August 12, 2021

Little Cottonwood Canyon EIS
c/o HDR
2825 E Cottonwood Parkway, Suite 200
Cottonwood Heights, UT 84121

RE: Alta Ski Area's comments regarding UDOT's preferred transportation alternatives presented in its Little Cottonwood Draft EIS.

Dear UDOT EIS Team,

First and foremost, thank you for your hard work on the monumental task of evaluating transportation alternatives for Little Cottonwood Canyon and selecting a preferred alternative. Alta Ski Area is supportive of any alternative that reduces traffic congestion and improves transportation in the canyon. We have reviewed the UDOT draft EIS and listened to or read many of the comments from individuals and entities regarding the draft EIS and offer the following comments for your consideration.

Background

Alta Ski Area is a year-round destination for more than 600,000 visitors annually and employs over 500 employees. Established in 1938, our visitors and employees have experienced a wide variety of travel conditions during the past 83 seasons. Personally, I have traveled the canyon 4-6 days a week, in a wide variety of conditions, for the past 32 years. Individually and collectively, we have seen and experienced the impact of snowfall, avalanches, mudslides, improperly equipped vehicles, and bus traffic in the canyon.

Alta Ski Area Review

Alta Ski Area recently completed a review of traffic flows (UDOT counts), average vehicle speeds (streetlight data), snowfall, temporary road closure data, parking counts and skier visitation levels for the 18-19 ski season to better understand traffic congestion issues and possible solutions in Little Cottonwood Canyon. The following was noted through our review process:

Weather

The primary cause of vehicle congestion and traffic delays related to Little Cottonwood Canyon is weather in the form of snowfall. Snowfall attracts more visitors to the canyon, often closes the mainline between Alta and Snowbird, reduces the traffic flow capacity of the road as it becomes slick and creates traffic backups due to closures for snow removal and avalanche mitigation work.

Road Capacity

Our review indicated that days when the road surface is only wet or dry, 5,000 – 6,000 vehicles per day have moved up and down the canyon with little congestion or delay. There were 42 days during the 18-19 ski season when more than 5,000 vehicles were in the canyon (an average of 5,815 vehicles per day). Our review showed the following:

- Uphill average traffic flows were 659 vehicles (11.3 %) between 7 and 8 am, 1,012 vehicles (17.4%) between 8 and 9 am, 882 vehicles (15.2%) between 9 and 10 am and 613 vehicles (10.5%) between 10 and 11 am resulting in 54.4% of the daily uphill traffic traveling up the canyon between 7 and 11 am.

- Downhill average traffic flows were 699 vehicles (12%) between 2 and 3 pm, 963 vehicles (17%) between 3 and 4 pm, 1005 vehicles (17%) between 4 and 5 pm and 741 vehicles (13%) between 5 and 6 pm resulting in 59% of the downhill traffic traveling down the canyon between 2 and 6 pm.

Our review showed that that the current canyon road can effectively move approximately 1,000 vehicles per hour when the road is not slick and it is not snowing. Streetlight data analysis indicates average travel speeds are 35-38 mph between Entry 1 of Snowbird and the mouth of the Canyon when traffic flows are 1,000 vehicles per hour or more. At 35-38 mph it takes 12-13 minutes to travel from the Snowbird Entry 1 to the mouth of the Canyon.

Streetlight data overlaid on UDOT traffic counts, skier area visitation numbers, weather and road closure data shows that only a few days of the 42 days in our analysis had significant congestion or traffic delay. The vast majority of significant congestion or delays days occurred on when vehicle traffic in the canyon was less than 4,000 vehicles and was associated with significant snowfall or road closures. Weather is clearly the primary source of traffic congestion and delays in the canyon.

Snowfall & Traction Equipment Impact

Snowfall in the canyon coupled with vehicles lacking proper traction equipment reduces the traffic flow capacity of the road resulting in congestion and delays. Our review showed that there were 28 days during the 2018-2019 ski season when 3 or more inches of snow fell during the day. During those 28 days an average of 3,775 vehicles per day were in the canyon and average peak down canyon traffic flow was reduced to 602 vehicles per hour.

Streetlight data showed it is not uncommon for snowfall to reduce the safe traveling speed of vehicles with good traction devices to 25 mph or less. At 25 mph the traffic flow capacity is reduced to approximately 725 vehicles per hour and travel time increased from 12-13 minutes to 20-25 minutes.

During storm periods traffic can only move as fast as the slowest vehicle and it is not uncommon to have vehicles lacking proper traction equipment traveling 10 mph or less down the canyon. At 10 mph traffic flow capacity is reduced to 300 vehicles per hour or less and travel time increases to 45-50 minutes.

Our review confirmed that the traffic flow capacity of the canyon road is often reduced by more than 50% during storm cycles when the road is slick and vehicles without proper traction devices are in the canyon. This is without taking into consideration the impact of vehicles with improper traction devices sliding off the road, getting stuck or in accidents, or the delay time of vehicles waiting in parking lots to access the canyon road.

It appears the current EIS draft has not identified this issue nor suggested solutions to address it. The math suggests removal of vehicles with improper traction devices from the canyon would reduce congestion and delays during storm periods more than removing 30% of the vehicles from the canyon.

For example, it takes approximately 2.85 hours to move 2,000 cars out of the canyon with proper traction devices moving at an average speed of 25 mph during a storm period. Whereas, it would take 4.67 hours to move 1,400 cars (30% less) without proper traction devices moving at an average speed of 10 mph. It appears that one of the most significant things we could do now to reduce congestion and delays in the canyon would be to limit Little Cottonwood Canyon to vehicles with proper traction devices during the winter months. Please include this issue and potential solutions in the final EIS.

Mount Superior (Mainline) Road Closure Impact

Our review also indicated that traffic flows down the canyon from the Town of Alta are also reduced when the road under Mount Superior (mainline) is closed for public safety purposes and all traffic exiting Alta is required to use the Bypass road. The Bypass road is a much steeper road that is problematic when it is snowing and also congests traffic by allowing more merge points from Snowbird traffic delaying the Alta traffic's exit from the Canyon.

The UDOT draft EIS does not appear to identify this issue or its impact on traffic congestion and delays. Installation of Remote Avalanche Control devices (RACs) in this area may allow avalanche mitigation work to be done during the day to keep the mainline open during peak travel times. Please consider inclusion of RACs in this area in the EIS alternatives to reduce the congestion and delays created by requiring all Alta traffic to exit via the Bypass road.

Merging of Alta & Snowbird Traffic

Our review and experience indicated traffic exiting the Town of Alta is often delayed by traffic exiting Snowbird (particularly when it is snowing), when the road is slick or has been closed for avalanche mitigation. Roadside parking and multiple entry points onto the State Road at Snowbird can result in up to 10 cars from Snowbird traveling down the canyon for every one car from Alta until the Snowbird parking areas are empty. It has not been uncommon for 85% of the vehicles parked at Snowbird to have merged onto the State Road and be below Entry 1

before 20% of the vehicles parked at Alta can exit Alta and be below Entry 1. When the traffic is congested due to weather, the commute for Alta visitors down the canyon is often an hour or more longer than for Snowbird visitors due to the merging of the Snowbird traffic onto the State Road.

The UDOT draft EIS has not addressed the impact of the number of traffic merge points at Snowbird onto the State Road and its impact on traffic congestion. Please include this issue in the final EIS and possible solutions such as signaling, a dedicated lane for Alta downhill traffic and keeping the mainline open.

Avalanche Mitigation Work

A common consequence of weather is closure of the road to perform avalanche mitigation work or for public safety. When it snows and the road is closed, traffic congestion develops on the traffic corridors and in the neighborhoods near the mouth of the canyon or at the ski areas as skiers queue up for the chance to ski The Greatest Snow on Earth.

Our review indicated that the road was closed at the mouth of the Canyon for avalanche mitigation work 12 days during the 18-19 ski season. Only two of those days had more than 5,000 vehicles in the canyon. These 12 days were the days the most congestion and delay occurred in the neighborhoods and arteries at the mouth of the canyon. Our review also showed that on road closure days the peak travel period for uphill traffic shifted from the 8 am to 9 am time period, to the 9 am to 10 am time period confirming traffic was queued up on the arteries and in the neighborhoods near the canyon.

The UDOT draft EIS does not address the impact that earlier completion of avalanche mitigation work would have on reducing congestion in the neighborhoods and arteries at the mouth of LCC nor suggest alternatives to complete the mitigation work earlier to reduce the congestion and delays. Please include this in the final EIS.

Currently, most avalanche mitigation work in the mid canyon and some withing the ski areas is done via a 105 Howitzer program. It is our understanding the Army plans to discontinue the Howitzer program by 2026. Does this apply to avalanche mitigation work to protect the highway? It appears that this issue has not been identified or addressed in the UDOT draft EIS. Can you please address this issue in the final EIS?

Other UDOT Draft EIS Observations and Comments

Tolling

The Draft EIS suggests tolling be included in the selected alternative to incentivize the use of public transportation. While tolling may encourage the use of public transportation it fails to effectively manage the limited supply of parking in the canyon. During the 20-21 ski season, there were 15 days when all the parking spaces in the Town of Alta were filled and hundreds of cars were turned away. Tolling would not have discouraged people from driving a vehicle up the canyon and trying to find a

parking spot when they were all occupied. Tolling is not an effective tool to manage traffic and parking when the available parking is limited.

Alta Ski Area will be implementing a paid parking reservation system during weekends and holidays for the 21-22 ski season to manage parking and traffic congestion. The paid reservation system will incentivize car pooling and the use of public transit, as well as, reduce or eliminate the number of vehicles traveling to Alta when parking is full. We believe this is a much better solution than tolling. We request the final EIS recognize that parking reservations systems implemented by the ski areas would more effectively manage traffic and parking, incentivize car pooling, and encourage the use of public transit than tolling. It would also shift the cost and management responsibility of this issue to the ski areas.

Roadside Parking

Both alternatives in the UDOT draft EIS include the elimination of roadside parking at the ski areas and with ¼ mile of trailheads. While it was noted that roadside parking is the result of insufficient parking at the ski areas and trailheads, UDOT only proposed expansion of parking at trailheads outside of the ski areas on Forest Service lands. It seems a reasonable alternative associated with elimination of the roadside parking at the ski areas would be expansion of existing ski area parking areas. This alternative would improve public safety, reduce congestion, and allow roadside areas, particularly those through Snowbird to be used to alleviate traffic flow and merging issues. We request UDOT include recognition that roadside parking at the ski areas could be eliminated by allowing the ski areas to expand their current parking areas in the final EIS.

Snow Sheds

While Snow Sheds with an enhanced bus service may reduce the number of road closure days or length of time required for avalanche mitigation work, buses must still queue up wait until the road is open before they can begin to transport visitors up the canyon. The Gondola alternative allows a more consistent and reliable transportation alternative when the road is closed for avalanche mitigation work, avalanches, plowing, mudslides/rockslides, or accidents. This will reduce the amount of traffic queuing up in traffic corridors or neighborhoods while the road is closed. The Gondola alternative is also less impacted by avalanche mitigation work and snow removal and does not require avalanche sheds. We believe avalanche sheds can be removed from the Gondola alternative to reduce costs, as well as, encourage gondola ridership.

Alta Ski Area Recommendation

Of the two alternatives proposed in the UDOT draft EIS, Alta Ski Area believes the LaCaille Gondola alternative is a better long term transportation alternative than the enhanced bus alternative and we encourage UDOT to proceed with this alternative for the following reasons:

Weather - Weather and slick roads are the primary factors that create traffic congestion and delays in Little Cottonwood Canyon. The Gondola alternative provides another transportation alternative that does not involve the road during weather events when we experience the most traffic

congestion and traffic delays. While the bus alternative may reduce the number of vehicles in the canyon, buses are still subject to the road conditions and often contribute to or are the cause of congestion in the canyon during storm periods. Buses would not be able to travel the canyon any faster than the slowest vehicle resulting in travel times greater than the gondola alternative during storm periods when traffic congestion and delays occur. The gondola alternative provides visitors, residents, and employees a transportation alternative that does not involve the road surface and can provide a more consistent travel time in the canyon. The carrying capacity per hour of the gondola alternative would be more consistent during storm periods than road based alternatives such as buses.

Emergency Ingress and Egress - During the past two years we have experienced storms that have closed the road for several days due to avalanches and mudslides. During these closures, ingress and egress for emergencies have been restricted to helicopter service or via a snowcat, if conditions permit, which is often not the case. Fortunately, we have not had an ingress or egress emergency that has resulted in the loss of life during the past two years. The bus alternative does not improve the current ingress or egress issue when the road is closed, whereas the Gondola alternative provides an ingress and egress improvement which may save lives in an emergency.

Environmental Impact - The environmental impact of the bus alternative which includes widening the state road, building resort transit centers and installing avalanche sheds and the use of buses that rely on fossils fuels is significantly greater than gondola stations and towers and a system powered by electricity. The Gondola alternative also has less impact on our watershed, wildlife and existing trails and trailheads in the canyon than the enhanced bus alternative.

Canyon Mobility - An analysis of the visitor patterns in Little Cottonwood Canyon via Streetlight Data for 2018, 2019 and 2020 indicates that 86-88% of the vehicles that enter Little Cottonwood Canyon annually travel to Alta or Snowbird. Only 12-14% of the vehicles entering the canyon stop at other locations in the canyon. While an enhanced bus service may provide more frequency for those visiting other locations in the canyon, the additional time required to stop at other locations will negatively impact bus ridership. Current surveys from ski area visitors indicate the more stops a bus has once it enters the canyon, the less likely they are to use bus service. The Gondola option will provide a direct transportation option to Alta and Snowbird for the vast majority of the canyon visitors. Under the Gondola option, the current bus service could be re-purposed to provide enhanced service to locations lower in the canyon at no additional cost making the canyon mobility of the Gondola option better than the enhanced bus option.

Visitor Experience - The experience one has using public transportation can impact the likelihood of its acceptance and use. The Gondola alternative provides more seating, a more scenic ride and more reliable transportation than the enhanced bus alternative. The indoor loading and unloading in the gondola alternative also better accommodates visitors with disabilities and may reduce slip and fall injuries encountered by individuals entering and exiting buses.

Operational Issues - One of the challenges of the current bus transit system in Little Cottonwood Canyon is the seasonality of visitation in the canyon. This seasonality requires UTA to significantly ramp up its service and employee base for the winter season which can be problematic. The enhanced bus alternative will magnify this issue and require more staff to support and operate buses than the Gondola alternative. The Gondola alternative seems less impacted by the seasonality of visitation in the canyon and is less costly to operate and maintain.

Interim Solutions

Both of the proposed alternatives in the UDOT draft EIS will require at least 3-5 years or longer to design, fund, and implement. Alta Ski Area recommends UDOT implement the following interim solutions to address the current traffic congestion and delay issues:

1. Since weather and slick road surfaces are the primary factors that result in traffic congestion, we strongly encourage UDOT implement the traction law in Little Cottonwood Canyon from November 1 to April 30 each year. Eliminating two-wheel drive vehicles without snow tires during the winter months would significantly reduce congestion and improve traffic flow in the canyon. Expansion of the current traction sticker program piloted in the canyon the past two season to all vehicles entering the canyon would significantly reduce congestion, accidents and slide offs when the road is slick.

2. Reduce the avalanche mitigation work time frame and end canyon road closures earlier. Take measures to complete the avalanche mitigation work and snow removal earlier in the morning. Consider the purchase and installation of Remote Avalanche Control devices for the mid-canyon area to reduce the time required to complete avalanche mitigation work in the canyon. A regular canyon opening time of 7:30 am would reduce congestion at the mouth of the canyon.

3. Provide an area for vehicles to queue up early mornings when waiting for the canyon road to open that does not interfere with traffic flows on the arteries near the mouth of the canyon. Consider using the road shoulder or a third lane from gate B to the canyon mouth, on North Little Cottonwood road to Wasatch Boulevard and on Little Cottonwood Road to Wasatch Boulevard as queue areas for vehicles waiting for the canyon to open. Use the park and ride lot at the mouth of the canyon as the queue up area for UTA buses only.

4. Minimize road closures under Mount Superior. Purchase and install Remote Avalanche Control devices in the Superior area to allow mitigation work to be done during the day to enable the mainline to be open during peak travel times. This would reduce congestion and delays created by all Alta traffic exiting via the Bypass road.

5. Request and allow the ski areas to replace current roadside parking through expansion of existing parking lots. Closure of the roadside parking will improve public safety and reduce traffic congestion.

6. Improve the traffic merge of Alta and Snowbird visitors. Consider an additional downhill lane for Alta traffic (this would be facilitated by the removal of roadside parking) or traffic signals that control the traffic flow out of Snowbird's merge points.

Alta Ski Area requests these interim solutions be considered and addressed in UDOT's final EIS. We believe they can reduce congestion and delays while longer term alternatives are implemented. We strongly encourage UDOT to refine and move forward these interim solutions.

Thank you for considering our comments.

Sincerely,

Michael R Maughan
President and General Manager
Alta Ski Area