely inspection. Inspections can occur earlier, but traditionally we see inspections beginning in October. An area with a well established program can easily be inspected earlier, but for areas that are experiencing significant staff turnover it is nice to inspect much closer to opening. Inspections need to occur when the lift is running so the completion of routine maintenance is a factor in its availability for inspection. It's not easy for a large area to have them all running at once during maintenance.

Acknowledgement:

You don't have to be an engineer to provide an inspection. You need to understand lifts, the standards, and the systems.

Most states with a ropeway safety program seem to contract individuals to perform inspections for them. This allows them to control the scope of the inspection. Currently the cost of the inspections is paid for by the resort as part of their insurance premium or directly to the inspector when obtaining their services. There would likely be an increased cost due to administration if the state was to provide the inspectors.

If you use non engineers to provide the inspection I'm not aware of a good way to address superficial inspection. At what point do you have the Committee get involved in the scope and detail of an inspection.

Alternative:

Allow areas and insurance providers to use non engineers. There are a lot of experienced inspectors who perform excellent inspections.

Continue to require approval by the UPRSC when the applicant demonstrates one of the following:

- 4 years of ropeway inspections in other jurisdictions
- Lift maintenance experience (4 years with mechanical systems and 4 years with electrical systems, experience can be obtained simultaneously)
- 4 years active participation with ASC B77 committee
- 4 years experience commissioning ropeways (Mike Beeley, Randy Henry, etc)

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

Meeting Date: 3-4-24

Agenda Item: 5

Subject: Forest Service / Area & Manufacturer Updates

Background:

Exhibits:

Committee Action Requested:

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

Meeting Date: 3-4-24

Agenda Item: 6

Subject: Safety Topic / Open Discussion / Questions

Background:

Exhibits:

Committee Action Requested: