



LIFT 1  
HISTORIC  
SIGNIFICANCE  
REPORT

SUZANNAH REID

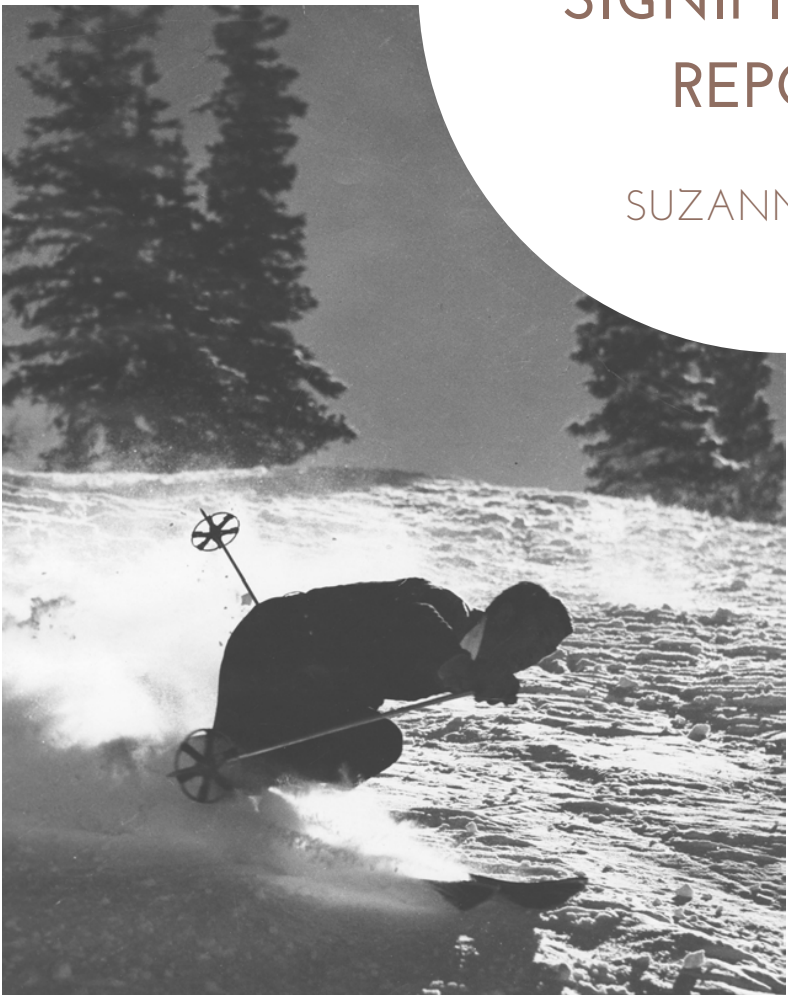




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## Aspen's Lift 1

Aspen's Lift 1 is the embodiment of the birth of recreational skiing. It tells the story of Aspen's ski history, along with the incredible drive and dedication of Friedl Pfeifer and his contemporaries. Lift 1 brings together the two strands of Aspen's post WWII history. It is the crossroads of Walter Paepcke and his mind, body, spirit philosophy and the explosion of alpine skiing in the US.

As an artifact of skiing, Lift 1 represents a direct line from the most influential people in the world involved in developing alpine technique and equipment, and those focused upon the invention and perfection of ski lift technology. The lift's builders went on to innovate and the lift itself opened the door for international racing and recognition of Aspen on the world stage.

As an artifact of a particular time in history, Lift 1 represents the emergence of the postwar tourist class in America, the rise of Aspen from the 'Quiet Years,' and the transition from a focus upon mineral extraction as a generator of wealth to the economy of outdoor recreation. It also has a compelling story to tell of the impacts of WWII on the development of recreational skiing in Colorado.

### Aspen Skiing to 1943

Movement on skis arrived in Colorado with the Norwegian and Scandinavian men who came to work the mines. Not only were skis useful for traveling to and from the mines, they provided recreation for men who had little else to do. Even then the quality of the snow and slopes around Aspen stood out.

Coloradans had been enjoying winter sports since the early part of the 20th century. Ski clubs and ski hills, mostly located in the Front Range foothills, grew in popularity in the 1920s and 30s. In 1932, bobsleigh, skating, hockey, and Nordic skiing events were held at the Winter Olympic Games in Lake Placid, NY, sparking excitement for winter sports in North America.

In the summer of 1936, T.J. Flynn, son of Aspen miner and Olympic bobsledder Billy Fiske, teamed with Ted Ryan to form the Highland Bavarian Corporation. By that winter, paying guests were staying in the new Highland Bavarian Lodge along Castle Creek and skiing on Little Annie. The men invited Andre Roch, a well-known alpinist and avalanche expert, to create a plan for Mount Hayden and Ashcroft. He found that "Aspen Mountain, directly above the town of Aspen, could be superior to anything in the U.S. at that time."<sup>1</sup>

Roch spent the winter of 1936-37 exploring and teaching skiing to guests of the Highland Bavarian Lodge as well as to interested locals. He also marked the location for the first trail on Aspen Mountain, which would be named in his honor.

Local boys had already been skiing the mountain on rudimentary equipment for years. Fred Willoughby recalled:

"...people would climb to the upper end of Aspen Street and come straight down either with a pole, or with one held between the legs to be used as a brake...My brother and I and a few others would climb from the Midnight Mine to Buckhorn Saddle and ski down to town over the same general area as the existing Aspen Mountain courses, using this same unsightly means for control and turning."<sup>2</sup>

Roch introduced Aspenites to new skiing equipment and techniques, and helped them found the Roaring Fork Winter Sports Club, which became the Aspen Ski Club.

"Before Roch left the Aspen area for home in Switzerland in May, 1937, he impressed upon the members the importance of starting a development on Aspen Mountain, ... His purpose for developing the run...was his firm belief that Aspen might go unnoticed for many years as a ski resort, but with a good race course ... the publicity gained from such thing would make an overall development of the mountain easier and faster."<sup>3</sup>

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<sup>1</sup> Peter Shelton, *Aspen Skiing: the First Fifty Years, 1947-1997: Aspen's Long Love Affair with Skiing, Mountains & Memories, Snow & Skiers*. Western Eye Press, 1996. p.14.

<sup>2</sup> Roxanne Eflin. *Historic Resources of Aspen, Multiple Resource Area Amendment- Ski Development Resources of*

*Aspen*. National Register of Historic Places Inventory- Draft Nomination Form, September 1989, p. 3.

<sup>3</sup> Eflin. *Historic Resources of Aspen, Multiple Resource Area Amendment- Ski Development Resources of Aspen*. p.6.

Roch was correct, a good race course would put Aspen Mountain on the map.

With focus on the new Roch Run, the Aspen Lions Club raised money in 1937 for the purchase of the cable needed to convert an old mining rig and a Model A engine into a lift. This consisted of two wooden ‘boats’ that could drag four skiers at a time a short distance up the hill from Aspen Street. Carrying 100 skiers per day, this was Aspen’s first ski tow.

The Aspen Ski Club members cleared the run designed by Roch. Two key races on the run attracted international attention. The Rocky Mountain Ski Association Championship was held in 1938, and three years later, the ski club hosted the U.S. World Alpine Championships.

Roch Run and the passion of the Aspen Ski Club resonated with Friedl Pfeifer when he first saw Aspen in 1943, and set the stage for the construction of Lift 1.

### **Friedl Pfeifer**

Friedl Pfeifer (1911-1995) left his birthplace of St. Anton, Austria shortly after the Anschluss in early 1938. Already an accomplished skier and instructor, he found his way to Sun Valley, Idaho where he was instrumental in setting up Averell Harriman’s new resort. By the 1939-40 season, he was director of the Sun Valley Ski School and undertook the installation of a two-stage single chair lift, the first chair lifts in the world. His experience laying out the route and working with the American Steel & Wire Company would directly inform his ideas for Aspen’s Lift 1.

During World War II, Pfeifer joined the 10th Mountain Division in 1943 and was stationed at Camp Hale near Leadville, Colorado. He was first introduced to Aspen on a training mission and was enthralled.

“The mountain peaks looming over town made me feel like I was returning to St Anton. Even the meadow sloping into town reminded me of home. I felt at that moment, an overwhelming sense of my future before me.”<sup>4</sup>

During training he and other members of the 10th Mountain Division travelled to Aspen as often as possible

to enjoy the mountain and begin work on developing their vision.

The 10th Mountain Division was deployed to Europe in 1944 and by February 1945 they were in combat in Italy. Pfeifer was seriously wounded and lost part of his lung. The Army moved him to Colorado Springs for rehabilitation. Pfeifer first met with industrialist Walter Paepcke, who was developing plans for Aspen’s postwar development, at his ranch in Larkspur, Colorado. Although Paepcke was interested in Pfeifer’s plans for skiing in Aspen, he was not ready to invest.

### **After the War**

Pfeifer was discharged from the Army in October of 1945 and immediately returned to Aspen. He met with the Ski Club, which gave him the responsibility of fixing up the Boat Tow. He also set out to establish the Roch Cup, a combined downhill and slalom race.

The ski school was next on his list. His experience in St. Anton led him to believe this would be an essential part of the area’s growth. Pfeifer, Percy Rideout and Johnny Litchfield, fellow veterans of the 10th Mountain Division, joined the effort and the Friedl Pfeifer Ski School, also known as the Aspen Ski School, was born. The next step was to widen the trails and get some rudimentary lifts working.

The land on Aspen Mountain was divided into numerous mining claims and rights to use the surface had to be secured. Frank and Fred Willoughby (owners of Midnight Mine) and Fred and John Dolinsek (residing at the base of Aspen Mountain) were property owners and members of the Aspen Ski Club. They had cleared Roch Run and built the Boat Tow, and shared Pfeifer’s vision for a skiing community.

Enough snow had fallen by December 18, 1945 to open the Ski School. In March of 1946, the first Roch Cup was held and the racers climbed to the start. Friedl Pfeifer was busy identifying claims and trying to raise the money to secure the land for new runs and a lift.

With little money but a focused mind, he forged ahead, reestablishing contact with G.H. Bannerman from American Steel & Wire who had constructed the lifts at Sun Valley to discuss his plans for the new Lift 1.

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<sup>4</sup> Friedl Pfeifer. *Nice Goin’: My Life on Skis*. Pictorial Histories Publishing Co., 1993, p. 111.

Bannerman agreed to begin acquiring the steel that would be needed, “on Pfeifer’s word that the money would be forthcoming, a show of faith that was astounding<sup>5</sup>.” Pfeifer also called on another friend from the 10<sup>th</sup> Mountain Division, Bob Heron. Heron was a civil engineer based in Denver, who had designed temporary lift systems for the US Army. Together the men chose the appropriate route for Lift 1 and devised a plan to transform an existing mining tramway into Lift 2. Lift 1 would take skiers up the hill over Roch Run to the top of today’s Ruthie’s lift, then on to the top of the mountain from near the top of today’s Lift 6. The master plan included construction of the Herbert Bayer designed Sundeck.

With planning complete, all that remained was to secure the funds. Pfeifer was concerned that the 1946-47 season might pass by with no progress, so he again approached Paepcke. Paepcke’s vision had evolved and he became convinced that skiing could entice investors to his own grand plan. Pfeifer would have to surrender control of his Aspen Skiing Company in exchange for shares in Paepcke’s new Aspen Skiing Corporation. Paepcke gave exclusive rights to Pfeifer to control the ski school and named him President of the Aspen Skiing Corporation. With this arrangement, Pfeifer handed over the “four-inch stack” of mining claims that needed to be acquired for the new ski area and promised to have the lifts running by Christmas.

Articles of incorporation were filed on May 16, 1946.<sup>6</sup> The sale of shares was designed to raise \$150,000 (about \$2 million dollars today) for the installation of the new lift. Paepcke announced that the towers for the lift would arrive in Aspen on September 1, with operations to begin exactly two months later.

Pfeifer’s crews were on the mountain cutting the Silver Queen trail and in mid-June they moved over to clear the new lift line. It took only four days to clear the mile and a half long, 30’-wide line, saving a considerable sum of money. Frank Willoughby surveyed the routes for Lift 1 and Lift 2 and brought the electric lines over from the Mountain Utilities Corporation’s Midnight Mine. The Robert Heron Engineering Company was on site, laying

out the location of each tower footing and supervising construction.

The trail crew, averaging eighteen men, was headed by Percy Rideout and John Litchfield. Newt Klusmire was the foreman of the concrete crew. His rock crusher, one of the few mechanized tools, provided aggregate for the foundations. They worked six days a week from 6:30 am to 5:30pm. Anyone who wanted to work just had to show up in front of Mike Magnifico’s ski shop in time to meet the trucks. Without modern motorized tools, the work was physically demanding and slow going. They would race the snow to get all the construction completed by the deadline.

The September 12, 1946 issue of the *Aspen Times* reported that all tower footings and the concrete for the top and bottom stations were complete. The article also made a plea for more men:

“With the first freezing nights already at hand, we would like to have it everyone’s interest that the construction continue on schedule. A larger crew on the mountain would naturally be of great help, so if you have your haying and potatoes out of the way, why not look Friedl up?”<sup>7</sup>

On September 19, 1946, the *Aspen Times* reported that twenty-two miles of new trails had been cut during the previous four months. The Silver Queen now extended to the top of Tourtelotte Park and the Magnifico Cut off east of Roch Run. The crews had also cut the Billy Zaugg trail, Schiller Road and the Little Annie trail down to the Highland Bavarian Lodge.

On October 31, 1946, the headline in the *Aspen Times* exclaimed “THEYRE UP!” “Construction crews under the direction of Robert Heron of the Heron Engineering Company completed erection of the 52nd<sup>8</sup> and last tower of the giant chair lift that will carry the skier or sightseer from Aspen to a point on Ajax mountain that is more than 3400 feet higher in vertical elevation.” Ten more days were required to ensure all the towers were plumb and

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<sup>5</sup>Morten Lund and Mary Hayes. *Skiing Comes to Aspen: Visionaries and Teachers*. Skiing Heritage Journal, Second Issue 1997, p. 18.

<sup>6</sup>“Incorporation Articles for Tow Recorded.” *Aspen Times*. 16 May 1946. p. 1

<sup>7</sup>Leonard Woods. “Aspen Ski Lift Construction on Schedule.” *Aspen Times*. 12 September 1946. p. 1

<sup>8</sup> This description refers to the total number of towers for both Lift 1 and Lift 2, exclusive of the base and top terminals.

bolted tightly. On November 11, 1946 the Sundeck was finished.

On December 14, 1946 the Aspen Skiing Corporation opened Lift 1 to local skiers at no cost. The completed Lift 1 consisted of 32 steel towers plus a terminal at each end. This was a monocable lift, where the chairs are attached directly to the drive cable. It was 8,500 feet in length and rose 2,560 feet in elevation. Powered by an electric motor stationed at the top terminal, along with a diesel backup motor, the new Lift 1 was the longest, fastest chairlift in the world. Among the other accommodations, the chairs had foot rests and a safety bar with a canvas blanket attached.

Lift 2 had 17<sup>9</sup> towers and was 5,300' long. It gained about 900' in elevation to reach the newly completed Sundeck. It was designed and constructed by Bob Heron from parts available from an old mine tramway. Lift 2 was a two-cable system where one cable was fixed with the chairs hung on roller carriages. The smaller drive cable pulled the chairs along the fixed cable. It deposited its passengers just outside of the new Sundeck. Lift 2 opened on December 21st.

“Promptly at 10 a. m. Miss Allene Robison, daughter of Mayor A. E. Robison christened the lift with a well-aimed blow, smashing a bottle of rare, old champagne against the uprights. Immediately the power was applied to the cable by Newt Klusmire, engineer at the power plant at the upper end and Mayor Robison swung easily into the first chair. Frank Willoughby, president of the Aspen Ski Club was seated in the second chair and Miss Robison took the third. ...”<sup>10</sup>

It was estimated that 1,000 people rode the lift that day. The biggest party, however was yet to come.

### **The Official Opening**

The official opening was held on January 11, 1947.

“One sunny Saturday in January 1947, businessmen from Denver, Colorado Springs, Chicago, and

Washington; famous skiers; 10th Mountain Division veterans; and the governor-elect of Colorado joined Aspen townspeople at the base of Aspen Mountain for the opening of Aspen’s Lift No.1. Set in motion with the push of a button, it carried skiers a mile and a half through the air and up 2,200 feet, where, after a short hop on Lift No.2, they could enjoy the scenery from the top of the mountain, have a snack at the Sundeck, and ski down the famous Roch Run. The world’s longest chairlift at the time, and the fastest (moved 275 skiers an hour), Lift No. 1 introduced masses of people to the joys, thrills, and fears of skiing.”<sup>11</sup>

Friedl Pfeifer described the off-hill festivities:

“In town, crowds of visitors strolled the streets looking at restored homes, reminders of the silver boom, and newly opened stores. The bars that were once filled with miners talking about silver and gold, were now filled with skiers eager for Aspen’s future. .... The celebration was a glimpse into the future of what was to become ASPEN. People walking the streets window shopping, music and parties, lights, the mountain open for skiing from top to bottom...Aspen was alive.”<sup>12</sup>

With the opening of the Lift, Aspen’s “Quiet Years” came to an end. Two thousand people attended the lift opening, overwhelming the town’s eight hundred residents. It had taken ten years from the first thought of an Aspen Ski Resort to arrive at this moment.

“The ski resort at Aspen had its roots in some of its citizens’ struggles to revive the town they loved. In the last half of the 1930s, and the first half of the 1940s, even as the old mining Aspen slid towards virtual extinction, these citizens propelled Aspen forward on its first crucial steps to becoming a destination ski resort.”<sup>13</sup>

Friedl Pfeifer, Johnny Litchfield, Percy Rideout and the other men who constructed Lift 1 had displayed an extraordinary physical and visionary commitment to the project.

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<sup>9</sup> Assumed by the author based on total number reported in the Aspen Times on various occasions.

<sup>10</sup> “Many People Enjoy Ride on Chair Lift.” *Aspen Times*. 19 December 1946. p. 1.

<sup>11</sup> Annie Gilbert Coleman. *Ski Style: Sport and Culture in the Rockies*. University Press of Kansas, 2004, pg. 118.

<sup>12</sup> Friedl Pfeifer. *Nice Goin'*, Pg 147.

<sup>13</sup> Lund, M. and Hayes, M. *Skiing Heritage Journal*, Second Issue 1997, Skiing Comes to Aspen: Visionaries and Teachers, page 14.

## After the Opening

Lift 1 sparked a boom. Dilapidated Victorian Aspen was reborn to meet the needs of the new ski tourist. With the lift complete, trail construction continued in anticipation of the 1950 FIS World Championships, where Aspen sealed its international reputation.

Lift 1 and Roch Run were integral parts of bringing the event to Aspen and of its success.

“Aspen Mountain’s Lift No.1, a huge cultural event organized by Walter Paepcke in the summer of 1949, and the World Alpine Championships, hosted for the first time in the United States at Aspen in 1950, won national media attention for the town and its young ski resort. Skiers from Denver, Chicago, Sun Valley and New York showed up to see what Aspen was like for themselves. With its organization, technology, management, and out-of-state customers, Aspen’s ski area outgrew every prewar resort except for Sun Valley.”<sup>14</sup>

After twenty-five years of transporting skiers up the mountain, Lift 1 ceased operation on April 11, 1971. Most of the towers were removed to make way for Lift 1A, which, in combination with the Ruthie’s chair replaced Lift 1. A portion of Lift 1 below the new Lift 1A, consisting of three towers and the base terminal, remain in their original location. Standing in the Lift 1 loading area, one still gets the sense of the majesty of boarding the world’s longest lift and rising up, beyond view, to the top of the mountain.

## A Brief History of the Ski Lift

Early in the history of recreational skiing, it quickly became clear that the need to hike uphill was a hindrance to the growth of skiing as an industry.

The first mechanized ski lift in North America was a rope tow installed in 1930-31 at Big Hill in Canada. Rope tows dominated the 1930s, with 113 in use by the end of the decade. They were easy to build and could be driven by any number of jerry rigged car engines. However, they were discouraging to use.

In Davos, Switzerland, an engineer named Ernst Constan invented the J-bar. Dartmouth College hired American

Steel & Wire to install a Constan designed J-bar lift on its ski hill in 1935-36. This was a turning point for both Constan and American Steel & Wire, as they were now in the ski lift business. The overhead single cable lift design was a significant improvement and became the basis for all lifts to come.

Averell Harriman understood that he needed a comfortable, easy to master lift to attract the wealthy class of skier he had in mind for Sun Valley. Looking to his company, the Union Pacific Railroad, he formed a group of engineers to redesign the ski lift. James Curran was an engineer with the company with experience designing lifts for the United Fruit Company, which needed to lift great bunches of bananas onto their ships. He envisioned the same design could be used for people by simply replacing the large hook with a chair. This provided for comfort as well as the ability to span steeper, rockier terrain, a problem not found in Eastern resorts where surface lifts predominated. Harriman chose to install the design on Proctor Hill (704’ long) and a second shorter version on Dollar Mountain. American Steel & Wire was contracted to build the lifts and the first aerial chair lifts began operating in 1936.

Sun Valley’s lifts began to inspire a rush of chairlift construction across America. In 1942, there were eighteen documented chairlifts in the country.<sup>15</sup> American Steel & Wire had built half of them. World War II delayed further development until the 1946 season, when steel again became available for non-military uses. The next two years saw the construction of ten more chairlifts, including Aspen’s Lift 1 and Lift 2.<sup>16</sup> After 1947, double chairs would rise to prominence.

The Aerial Ski Tramway received its patent (#2,152,235) on March 28, 1939. The men listed on the patent are Gordon H. Bannerman, James M. Curran, Glen H. Trout, and the American Steel & Wire Company of New Jersey.

“This invention is an aerial ski tramway intended to convey skiers from the bottom of snowy hills to the top so that they can ski back down again. One of the objects is to transport the skiers back up the hill in a manner involving as little effort on the part of the skiers as is possible. Another object is to carry the skiers in an absolutely safe manner so that regardless

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<sup>14</sup> Annie Gilbert Coleman. *Ski Style*. p. 122.

<sup>15</sup>Morten Lund and Kirby Gilbert. “A History of North American Lifts.” *Skiing Heritage*, September 2003. p. 24.

<sup>16</sup> Morten Lund and Kirby Gilbert. “A History of North American Lifts.” *Skiing Heritage*, September 2003. p. 24.

of their peculiarities it is practically impossible for them to be injured”<sup>17</sup>

## Lift 1

Lift 1 has a very open, straightforward structure that reveals the simplicity of the original design and drive components. While simple in construction, the top and bottom terminals had to be designed to withstand the dynamic forces of the 1-1/8” cable that traveled 8,500 feet in distance, rising 2,560 feet in elevation and back down again. The design needed to provide tensioning for the cable, prevent dangerous backsliding, and allow people to ski on and off the chair. These technical challenges were all solved in a straightforward, economical manner. *Popular Mechanics* featured the lift on the cover of its January 1948 issue, noting it as a major engineering feat.

The towers were prefabricated by American Steel & Wire of steel angle (‘L’ shaped) components, making up both the vertical corners of each tower and the diagonal struts that create vertical truss configuration. The majority of the height of each tower was riveted in the shop and shipped to the site, where the top frame and sheave wheels were bolted on. Each tower was lifted into place by hand and bolted to a concrete base.

Of the original towers, three free-standing towers and the base terminal remain. The base terminal construction is similar to the towers, with additional welded steel tube and channel members to account for the significantly larger structural loads on the frame. The steel frame supports a 10”-diameter bullwheel and a rolling steel carriage that allows for the main 1-1/8” cable to be tensioned by the large concrete counterweight at the northernmost end of the terminal. The counterweight tower extends several feet above the bullwheel and several feet below the height of the chair loading area. This provides a wide range of travel for tensioning the extremely long cable.

The original ticket office and operator shack adjacent to the lift have been lost.

The steel structures are in remarkably good condition and are complete assemblies, with the exception of the cable, stored off-site with the remaining chairs. Some areas of peeling paint reveal the original orange color. The board

formed concretework shows some deterioration, not unusual in the freeze-thaw climate conditions. The bull wheel is rusty but appears in good condition. There are several wood components at the chair guide structure that are missing or seriously deteriorated. This is also not unusual considering age and climate and lack of long term maintenance. The sheave wheels on the towers remain and appear to be in good condition.

Lift 1 was the sixth property in Aspen to receive historic designation from the City (Ordinance #37, Series of 1974). At the time, the Historic Preservation Commission recommended designation, finding that the lift was vital to Aspen’s heritage.

## Conclusion

It took enormous physical effort to build Lift 1. Crews cut the lift lines and trails with axes. The lift components, installed before helicopters were available for such use, were brought to Aspen by train and hauled up the mountain by truck, then set in place by hand. The cable had to be pulled into place and the chairs installed on the cable on site. The entire effort is a testament to the sheer force of will involved in bringing Aspen to the forefront of the ski industry.

Many of the men who accomplished this feat remained active in the Ski Corporation, running and servicing the lifts and expanding the trails. Friedl Pfeifer went on to develop Buttermilk. Bob Heron, who got his ski lift start with Lift 1 and Lift 2, would go on to design the Berthoud Pass double chair in the fall of 1947, the second double chair in North America.

Three other single chairlifts survive in North America. Two are operational, one at Mad River Glen in Vermont (1948) and one at Mt. Eyak (originally from Sun Valley c1939) in Alaska. The Ruud Mountain lift (1936) in Sun Valley is actively preserved but is not functional.

Mad River Glen’s lift operated into early 2000, at which time the cooperative that owns the area raised funds to completely refurbish it and see it listed on the National Register of Historic Places. Reopened in 2007, it is now the fastest fixed grip lift in the US. Though closely related in time and character, Lift 1 differs from the Mad River Glen lift in a couple of interesting areas. Lift 1 was driven

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<sup>17</sup>Library of Congress, Historic American Engineering Record, US Patent Office, by way of Mad River Glen, Single Chair Ski Lift, HAER #VT-38.

by an electric motor at the top terminal, instead of the bottom drive diesel at Mad River.

By now many of the men who visualized and built Aspen Mountain have passed and the city is losing that direct connection to its origin story. It is easy in an age of modern machinery and modern lifts to take for granted what was achieved by these men. Lift 1 is a powerful reminder of where it all began. To stand at the loading area and let your eye follow the lift line up the mountain engages the imagination and drives the question ‘Who did this and how did they do it?’ It is critical to preserve these touchstones so that future generations will also be able to look up in wonder and understand what those of the past achieved.