

Purpose and Need and Screening Criteria FAQ

The following comment and question themes were frequently submitted during the November–December 2019 public comment period for the purpose and need chapter and *Alternatives Screening Methodology Report* for the Little Cottonwood Canyon Environmental Impact Statement (EIS).

Subject: Project Study Area

- 1. The project study area should allow UDOT to consider transit solutions that prevent personal vehicles from traveling to the canyon from areas across the valley.**

The Utah Department of Transportation (UDOT) is evaluating transit-based alternatives (bus, shuttles, gondola, and train) as part of the EIS process. These alternatives include transit hub(s) in the valley (for example, at the Gravel Pit on Wasatch Boulevard) where recreational users could access direct transit to the ski resorts. The transit hub(s) would allow bus service or other forms of transit to be located near the base of the canyon. This location would reduce the distance of travel to the ski resorts and thus the travel time, which would result in more-reliable service. The transit hub(s) would also reduce the initial and operating cost of bus service for example because fewer buses would be needed with the shorter travel distance, and they would have faster travel times.

The transit hub(s) concept will be an important part of any transit alternative because it would provide greater reliability in transit service and parking to accommodate the number of potential users. Therefore, the EIS will evaluate a transit hub(s) concept. In addition, UDOT will be evaluating rail alternatives as part of the EIS process. The alternative rail alignments would connect to the existing Utah Transit Authority (UTA) light rail system, thereby providing a connected system across the Salt Lake Valley.

Feeder bus service to the transit hub(s) from locations outside the EIS study area (locations such as downtown Salt Lake City) can be addressed outside the EIS process by UTA adding or changing its current bus service routes. Also, private vendors could develop feeder bus services to the transit hub location(s). Without the transit hub(s), regional feeder bus services would not function.

If UDOT selects a transit hub(s) alternative in the project's Record of Decision, it is likely that UDOT would phase construction by starting with a smaller parking garage and expanding as warranted based on demand. This phased expansion would allow UTA and private vendors to evaluate how the transit hub(s) concept is operating so they can determine the viability and type of feeder service.

2. The project study area should be expanded to include Big Cottonwood Canyon.

The transportation needs assessment study area used for the Little Cottonwood Canyon Project extends along State Route (S.R.) 210 from its intersection with S.R. 190/Fort Union Boulevard in Cottonwood Heights to its terminus in the town of Alta. UDOT developed this study area to include an area that's influenced by the transportation operations on Wasatch Boulevard and in Little Cottonwood Canyon and to provide logical termini (endpoints) for the project.

The intersection of S.R. 190/Fort Union Boulevard was selected as the western terminus because it's the point where traffic splits between Big Cottonwood Canyon and Little Cottonwood Canyon. Traffic south of this intersection is mostly related to trips into and out of Little Cottonwood Canyon and commuter traffic on Wasatch Boulevard. The end of the paved road in Little Cottonwood Canyon was selected as the eastern terminus because this is where S.R. 210 terminates in the town of Alta at Albion Basin Road. The Little Cottonwood Canyon Project does not include Albion Basin Road.

Potential transportation solutions in the study area would have independent utility because they would be usable and would be a reasonable expenditure even if no additional transportation improvements in the area are made. In addition, alternative solutions on S.R. 210 would not restrict UDOT from considering alternatives for other reasonably foreseeable transportation improvements currently included in the regional transportation plan or being considered by local municipalities. The study area from Fort Union Boulevard is also long enough to address environmental matters on a broad scope along Wasatch Boulevard and in Little Cottonwood Canyon.

Once the project alternatives are developed, UDOT will evaluate the expected direct, indirect, and cumulative impacts to each human and natural environment resource. To make sure that the direct, indirect, and cumulative impacts to these resources are carefully considered, UDOT will use larger impact analysis area for each resource than the transportation needs assessment study area. For example, the impact analysis area for water resources could include the entire watershed in Little Cottonwood Canyon and how transportation solutions might have adverse and/or beneficial impacts.

3. The study area is too narrowly focused on S.R. 210 and must be expanded to include the important natural resources and recreation experience outside the roadway corridor.

The transportation needs assessment study area used for the Little Cottonwood Canyon Project extends along S.R. 210 from its intersection with S.R. 190/Fort Union Boulevard in Cottonwood Heights to its terminus in the town of Alta and includes the Bypass Road. UDOT developed this study area to include an area that's influenced by the transportation operations in Little Cottonwood Canyon and to provide logical termini (endpoints) for the project.

The transportation needs assessment study area is used only to determine the need for transportation solutions. A separate impact analysis area will be developed for each environmental resource evaluated in this EIS. The impact analysis area for each environmental resource will take into account the direct and

indirect impact of the alternatives and will be larger than the transportation needs assessment study area. For example, the visual resources impact analysis area might include all of Little Cottonwood Canyon, and the air quality impact analysis area might include the Wasatch Front airshed.

The purpose and need chapter will be revised to be clearer regarding the differences between the transportation needs assessment study area and the impact analysis areas for the various environmental resources.

Subject: Screening Criteria

4. Person throughput should be a Level 1 screening criterion.

Throughput is an indicator of the productivity of a transportation system. It tells a traffic analyst how many people or vehicles were moved by the transportation system during the analysis period. If the analyst's goal is to move people rather than just vehicles, throughput can be computed based on person-trips rather than vehicle-trips.

For the Little Cottonwood Canyon EIS, UDOT is evaluating the project alternatives using two levels of screening criteria. Level 1 screening identifies alternatives that would meet the overall purpose of the project, and Level 2 screening evaluates alternatives according to environmental criteria.

There are two Level 1 screening criteria that consider person throughput: (1) per-person travel time and (2) total person-demand (based on the 30th-busiest hour of traffic at a specific location during the year). For an alternative to meet the project purpose, it must be capable of transporting as many people as want to be transported during the 30th-busiest hour during the year. The 30th-busiest-hour person-demand will be calculated based on vehicle occupancy and traffic data collected by UDOT. Once the person-demand throughput is determined, UDOT will calculate the travel time per person for each alternative. This calculation will show the benefit for all users independent of whether a user is traveling in a personal car or on transit. For example, an alternative with a dedicated bus lane would result in a faster travel time for people riding the bus compared to people driving a personal vehicle.

5. The screening criteria should consider limiting the number of people in the canyon.

UDOT's purpose for the Little Cottonwood Canyon Project is reflected in one primary objective for S.R. 210: to substantially improve safety, reliability, and mobility on S.R. 210 from Fort Union Boulevard through the town of Alta for all users on S.R. 210. In Level 1 screening, the project alternatives will be screened based on this primary purpose.

Alternatives that pass Level 1 screening could include alternatives that are transit-oriented, alternatives such as bus, gondola, and trains and other alternatives that improve roadway capacity. UDOT will evaluate the direct, indirect, and cumulative impacts of those alternatives on the human and natural

environment along S.R. 210 so that UDOT can make an informed decision regarding the impacts and benefits of each alternative evaluated.

Although the project's purpose is not intended to increase visitation in the canyon but rather to improve overall transportation mobility, visitation in the canyon could increase as a result of projected population growth and increasing recreation demands along the Wasatch Front. The U.S. Department of Agriculture (USDA) Forest Service (a cooperating agency in preparing the EIS) will advise UDOT regarding the expected impacts of transportation improvements and associated recreation use to National Forest System land and forest resources in accordance with the *Forest Plan Wasatch-Cache National Forest*.

The USDA Forest Service has the authority to regulate occupancy and use of National Forest System lands under the Organic Act of 1897 (16 United States Code Section 551). Through implementation of forest plans, the Forest Service closely monitors the use levels of National Forest System lands to preserve forest resources and protect wilderness characteristics. The Forest Service acknowledges that, in the future, management might be needed to limit resource impacts from user visitation in Little Cottonwood Canyon. Specific carrying capacities are not being considered at this time. For more information, refer to the Uinta-Wasatch-Cache National Forest FAQ regarding this topic at <https://www.utah.gov/pmn/files/508421.pdf>.

6. The screening criteria should focus on reducing vehicle use and increasing transit use.

The Level 1 screening criteria include per-person travel time. UDOT will calculate the travel time per person for each alternative. This calculation would show the benefit for all users independent of whether a user is traveling in a personal car or in a bus. For example, if a dedicated bus lane were implemented with a faster travel time for a bus than for a personal vehicle, the maximum 42 people in the bus would have a faster per-person travel time than the 2 people in the personal vehicle. This outcome shows a greater benefit to alternatives that provide priority bus service with high bus frequencies. Since buses in dedicated bus lanes have faster travel times than do personal vehicles, the faster travel times would promote bus use and potentially reduce personal vehicle use since personal vehicles would have longer per-person travel times.

7. The Level 1 screening criteria should not be solely focused on transportation but should include other factors such as watershed protection, compliance with the Safe Water Drinking Act and Clean Water Act, and impacts to other environmental resources.

UDOT has a mission and jurisdiction focused on transportation; therefore, UDOT projects are primarily focused on transportation. The Little Cottonwood Canyon Project is funded through Senate Bill 277, in which the Utah legislature approved funding for transportation improvements in areas with recreation and tourism activity that currently experience significant congestion. Therefore, the Little Cottonwood Canyon EIS Level 1 screening criteria are based on the project purpose.

The Level 1 screening criteria are used to determine alternatives that meet the purpose of the Little Cottonwood Canyon Project, which is to improve safety, reliability, and mobility of the transportation system on S.R. 210 from Fort Union Boulevard through the town of Alta.

The Level 2 screening criteria include impacts to wetlands, streams, and floodplains. If two alternatives meet the project purpose equally, but one would have greater impacts to these water resources, the alternative with greater impacts would be eliminated.

For Level 1 and Level 2 screening, the project alternatives have not been developed in enough detail for UDOT to determine their compliance with the federal and state Safe Drinking Water Act. Once reasonable alternatives are determined, UDOT will evaluate them in detail for direct, indirect, and cumulative environmental impacts and regulatory compliance in order to provide a comparison among the alternatives. UDOT will consider all of the alternative(s)' impacts to drinking water and other resources before selecting a preferred alternative or issuing a decision to move forward. If UDOT were to eliminate alternatives in Level 1 screening based on environmental impacts and compliance with regulations, this could eliminate many alternatives that would otherwise be reasonable.

8. How will decisions be made using the screening criteria?

UDOT will evaluate all project alternatives using the screening criteria to determine which alternatives should be eliminated and which alternatives are reasonable and will be considered in greater detail in the EIS. UDOT does not weight the criteria. UDOT will clearly discuss the evaluation process in the *Alternatives Screening Report*, which is expected to be released in the summer of 2020.

Subject: Wasatch Boulevard

9. UDOT should consider slower speeds as part of the project need, screening criteria, and design of alternatives.

Safety is part of the project purpose and was identified as a need on S.R. 210 as a result of poor sight distances, accidents, and a roadway design that does not meet current safety design standards. Vehicle speed plays a role in evaluating sight distance, accidents, and roadway design.

UDOT will not use speed as a screening criterion, since any roadway alternative could be designed for a specific speed. Typically, vehicle speeds are considered in the design phase once an alternative has made it through the screening process. The evaluation of speed limits is normally done outside the EIS process because it is an operational consideration that UDOT can change without an environmental document. Typically, on state roads, UDOT conducts an evaluation of speed that is based on the 85th-percentile speed while giving consideration to the road surface, shoulders, sight distance, development, pedestrian activity, and crash data. UDOT is currently evaluating the speed limit on Wasatch Boulevard and is taking these factors into consideration.

10. Level of service should not be considered as a screening criterion for Wasatch Boulevard because it is a vehicle-based criterion.

Level of service (LOS) is a common and widely accepted way measure traffic conditions. For the Wasatch Boulevard segment of S.R. 210, UDOT is using level of service as one of the screening criteria for weekday AM and PM peak periods. (Peak periods are the periods of the day with the most vehicle traffic.) One of the goals in UDOT's 2018 Strategic Direction online report (<http://www.udot.utah.gov/strategic-direction/>) is to optimize mobility. To achieve this goal, proposed urban roadway projects are typically evaluated in terms of the road's modeled level of service.

Level of service is measure of roadway capacity performance of a street, freeway, or intersection. When the capacity of a road is exceeded, the result is congestion, delay, and a poor level of service. Level of service is represented by a letter "grade" ranging from A for excellent conditions (free-flowing traffic and little delay) to F for failure conditions (extremely congested, stop-and-go traffic and excessive delay). UDOT has set a goal of maintaining roads in urban parts of the state at LOS D or better during peak periods. Typically, in urban areas, LOS E and F are considered unacceptable operating conditions, and LOS A through D are considered acceptable operating conditions.

Wasatch Boulevard between Fort Union Boulevard and North Little Cottonwood Road serves both recreational traffic and commuting traffic. UDOT chose LOS D as the threshold for determining whether capacity improvements are needed on Wasatch Boulevard from Fort Union Boulevard to North Little Cottonwood Road.

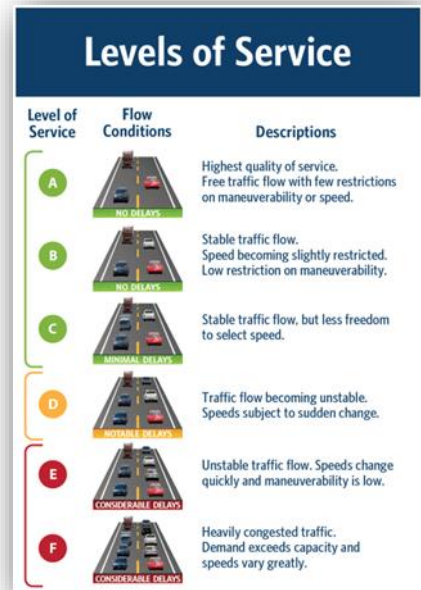
Although a road's level of service is based on how the number of vehicles affect the capacity of the road, UDOT will be evaluating project alternatives that reduce the number of vehicles, such as increased bus service. UDOT will also provide information regarding travel time as part of the analysis.

11. For Wasatch Boulevard, why is UDOT planning for LOS D, which still results in noticeable delay?

For the Wasatch Boulevard segment of S.R. 210, UDOT is using level of service as one of the screening criteria for weekday AM and PM peak periods. (Peak periods are the periods of the day with the most vehicle traffic.) Level of service is measure of roadway capacity performance of a street, freeway, or intersection. When the capacity of a road is exceeded, the result is congestion, delay, and a poor level of service. Level of service is represented by a letter “grade” ranging from A for excellent conditions (free-flowing traffic and little delay) to F for failure conditions (extremely congested, stop-and-go traffic and excessive delay).

UDOT has set a goal of maintaining roads in urban parts of the state at LOS D or better during the peak periods. Typically, in urban areas, LOS E and F are considered unacceptable operating conditions, and LOS A through D are considered acceptable operating conditions. UDOT chose LOS D as the threshold for determining whether capacity improvements are needed on Wasatch Boulevard from Fort Union Boulevard to North Little Cottonwood Road.

UDOT does not develop alternatives with a goal of LOS A through C in built urban areas because any transportation alternative that was designed to achieve these levels of service would likely require widening the roadway beyond the width that would achieve LOS D. Such widening could cause additional impacts to existing properties and the surrounding communities, and these additional impacts could be too great with minimal additional benefit to the traveling public.



12. For Wasatch Boulevard, the screening criteria should include safety to show the tradeoff between improving mobility and improving safety.

The project purpose of improving mobility applies to all modes of travel including vehicle travel, walking, and cycling. Once the project alternatives are developed, their design will meet the current safety standards for each mode. These standards include sight distance and pedestrian and bicycle safety standards. With improved transportation facilities, drivers could see, maneuver, and have safe pull-out areas compared to the existing facilities on S.R. 210. In addition, pedestrian and bicyclist facilities would have appropriate separation from vehicles for a safe travel environment.

For the EIS, mobility will include a review of pedestrian facilities along S.R. 210. UDOT is committed to have the alternatives address pedestrian facilities and is reviewing the Wasatch Boulevard Master Plan,

which also shows a need for pedestrian trails and sidewalks. UDOT did evaluate pedestrian facilities on Wasatch Boulevard and notes only about 5% of the road has sidewalks.

Subject: Planning Horizon and Construction Timing

13. The purpose and need looks at information to 2050. Does that mean nothing will happen until 2050?

No. If UDOT selects an action alternative, any construction or changes to transit service could occur after UDOT issues the project's Record of Decision, which is planned for 2021. The year 2050 is the planning horizon used to develop transportation solutions based on potential future needs several decades in the future. If UDOT were to construct a project in 2025 while using a 2050 planning horizon, for example, the project would have a useful life of about 25 years. It would not be a prudent expenditure of public funds to solve for existing needs today, since the project could be obsolete in a few years.

The 2050 planning horizon that UDOT is using for the Little Cottonwood Canyon EIS aligns with the current 2019–2050 regional transportation plan developed by the Wasatch Front Regional Council (the metropolitan planning agency for the Wasatch Front). Transportation EISs are required to be consistent with the planning horizon in the current regional transportation plan.

UDOT is also making operational improvements to S.R. 210 where possible before a Record of Decision is issued. These improvements can't predetermine selection of any alternative in the EIS and must have independent utility (that is, they must be usable and be a reasonable expenditure of funds, even if no additional transportation improvements in the area are made). For example, UDOT is improving the entrances at Snowbird and Alta to improve traffic flow in the immediate future.

Subject: Project Purpose

14. Many environmental resources such as watershed protection, recreation, and ecology are missing from the purpose and need.

Please see the response to comment 7. The objective of the purpose and need chapter in an EIS is to identify the "need" for a specific project. For UDOT projects, those needs are transportation needs. The purpose and need chapter for the Little Cottonwood Canyon EIS focuses on the transportation needs on S.R. 210.

In the EIS process, UDOT will evaluate the effects of the project alternatives on environmental resources once the alternatives are developed. Environmental resources will be considered during the screening of alternatives and in more detail once the reasonable alternatives are determined. UDOT will have an interdisciplinary team to conduct the environmental impact analysis and will be assisted by resource

experts from the U.S. Department of Agriculture Forest Service. The environmental analysis will evaluate the direct, indirect, and cumulative impacts of each reasonable alternative in accordance with the National Environmental Policy Act (NEPA).

15. UDOT describes the purpose of the project but not of the EIS process.

The Little Cottonwood Canyon EIS is being prepared using the NEPA process, which is intended to help public officials make decisions that are based on their understanding of environmental consequences and to take actions that protect, restore, and enhance the environment.

16. The project purpose should include reducing the amount of private vehicle traffic.

Please see the response to comment 4. UDOT's purpose for the Little Cottonwood Canyon Project is reflected in one primary objective for S.R. 210: to substantially improve safety, reliability, and mobility on S.R. 210 from Fort Union Boulevard through the town of Alta for all users on S.R. 210. If the project purpose was based on reducing the number of private vehicles in the canyon, the purpose would too narrowly focus the alternatives. With the current purpose, UDOT can consider alternatives that could reduce the use of private vehicles—alternatives such as tolling, buses, gondolas, and trains—along with other alternatives that would increase the roadway capacity on S.R. 210.

17. The purpose and need is too narrowly focused and will result in alternatives that lead only to road construction.

UDOT's purpose for the Little Cottonwood Canyon Project is reflected in one primary objective for S.R. 210: to substantially improve safety, reliability, and mobility on S.R. 210 from Fort Union Boulevard through the town of Alta for all users on S.R. 210. UDOT believes that this purpose is not so narrowly focused that it would result only in road construction. The purpose is broad enough that many of the project alternatives being considered include only transit (gondola, rail, and/or bus) and might not require any roadway improvements related to private vehicles. For example, alternatives could consider only increased transit frequency with bus priority areas so that riding transit would be faster than driving private vehicles. UDOT is working with UTA on potential transit solutions.