

STATE OF NEW HAMPSHIRE



Passenger Tramway Safety Board



Office: c/o N.H. State Fire Marshal's Office
110 Smokey Bear Blvd., Concord, NH
Mailing Address: 33 Hazen Drive, Concord, NH 03305
603-223-4289, FAX 603-223-4294

Table with 4 columns: Selden Hannah (Chairman), Mark Petrozzi (Member), Robert Hoyt (Member), Stanley Judge (Member)

NEW HAMPSHIRE PASSENGER TRAMWAY SAFETY BOARD MEETING MINUTES 7/21/2017 (Draft)

Attendees:

Board Members: Selden Hannah, Chairman. Bob Hoyt Stanley Judge Mark Petrozzi

NH DOS: Briggs Lockwood Nancy Ettelson Scot Woolfenden

Industry: Dave Mosher Rich Combs Bill Malcola Kris Blomback Matt Harvey Dartmouth Skiway Skytrans Mfg Whaleback Ski Area Pat's Peak Ski Area Pat's Peak Ski Area

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The meeting was called to order by Chairman Hannah at 9:07 am.

### Agenda item #1:

The board reviewed the minutes of the previous meeting dated 6-14-2017

Motion was made by Mark Petrozzi to accept the minutes

Second by Bob Hoyt.

Mark Petrozzi identified several grammatical errors to be corrected.

Motion passed with the corrections.

Vote was unanimous.

Bob Hoyt asked Briggs Lockwood the status of Black Mountains tower footing situation. Briggs Lockwood explained that Black Mountain has decided to drill and pin the top two towers of the double lift.

### Agenda item #2:

Rich Combs presented an application for construction of concrete and the electrical system for a T-Bar at Whaleback Ski Area. The lift is to have 27 carriers and 5 towers.

Rich Combs reviewed the drawings with the board.

Briggs Lockwood asked if the lift would incorporate a slow feature.

Rich Combs explained the lift would have a variable frequency drive (VFD) and slow buttons would be provided at the drive and return stations.

Nancy Ettleson questioned the clearances on tower #5 in the case of a derailment. Rich Combs assured the board that all clearances would meet ANSI B77.1-2011 standards. Rich combs also stated that they would test all clearances prior to installing carriers.

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Rich Combs passed out to the board the electrical drawing package. He explained the motor is original to the lift and has been refurbished. The safety system will use 24V relay logic and the anticipated speed would be around 300 ft/min.

Mark petrozzi questioned the speed of the lift stating that the application lists a maximum speed of 300 ft/min. If the speed is increased above this value the application will need to be amended to reflect the new speed.

Chairman Hannah questioned the tensioning force provided by the counterweight and variations in this force due to angled counterweight cables. Rich Combs will look into changing the design of the reeving sheaves to straighten out the angled counterweight cable.

Motion was made by Stan Judge to approve the application for construction of the concrete and electrical system for the T-Bar at Whaleback Ski Area. Second by Bob Hoyt.  
No further discussion  
Motion passed, vote was unanimous

### Agenda Item #3:

Kris Blomback presented drawings and calculations for the relocation of a 1986 CTEC triple chair lift from Ascutney ski area in Vermont to Pat's Peak ski area. The original application was submitted at the July 13, 2016 Tramway Board meeting at which time the board approved for construction concrete only.

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Kris Blomback informed the board that all concrete work has been completed and they are ready for lift construction.

The board reviewed the drawings and calculations. Kris Blomback informed the board the lift will have a loading conveyor, the tension system was changed from concrete to hydraulic, new lifting frames will be provided on all towers, all shafts and axles will be new and all sheave wheels will be upgraded to CTEC 1200 series.

Matt Harvey explained that both return and drive bullwheels underwent non-destructive testing and 3 cracks were identified. These cracks were repaired according to Doppelmays specifications and procedures.

Chairman Hannah questioned the loading calculations that were presented in the package. They appear to be incorrect and do not cover all loading situations (25% downhill load). Mark Petrozzi reiterated Chairman Hannah's concerns stating the lift calculations need to be re-worked to reflect all loading conditions.

Kris Blomback will speak with the engineer and re-submit at the next board meeting.

Stan Judge pointed out that the new drawings have the same drawing number as previous ones. These revised drawings should be listed and dated in the revision block on the drawing to alleviate any confusion in the future.

No action was taken by the board on this construction approval.

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The board set the next meeting date for August 18, 2017 at 9:00am at 110 Smokey Bear lane, Concord.

### Agenda item #4:

Crotched Mountain Ski Area was not present at the meeting, therefore no action was taken.

### Agenda item #5:

Dave Mosher presented an application for construction and drawings for a portal tower on TRM 95, Holts double. The new tower is being installed to alleviate vibrations in the drive terminal caused by chair grips entering the portal sheave trains simultaneously. The current portal sheaves are attached to the drive terminal. It is hoped that by placing the sheave trains on a separate tower this condition will be corrected.

Dave Mosher explained that all work will be done by Doppelmayr and that there will be no change in the profile of the lift.

Motion made by Stan Judge to approve the application for construction of a portal tower on TRM 95 subject to the following conditions:

1. Receipt of signed and stamped drawings.
2. Receipt of a signed application
3. Receipt of a certification letter.

Second by Mark Petrozzi,

No further discussion.

Motion passed, vote was unanimous.

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### Agenda item #6:

Review of pinned tower foundations.

Briggs Lockwood presented the board with photos of the tower footings from Black Mountain that are going to be anchored.

Nancy Ettleson passed out to the board an updated list of return terminal footing and tower foundation information and corrective action to date by ski area.

Mark petrozzi questioned what the board was going to do to ensure compliance by ski areas with the policy concerning this issue. Chairman Hannah felt the board should require ski areas to comply with the policy as stated in the minutes of the August 17, 2016 Tramway board meeting. All board members were in agreement.

Motion made by Mark Petrozzi: Pursuant to the policy determined by the NH Passenger Tramway Safety Board at its August 17, 2016 meeting, all New Hampshire ski area operators must:

1. Identify pinned foundations; including return terminals and towers and must identify those with mechanical anchors.
2. If grout was used, identify the grout used.
3. Any pinned foundation where the grout has not been or cannot be properly identified will need to be assessed by a qualified engineer and verified; if modifications are required, a qualified engineer needs to design the modification.
4. Any corrective actions determined by the qualified engineer must be completed prior to registration of the affected lift(s) for the 2017-18 winter season.

Second by Stan Judge

No further discussion

Motion passed, vote was unanimous.

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Briggs Lockwood provided pictures of the corrosion identified by Loon Mountain on their gondola cabins. He informed the board that Loon is going to replace all cabins next year. The new cabins are being constructed identical to the old cabins.

Motion made by Bob Hoyt to adjourn.  
Second by Mark Petrozzi  
Motion passed, vote was unanimous.

Meeting was adjourned at 12:05 pm

Respectfully submitted

Scot Woolfenden