

APPENDIX 15B

Determinations of Eligibility and Findings of Effect



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

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May 7, 2021

Mr. Chris Hansen
Historic Preservation Specialist
Utah Division of State History
300 Rio Grande
Salt Lake City, UT 84101-1182

RE: UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah (PIN 16092)
Determination of Eligibility and Finding of Adverse Effect.

Dear Mr. Hansen:

The Utah Department of Transportation (UDOT) in conjunction with the United States Forest Service, Uinta-Wasatch-Cache National Forest (USFS), is preparing to undertake the subject federal-aid project. In accordance with Parts 3.1.1 and 3.2 of the *Memorandum of Understanding Between the Federal Highway Administration and the Utah Department of Transportation Concerning State of Utah's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 USC §327* (executed January 17, 2017), the UDOT assumes responsibility, assigned by the Federal Highway Administration (FHWA), for ensuring compliance with Section 106 of the NHPA and with Section 4(f) of the DOT Act of 1966, as amended. Also in accordance with the *Third Amended Programmatic Agreement among the FHWA, the Utah State Historic Preservation Officer, the Advisory Council on Historic Preservation, the USACE Sacramento District, and the UDOT Regarding Section 106 Implementation for Federal-Aid Transportation Projects in the State of Utah* (executed August 23, 2017), Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 300101 et seq.), and U.C.A.9-8-404, the UDOT has taken into account the effects of this undertaking on historic properties, and is affording the Utah State Historic Preservation Officer (SHPO) an opportunity to comment on the undertaking. Additionally, this submission is in compliance with Section 4(f) of the Department of Transportation Act of 1966, 23 U.S.C. § 138 (as amended) and 49 U.S.C. § 303 (as amended).

PROJECT DESCRIPTION

The Utah Department of Transportation (UDOT) began an Environmental Impact Statement (EIS) in the spring of 2018 for Little Cottonwood Canyon and Wasatch Boulevard in partnership with Utah Transit Authority and the USDA Forest Service. The purpose of the EIS is to provide an integrated transportation system that improves the reliability, mobility, and safety for all users on SR-210 from Fort Union Boulevard through the town of Alta. UDOT has developed five action alternatives to meet the purpose and need for this project: Enhanced Bus Service Alternative (EBS), Enhanced Bus Service in Peak-period Shoulder Lanes Alternative (PPSL), Gondola Alternative A (GA), Gondola Alternative B (GB) and Cog Rail (COG). Additional information on the alternatives can be found at www.littlecottonwoodeis.udot.utah.gov/draft-alternatives.

Each action alternative includes the following items: widening of Wasatch Blvd, two mobility hubs, avalanche mitigation, changes to trailhead parking and no winter roadside parking (See attached Fact Sheet). There are two options for widening along Wasatch Blvd. which are discussed separately. The Imbalanced Lane Alternative (WIL)

would widen Wasatch Blvd. where necessary to between 3 to 5 lanes to achieve an improved level of service but with an inconsistent roadway corridor. The Five Lane Alternative (W5L) would add one additional travel lane in each direction and roundabout intersections at three cross-streets. Each action alternative requires passengers to park at a mobility hub and then board a bus that will transport them to the destination resorts or a gondola or rail terminal. The mobility hubs are located at 6200 S Wasatch Blvd. and 9400 S Highland Dr. and both include construction of a parking structure. In the EBS, PPSL, and GA Alternatives the 6200S Wasatch Blvd. mobility hub would provide 1,500 parking spaces in a structure 3-4 stories tall. The 9400 S Highland Dr. mobility hub would provide 1,000 parking spaces in a structure that is 3 stories tall. In the GB and COG Alternatives parking at the mobility hubs would be reduced due to additional spaces at the terminal and therefore the 6200 S Wasatch Blvd. mobility hub would provide 600 parking spaces in a structure 2-3 stories tall and the 9400 S Highland Dr. mobility hub would provide 400 parking spaces in a structure 2 stories tall.

Additional information on the alternatives can be found at www.littlecottonwoodeis.udot.utah.gov/draft-alternatives.

Enhanced Bus Service Alternative (EBS)

The Enhanced Bus Service Alternative includes frequent bus service from two mobility hubs (the gravel pit and 9400 South/Highland Drive), improvements to Wasatch Boulevard, avalanche mitigation, improvements to trailheads, and no winter parking.

Enhanced Bus Service in Peak-period Shoulder Lanes Alternative (PPSL)

The Enhanced Bus Service in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative. The only difference between the alternatives is that this alternative includes widening SR-210 from North Little Cottonwood Road to the Alta Bypass Road to add peak-period shoulder lanes.

Gondola Alternative A Alternative (GA)

Gondola Alternative A would include a gondola alignment from the intersection of SR-209/SR-210 to both the Snowbird and Alta ski resorts. The gondola facility will include a terminal station at the existing park-and-ride lot on the north side of SR-210 at the entrance of Little Cottonwood Canyon, an angle station west of the Tanners Flat Campground (no additional ground disturbance), 20 towers varying in height from 130 to 230 feet in height, and base stations at the Snowbird and Alta ski areas. The alternative would include frequent bus service from two mobility hubs to the gondola base station, improvements to Wasatch Boulevard, snow sheds, improvements to trailheads, and no winter parking.

Gondola Alternative B Alternative (GB)

Gondola Alternative B would be similar to Gondola Alternative A, but the terminal station would be located at a proposed development south of North Little Cottonwood Road near the La Caille restaurant, about 0.75 mile northwest of the intersection of S.R. 209 and S.R. 210. An additional segment of the gondola alignment would run for about 0.75 mile from the base station to the Little Cottonwood Canyon park-and-ride lot. Additional items in this alternative include a 1,500-stall parking structure at the terminal station, travel lanes from Wasatch Blvd. to the termination station, and a new trail segment to connect to the trails on Wasatch Blvd. and Fort Union Blvd.

Cog Rail Alternative (COG)

The Cog Rail Alternative would start at a terminal station located at a proposed development south of North Little Cottonwood Road near the La Caille restaurant, about 0.75 mile northwest of the intersection of S.R. 209 and S.R. 210, and would travel on the north side of S.R. 210 to both the Snowbird and Alta ski resorts. The rail alignment would include reconfiguration of the parking lots at the Little Cottonwood Canyon park and ride lot, Grit Mill trailhead, Gate Buttress trailhead, and Lisa Falls trailhead; and construction of an additional snow shed between the Snowbird and Alta ski areas. The alternative would include frequent bus service from two mobility hubs to the cog rail base station, improvements to Wasatch Boulevard, snow sheds, improvements to trailheads, and no winter parking.

AREA OF POTENTIAL EFFECT AND SURVEYS

The area of potential affects (APE) includes the proposed footprint of all active alternatives as well as all adjoining parcels. The APE is approximately 11 miles long and will extend 0.25mi to either side of the existing SR-210

centerline for a total of 791 ac. A study area (or physical impacts APE) was defined within the APE to delineate the area that was subject to archaeological inventory and extends 100 feet either side of the SR-210 centerline. This project also includes an APE for associated (visual) effects which includes the visual environment within Little Cottonwood Canyon and those areas within the viewshed of the Project.

This area has potential for cultural resources to be present due to its proximity to several mountain drainages, historic mining areas and development to the ski industry in Little Cottonwood Canyon. However, the APE has also experienced extensive ground disturbance from previous road construction and mine remediation activities.

An intensive-level archaeological inventory and a selective reconnaissance-level survey for historic architecture were performed for an area 100 feet either side of the project centerline, as well as adjacent project areas. The APE has been surveyed by SWCA, under State Antiquities Project Number U18ST218, and the complete results are reported in *Class III Archaeological Inventory for the Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah* (see enclosed report). An intensive level pedestrian survey was conducted using 15 meter transects to identify archaeological resources as terrain allowed. A selective reconnaissance level survey was conducted to record architectural properties and those results are reported in *Selective Reconnaissance-Level Architectural Survey for the Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah* (see enclosed report). Five parcels could not be effectively surveyed due to vegetation and/or terrain and these are assumed to be historic properties.

The surveys have resulted in the identification of 22 archaeological sites and 129 architectural properties. Of these, 9 archaeological sites and 84 architectural properties are eligible to the National Register of Historic Places (NRHP). Five previously documented archaeological sites were not re-located. No known traditional cultural properties are located in the APE. The Determinations of Eligibility and Findings of Effects (for both Section 106 and Section 4(f)) are provided in the following sections for each action alternative with impacts to archaeological sites listed in Table 1 and impacts to architectural resources listed in Table 2. Please see attached notification letter regarding Section 4(f) *de minimis* impacts.

An analysis was also conducted for all cultural resources within the visual effects APE and those results are reported in *Cultural Resources Visual Analysis for the Little Cottonwood Canyon Environmental Impact Statement* (see enclosed report). The analysis determined that five resources required evaluation, 2 archaeological sites and 3 historic buildings. Three of the resources (42SL102, Cliff Lodge, and Iron Blossam Lodge) have a strong contrast rating, one (Alta Lodge) has a moderate contrast rating, and one (42SL90) has a weak contrast rating. The GA and GB Alternatives are the only alternatives to pose a visual impact to cultural resources, and it was found that while they would alter the setting of these cultural resources, they would not diminish any character-defining features or aspects of integrity that qualify these resources for inclusion in the NRHP and will result in no adverse effects to these historic properties.

ENHANCED BUS SERVICE ALTERNATIVE

Archaeological Resources

The EBS Alternative will impact two archaeological sites: Site 42SL830 and 42SL419.

Site 42SL830 is the historic Salt Lake to Alta Road (SR-210) which is overlain with the modern pavement. This site is affected by the EBS along modern Wasatch Blvd and SR-210 to varying degrees based on the details of those alternatives. Since no historic road fabric or associated features or artifacts were observed, this alternative will result in a finding of a finding of No Adverse Effect.

Site 42SL419 is the Denver & Rio Grande Western Railroad, Alta Branch, which has been largely destroyed within the APE. In this alternative, both of the snow shed alternatives would impact approximately 0.19 ac. of an intact retaining wall (known colloquially as the “China Wall”). As this impact would remove the only remaining intact feature of this site, the proposed project will result in a finding of Adverse Effect.

Section 4(f) applies to Site 42SL419 as it is eligible for the NRHP only under Criterion A. Site 42SL830 is partly eligible for data potential and does not warrant preservation in place, therefore is exempt from Section 4(f) under 23CFR 774.13(b).

Architectural Resources

The EBS Alternative will impact a total of 10 historic properties. All impacts would be to a portion of the parcel and not impact the primary building. The acquisitions, temporary construction easement (TCE) and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect. Property acquisition at seven of these buildings will result in a Section 4(f) *de minimis* impact, three others would constitute Temporary Occupancy.

ENHANCED BUS SERVICE WITH IN PEAK-PERIOD SHOULDER LANES ALTERNATIVE

Archaeological Resources

The PPSL Alternative will impact five archaeological sites: Sites 42SL109, 42SL830, 42SL549, 42SL419 and 42SL916.

Site SL109 is the Little Cottonwood Grit Mill and Granite Quarry which lies on either side of SR-210. Impacts by the PPSL would include about 3.19ac. of disturbance along the road margins, a small portion of the site, and avoid all documented features. As a result of construction monitoring for a roadside project in 2020, several additional boulders with drill scars and imbedded tools were identified. If selected, construction monitoring will be conducted at this site. This alternative will not substantially impact or alter any contributing elements of the site or any of the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect.

Site 42SL830 is the historic Salt Lake to Alta Road (SR-210) which is overlain with the modern pavement. This site is affected by the EBS along modern Wasatch Blvd and SR-210 to varying degrees based on the details of those alternatives. Since no historic road fabric or associated features or artifacts were observed, this alternative will result in a finding of a finding of No Adverse Effect.

Site 42SL549 is the historic Whitmore Temple Granite Power Plant and this alternative would only impact the northern portion of this site (<0.01ac.). At this location the alternative would encroach on the location of F-08, a wooden pipeline, but would not directly impact it. As this alternative would only impact a small portion of the site and will not substantially impact or alter any contributing elements of the site or any of the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect.

Site 42SL419 is the Denver & Rio Grande Western Railroad, Alta Branch, which has been largely destroyed within the APE. In this alternative, both of the snow shed alternatives would impact approximately 0.19 ac. of an intact retaining wall (known colloquially as the “China Wall”). As this impact would remove the only remaining intact feature of this site, the proposed project will result in a finding of Adverse Effect.

Site 42SL916 is the historic wagon road to Alta, which has been partly converted to the Little Cottonwood Creek Trail. This alternative would impact approximately 0.02ac. within the site boundary for a temporary construction easement to construct drainage culverts. These culverts will be buried beneath the trail and all trail features restored. As this alternative would only impact a small portion of the site and will not substantially impact or alter any contributing elements of the site or any of the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect.

Section 4(f) applies to Site 42SL419 as it is eligible for the NRHP only under Criterion A. The remaining sites are partly eligible for data potential and does not warrant preservation in place, therefore is exempt from Section 4(f) under 23CFR 774.13(b).

Architectural Resources

The PPSL Alternative will impact a total of 22 historic properties. The acquisitions, TCEs and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined

eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect. Property acquisition at 15 of these buildings will result in a Section 4(f) *de minimis* impact, seven others would constitute Temporary Occupancy.

GONDOLA A ALTERNATIVE

Archaeological Resources

The GA Alternative will impact 6 archaeological sites: Sites 42SL52, 42SL90, 42SL102, 42SL109, 42SL830, and 42SL419.

Site 42SL52 is the 79.8ac. historic Alta townsite, the boundary of which includes historic debris and structures as well as modern development. A gondola tower and the Alta destination station would be constructed within the site. The tower is currently impacting approximately 0.10ac. of Feature F-3, a large depression filled with historic debris. It is unclear if F-3 represents the remains of a demolished structure, adit, or refuse pit. The station will impact 0.52ac. but is not impacting any known site features in that area. This site has a high potential for buried deposits and therefore construction monitoring will be conducted for any project elements within the site boundary. Therefore, the proposed project would result in a finding of Adverse Effect.

Site 42SL90 is a prehistoric rock shelter and rock art panel. This site will not experience any physical impacts and all potential visual impacts would be screened by dense vegetation. Therefore the proposed project would result in a finding of No Historic Properties Affected.

Site 42SL102 is a historic hydroelectric plant. This site will not experience any physical impacts and all potential visual impacts would be screened by dense vegetation. Therefore the proposed project would result in a finding of No Historic Properties Affected.

Site SL109 is the Little Cottonwood Grit Mill and Granite Quarry which lies on either side of SR-210. Impacts by the GA would include a gondola tower and the base station which would be located in the existing parking lot. Approximately 2.42ac. would be necessary for the base station, the majority of which is within the current parking lot and is designed to avoid features that contribute to the NRHP eligibility of the site. The tower would impact 0.15ac. of the site and there are no known features in this area. As a result of construction monitoring for a roadside project in 2020, several additional boulders with drill scars and imbedded tools were identified. If selected, construction monitoring will be conducted at recommended for this site. As no known significant features would be impacted, the proposed project would result in a finding of No Adverse Effect.

Site 42SL830 is the historic Salt Lake to Alta Road (SR-210) which is overlain with the modern pavement. Since no historic road fabric or associated features or artifacts were observed, this alternative will result in a finding of a finding of No Adverse Effect.

Site 42SL419 is the Denver & Rio Grande Western Railroad, Alta Branch, which has been largely destroyed within the APE. In this alternative, both of the snow shed alternatives would impact approximately 0.19 ac. of an intact retaining wall (known colloquially as the "China Wall"). As this impact would remove the only remaining intact feature of this site, the proposed project will result in a finding of Adverse Effect.

Section 4(f) applies to Site 42SL419 as it is eligible for the NRHP only under Criterion A. The remaining sites are partly eligible for data potential and does not warrant preservation in place, therefore is exempt from Section 4(f) under 23CFR 774.13(b).

Architectural Resources

The GA Alternative will impact a total of 17 historic properties, including five at the Snowbird Ski and Summer Report. Property acquisition would be necessary to accommodate the gondola towers, TCEs and changes to the visual character of the property setting. In addition to the impact of gondola towers, impacts to historic architecture also include easements underneath the gondola cables. The acquisitions, TCEs and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined eligible for the NRHP. For Snowbird, SWCA and the UDOT Cultural Resources staff identified character-defining features within four

predominant themes: planning, ecological, modernism, and verticality. None of the GA Alternative impacts will adversely affect the Snowbird properties within the context of these themes. (A memorandum addressing the Snowbird properties is attached). Thus, the proposed project will result in a finding of No Adverse Effect. Property acquisition at 12 of these buildings will result in a Section 4(f) *de minimis* impact, three others would constitute Temporary Occupancy.

GONDOLA B ALTERNATIVE

Archaeological Resources

The GB Alternative will have an impact to the same 6 archaeological sites as GA: Sites 42SL52, 42SL90, 42SL102, 42SL109, 42SL830 and 42SL419.

Site 42SL52 is the 79.8ac. historic Alta townsite, the boundary of which includes historic debris and structures as well as modern development. A gondola tower and the Alta destination station would be constructed within the site. The tower is currently impacting approximately 0.10ac. of Feature F-3, a large depression filled with historic debris. It is unclear if F-3 represents the remains of a demolished structure, adit, or refuse pit. The station will impact 0.52ac. but is not impacting any known site features in that area. This site has a high potential for buried deposits and therefore construction monitoring will be conducted for any project elements within the site boundary. Therefore, the proposed project would result in a finding of Adverse Effect.

Site 42SL90 is a prehistoric rock shelter and rock art panel. This site will not experience any physical impacts and all potential visual impacts would be screened by dense vegetation. Therefore the proposed project would result in a finding of No Historic Properties Affected.

Site 42SL102 is a historic hydroelectric plant. This site will not experience any physical impacts and all potential visual impacts would be screened by dense vegetation. Therefore the proposed project would result in a finding of No Historic Properties Affected.

Site SL109 is the Little Cottonwood Grit Mill and Granite Quarry which lies on either side of SR-210. Impacts by the GB would include a gondola tower and the base station which would be located in the existing parking lot. Approximately 2.42ac. would be necessary for the base station, the majority of which is within the current parking lot and is designed to avoid features that contribute to the NRHP eligibility of the site. The tower would impact 0.15ac. of the site and there are no known features in this area. As a result of construction monitoring for a roadside project in 2020, several additional boulders with drill scars and imbedded tools were identified. If selected, construction monitoring will likely be recommended for this site. As no known significant features would be impacted, the proposed project would result in a finding of No Adverse Effect.

Site 42SL830 is the historic Salt Lake to Alta Road (SR-210) which is overlain with the modern pavement. This site is affected by the GB along modern Wasatch Blvd and SR-210 to varying degrees based on the details of those alternatives. Since no historic road fabric or associated features or artifacts were observed, this alternative will result in a finding of a finding of No Adverse Effect.

Site 42SL419 is the Denver & Rio Grande Western Railroad, Alta Branch, which has been largely destroyed within the APE. In this alternative, both of the snow shed alternatives would impact approximately 0.19 ac. of an intact retaining wall (known colloquially as the "China Wall"). As this impact would remove the only remaining intact feature of this site, the proposed project will result in a finding of Adverse Effect.

Section 4(f) applies to Site 42SL419 as it is eligible for the NRHP only under Criterion A. The remaining sites are partly eligible for data potential and does not warrant preservation in place, therefore is exempt from Section 4(f) under 23CFR 774.13(b).

Architectural Resources

The GB Alternative will impact a total of 20 historic properties, including 5 at the Snowbird Ski and Summer Resort. Property acquisition would be necessary to accommodate the gondola towers and base station, TCEs and changes to the visual character of the property setting. In addition to the impact of gondola towers, impacts to

historic architecture also include easements underneath the gondola cables. The acquisitions, TCEs and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined eligible for the NRHP. For Snowbird, SWCA and the UDOT Cultural Resources staff identified character-defining features within four predominant themes: planning, ecological, modernism, and verticality. None of the GB Alternative impacts will adversely affect the Snowbird properties within the context of these themes. (A memorandum addressing the Snowbird properties is attached). Thus, the proposed project will result in a finding of No Adverse Effect. Property acquisition at 15 of these buildings will result in a Section 4(f) *de minimis* impact, three others would constitute Temporary Occupancy.

COG RAIL ALTERNATIVE

Archaeological Resources

The COG Alternative will impact 4 archaeological sites: Sites 42SL109, 42SL830, 42SL419 and 42SL916.

Site SL109 is the Little Cottonwood Grit Mill and Granite Quarry which lies on either side of SR-210. Impacts by the COG Alternative would include the rail tracks, maintenance facility, and reconstruction of the current parking lot and trailhead, comprising 10.62ac (approximately 1/3 of the site area). Portions of the quarried canyon face and quarried stone boulders are scattered across the 31-acre site. As a result of construction monitoring for a roadside project in 2020, several additional boulders with drill scars and imbedded tools were identified. If selected, construction monitoring will be conducted at this site. Given the scale and distribution of impacts throughout the site boundary which would impact defining characteristics of the site, the proposed project would result in a finding of Adverse Effect.

Site 42SL830 is the historic Salt Lake to Alta Road (SR-210) which is overlain with the modern pavement. This site is affected by the COG along modern Wasatch Blvd and SR-210 to varying degrees based on the details of those alternatives. Since no historic road fabric or associated features or artifacts were observed, this alternative will result in a finding of a finding of No Adverse Effect.

Site 42SL419 is the Denver & Rio Grande Western Railroad, Alta Branch, which has been largely destroyed within the APE. In this alternative, both of the snow shed alternatives would impact approximately 0.19 ac. of an intact retaining wall (known colloquially as the “China Wall”). As this impact would remove the only remaining intact feature of this site, the proposed project will result in a finding of Adverse Effect.

Site 42SL916 is the historic wagon road to Alta, which has been partly converted to the Little Cottonwood Creek Trail. This alternative would impact approximately 0.02ac. within the site boundary for a temporary construction easement to construct drainage culverts. These culverts will be buried beneath the trail and all trail features restored. As this alternative would only impact a small portion of the site and will not substantially impact or alter any contributing elements of the site or any of the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect.

Section 4(f) applies to Site 42SL419 as it is eligible for the NRHP only under Criterion A. The remaining sites are partly eligible for data potential and does not warrant preservation in place, therefore is exempt from Section 4(f) under 23CFR 774.13(b).

Architectural Resources

The COG Alternative will impact a total of 18 historic properties. The acquisitions, TCEs and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined eligible for the NRHP. Thus, the proposed project will result in a finding of No Adverse Effect. Property acquisition at 14 of these buildings will result in a Section 4(f) *de minimis* impact, four others would constitute Temporary Occupancy.

SECTION 4(f) EVALUATION

Under Section 4(f), use of a property includes permanent incorporation of land into a transportation facility, temporary uses, and constructive uses (i.e., severe proximity impacts). Uses that result in minor impacts without adverse effects are considered to have a *de minimis* impact. Uses that result in Greater than *de minimis* impacts result in adverse effects to the activities, features, or attributes qualifying a property for protection under Section 4(f). Additionally, some temporary occupancies of land are so minimal as to not constitute a use within the meaning of Section 4(f) when the scope of the work is minor and the magnitude of the changes to the Section 4(f) property are minimal. The land would also need to be fully restored to a condition at least as good as that which existed prior to the project.

The project will result in a use of Section 4(f) resources resulting in a *de minimis* impact of up to 15 buildings and temporary occupancy finding for up to 7 buildings as outlined in Table 3. An individual Section 4(f) evaluation is being prepared and will be included with the environmental document prepared for this project. The evaluation discusses the impact by the action alternative and measures taken to minimize harm to the Section 4(f) properties. This information is summarized below. A copy of the Section 4(f) evaluation will be provided upon request.

Section 4(f) applies to archeological sites that are on or eligible for the NRHP and that warrant preservation in place. Section 4(f) does not apply if FHWA determines, after consultation with SHPO and the ACHP (if participating) that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. None of the eight eligible archaeological sites within the study area retain appropriate integrity and significance to be considered Section 4(f) properties.

Table 3. Summary of Section 4(f) Impact by Build Alternative

	EBS	PPSL	GA	GB	COG
Greater than <i>de minimis</i> Impact	1	1	2	2	2
<i>De minimis</i> Impact	7	15	12	15	14
Temporary Occupancy (no Section 4(f) Use)	3	7	3	3	4
Total No. of Section 4(f) Impacts	8	16	14	17	16

CONSULTATION EFFORTS

Native American consultation was initiated through letters sent to the Uintah and Ouray Ute Tribes, Shoshone-Bannock Tribes, Eastern Shoshone Tribe of the Wind River Reservation, Northwestern Band of Shoshone Nation, Skull Valley Band of Goshute Indians, Confederated Tribes of the Goshute Reservation, and the Cedar and Shivwits Bands of the Paiute (sent March 7, 2018). No responses were received from this correspondence, but the Utah Division of Indian Affairs is a Participating Agency under NEPA for the EIS.

The following organizations were also invited to be consulting parties under Section 106: Friends of Alta, Alta Historical Society, Alta Community Enrichment, Cottonwood Heights Historic Committee, Cottonwood Heights CLG, Wasatch Mountain Club, Cottonwood Canyons, Foundation, Save Our Canyons, Preservation Utah, the Utah Professional Archaeological Council, and the Church of Jesus Christ of Latter-day Saints (sent March 7, 2018). The Cottonwood Heights Historic Committee, Cottonwood Heights CLG, and Church of Jesus Christ of Latter-day Saints agreed to be consulting parties.

Public open house meetings have been held at the NEPA Scoping (June 2019) and Alternatives Screening stages and the public was notified of potential impacts to cultural resources. To date, few comments about cultural resources have been submitted and express general concern about archaeological resources, and the 'China Wall' portion of

42SL419. Public comments will be solicited at other stages of the EIS with updated information on impacts to cultural resources as they are known and will be addressed throughout the project.

SUMMARY

All action alternatives equally impact Site 42SL419 resulting in a finding of Adverse Effect and a Section 4(f) use with Greater than *de minimis* impacts. In addition, the GA and GB alternatives result in an Adverse Effect to Site 42SL52 and the COG alternative results in an Adverse Effect to Site 42SL109. Table 4 summarizes these impacts on archaeological resources.

Table 4. Summary of Effect of Alternatives on Archaeological Resources

	EBS	PPSL	GA	GB	COG
Adverse Effect	1	1	2	2	2
No Adverse Effect	1	4	2	2	2
No Historic Properties Affected	0	0	2	2	0

All action alternatives require the partial acquisition of properties eligible for the NRHP resulting in a finding of No Adverse Effect and a Section 4(f) use with *de minimis* impacts. Table 5 summarizes these impacts on architectural resources.

Table 5. Summary of Effect of Alternatives on Architectural Resources

	EBS	PPSL	GA	GB	COG
Adverse Effect	0	0	0	0	0
No Adverse Effect	10	22	17	20	18
No Historic Properties Affected	Varies	Varies	Varies	Varies	Varies

Therefore, the project will result in a finding of Adverse Effect for up to 2 archaeological sites, No Adverse Effect and Section 4(f) *de minimis* impact for up to 4 archaeological sites and 22 architectural properties, and a finding of No Historic Properties Affected for all remaining architectural properties and archaeological sites. Therefore, the potential Finding of Effect for the proposed UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah, is **Adverse Effect**. UDOT will submit a final Finding of Effect and continue consultation for the project once a Preferred Alternative is selected.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by UDOT pursuant to 23 *USC* §327 and a Memorandum of Understanding dated January 17, 2017, and executed by FHWA and UDOT.

Please review this document and, providing you agree with the findings contained herein, provide written concurrence. Should you have any questions or need additional information, please feel free to contact Liz Robinson at 801-910-2035 or lizrobinson@utah.gov, or Elizabeth Giraud at 801-965-4917 or egiraud@utah.gov.

Sincerely,

Liz Robinson

Liz Robinson
Cultural Resources Program Manager
UDOT Central Environmental

Elizabeth Giraud

Elizabeth Giraud, AICP
Architectural Historian
UDOT Central Environmental

Enclosures

cc: Joshua VanJura, Project Manager
Brandon Weston, Environmental Director

Little Cottonwood Canyon EIS DOE/FOE:

Archaeology Impact Table & Figures

Table 1. Determinations of Eligibility and Findings of Effect for Archaeological Sites

Site Number	Site Type	Site Name	NRHP Evaluation	Alternative(s) Having Impact	Nature of Impact	Section 106 Effect	Section 4(f) Use/Impact	Warrants Preservation in Place	Figure Reference
42SL830	Road	Salt Lake to Alta Road/SR 210	Eligible	All Alternatives	31.24 acres of potential impact (WIL)	No adverse effect	N/A	No	Figure 36
					31.29 acres of potential impact (W5L)		N/A		
				All Alternatives except for COG	9.58 acres of potential impact (SSRR)	No adverse effect	N/A		Figure 37
					7.30 acres of potential impact (SSB)		N/A		
					1.81 acres of potential impact (TH)		N/A		Figure 38
				PPSL	50.52 acres of potential impact	No adverse effect	N/A		Figure 39
				GA	1.10 acres of potential impact	No adverse effect	N/A		Figure 41
				GB	7.31 acres of potential impact	No adverse effect	N/A		Figure 41 Figure 42
				COG	42.90 acres of potential impact	No adverse effect	N/A		Figure 43 Figure 44 Figure 45
					8.88 acres of potential impact (SSRR)	No adverse effect	N/A		Figure 45
					7.78 acres of potential impact (SSB)	No adverse effect	N/A		Figure 45
					0.29 acres of potential impact (TH)	No adverse effect	N/A		Figure 38

42SL109	Granite quarry	Little Cottonwood Grit Mill Property	Eligible	PPSL	3.19 acres of potential impact	No adverse effect	N/A	No	Figure 40
				GA, GB	2.57 acres of potential impact	No adverse effect	N/A		Figure 41
				COG	10.62 acres of potential impact	Adverse effect	N/A		Figure 44
42SL549	Power plant	Whitmore Temple Granite Power Plant	Eligible	PPSL	less than 0.01 acres of potential impact	No adverse effect	N/A	No	Figure 40
42SL52	Town site	Town Site of Alta	Eligible	GA, GB	0.63 acres of potential impact	No adverse effect	N/A	No	Figure 41
42SL90	Rock shelter/ rock art	Prehistoric rock shelter and rock art	Eligible	GA, GB	Visual	No adverse effect	N/A	No	Figure 41
42SL102	Power plant	Tanner Hill Site hydroelectric plant	Unevaluated	GA, GB	Visual	No adverse effect	N/A	N/A	Figure 41
42SL405	Power plant	Cottonwood Granite Company Power Plant #3	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A
42SL419	Railroad	D&RGW Railroad/Wasatch & Jordan Valley Railroad/Salt Lake & Alta	Eligible	All alternatives	0.19 acres of potential impact (SSRR, SSB)	Adverse Effect	Yes	No	Figure 46
42SL473	Tramway	Michigan-Utah Mine Aerial Tramway	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A
42SL507	Power plant	Whitmore Wasatch Power Plant	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A
42SL538	Dam	Utah Granite and Marble Co./Whitmore Power Plant	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A

42SL551	Road	Road to Little Cottonwood	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A
42SL740	Road	Alta Prince of Wales Road	Eligible	N/A	Property avoided	No historic properties affected	N/A	No	N/A
42SL916	Road	Wagon Road to Alta	Eligible	PPSL	0.02 acres potential effect	No Adverse Effect	No	No	Figure 47
				COG	0.01 acres potential effect	No Adverse Effect	No	No	Figure 47
42SL860	Mine	Emma Mine	Eligible	N/A	Property avoided	No historic properties affected	N/A	No	N/A
42SL915	Gravel Pit	Walker and Draper Gravel Pits	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A
42SL393	Ditch	Butler Ditch	Not eligible	N/A	N/A	No historic properties affected	N/A	N/A	N/A

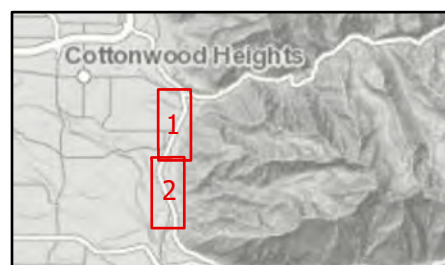
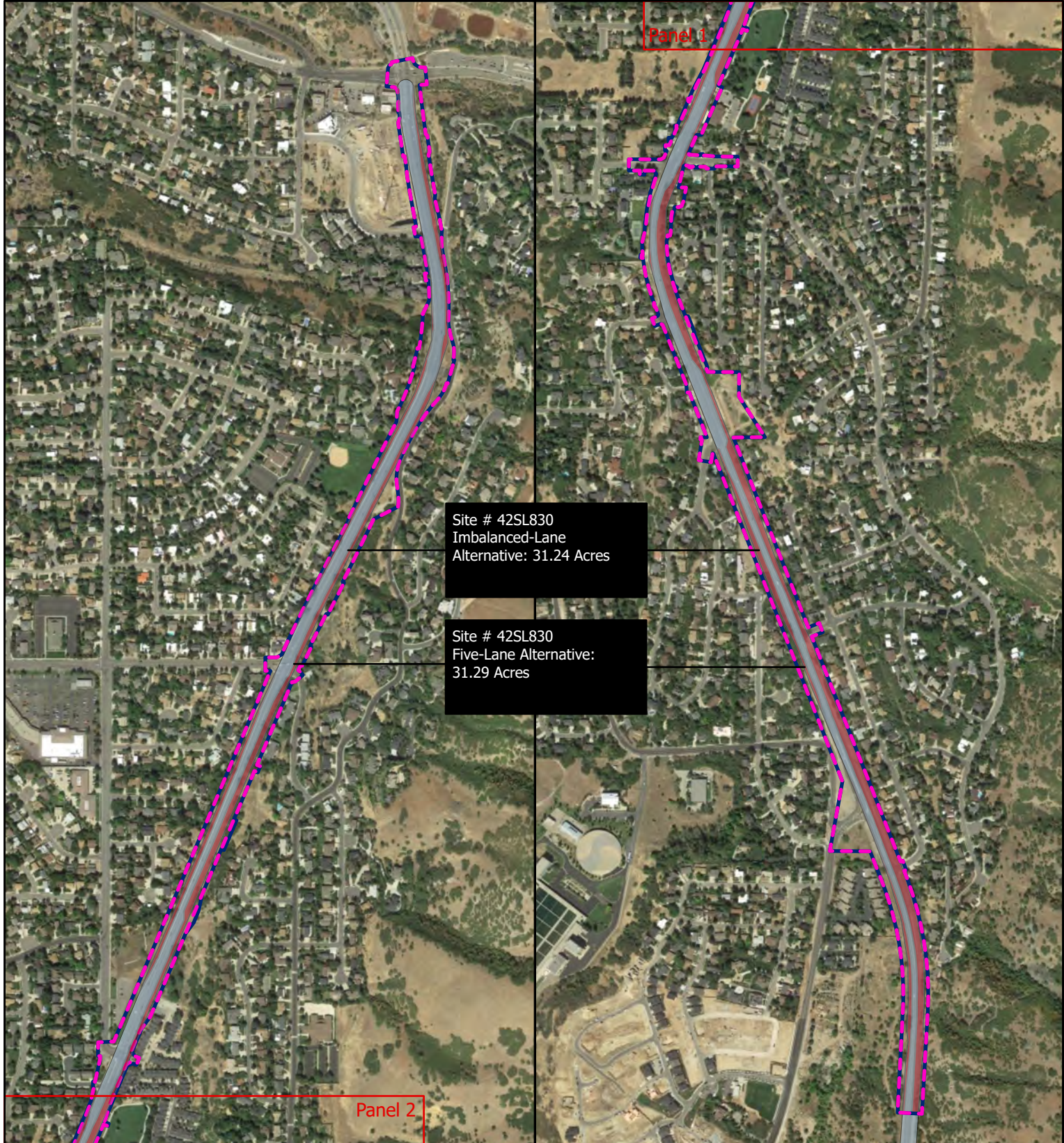
Alternative Abbreviations





Action Alternatives (main alternatives being evaluated in detail)

PPSL	Enhanced Bus Service in Peak-period Shoulder Lane Alternative
GA	Gondola Alternative A
GB	Gondola Alternative B
COG	Cog Rail Alternative

Sub-alternatives (alternative options that fall under action alternatives)

WIL	Wasatch Boulevard Imbalanced-lane Alternative (could apply to all action alternatives)
W5L	Wasatch Boulevard Five-lane Alternative (could apply to all action alternatives)
SSRR	Snow Sheds with Realigned Roads Alternative
SSB	Snow Sheds with Berms Alternative
TH	Trailhead Improvements



-  Imbalanced-Lane Alternative Total Impacts
-  Five-Lane Alternative Total Impacts
-  Impacted Area
-  Archaeological Site Boundary (42SL830)

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
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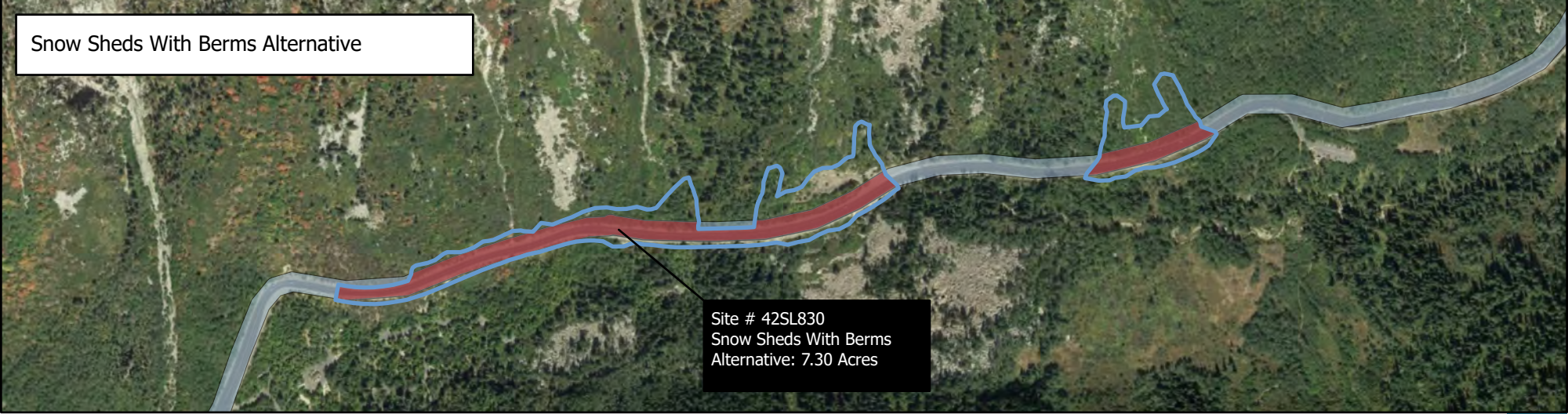
0 500 1000 Feet





*Impacts on this figure apply to all action alternatives.

Snow Sheds With Realigned Road Alternative

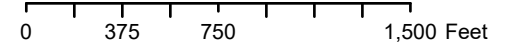


Snow Sheds With Berms Alternative

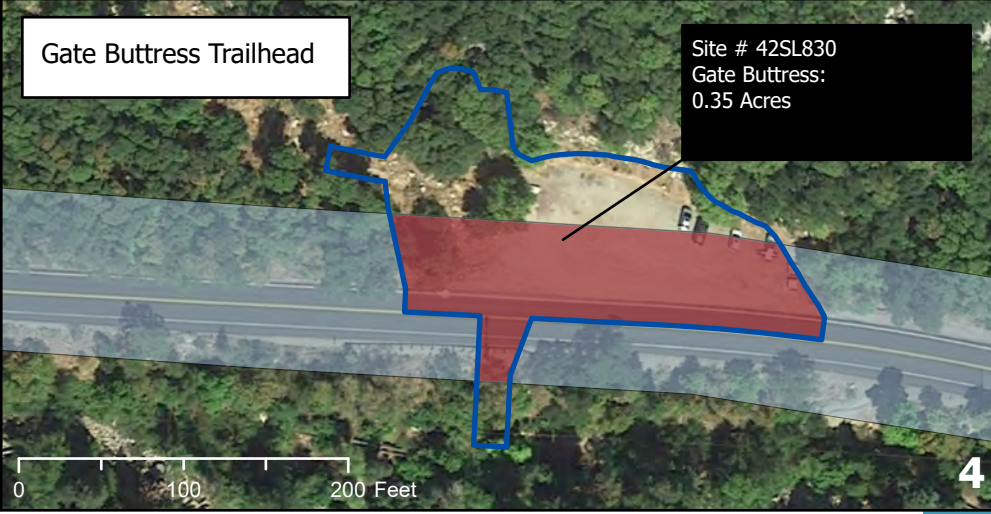
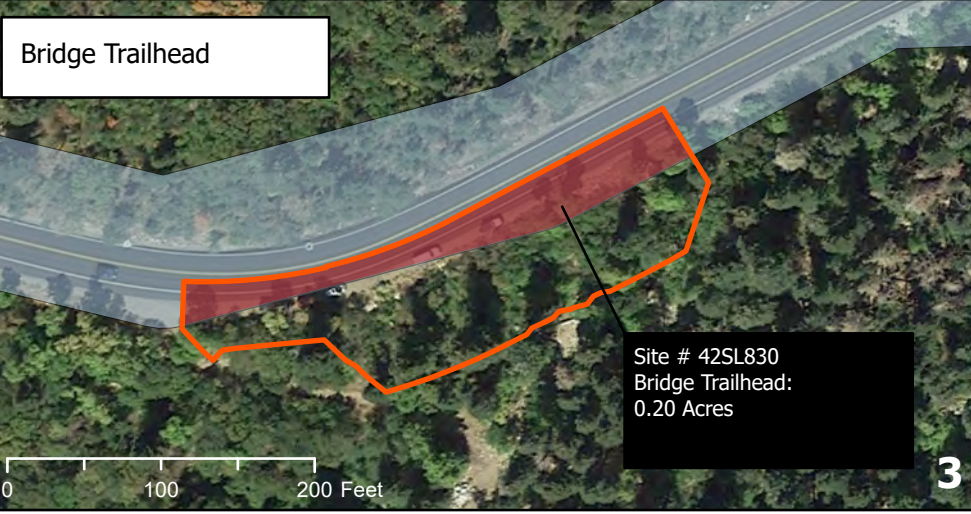
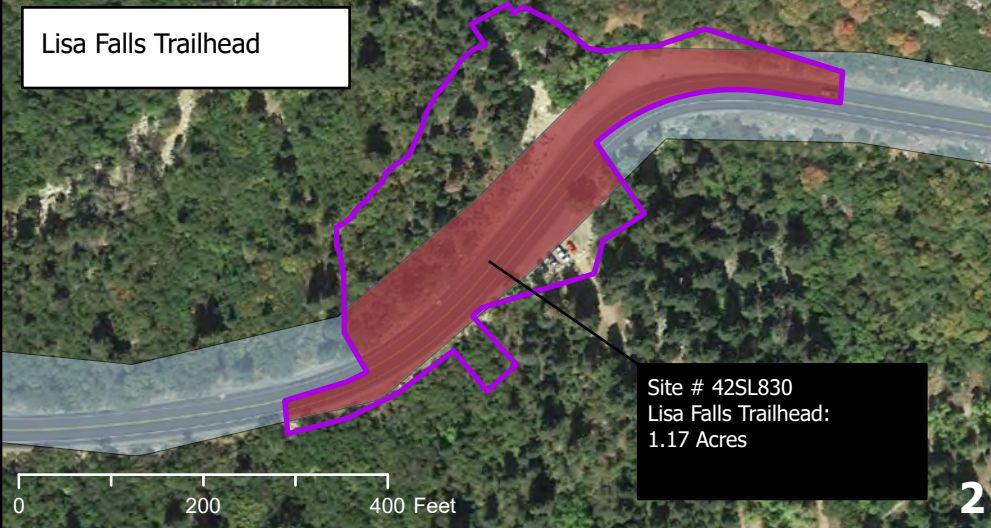
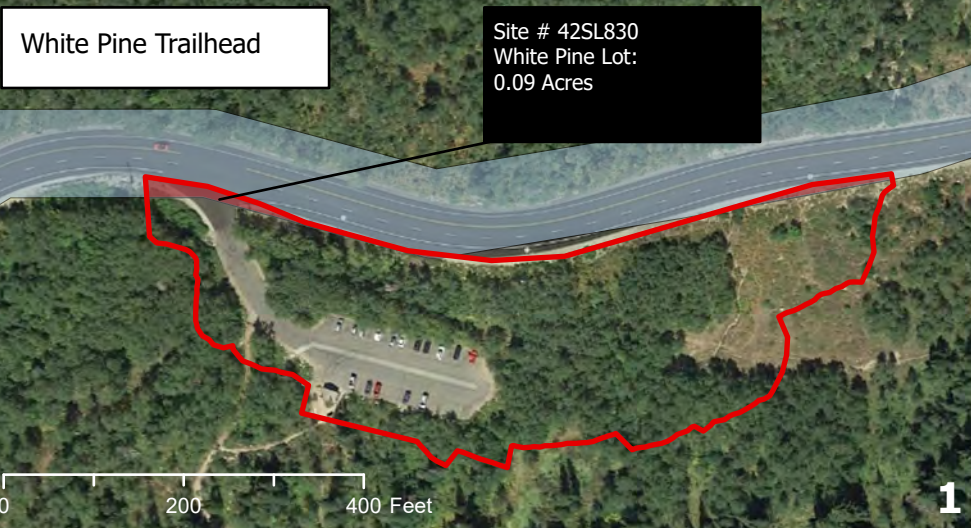


-  Snow Sheds with Berms Alternative Impact Area
-  Snow Sheds with Realigned Road Alternative Impact Area
-  Impacted Area
-  Archaeological Site Boundary (42SL830)

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*Impacts on this figure apply to all action alternatives except cog-rail.



- Trailhead Improvements
- Parking - Bridge Trailhead
 - Parking - Gate Buttruss
 - Parking - Lisa Falls PPSL Option A
 - Parking - White Pine Option A

- Impacted Area
- Archaeological Site Boundary (42SL830)



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FINDING OF EFFECT



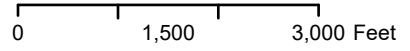
*Impacts for White Pine Trailhead and Bridge Trailhead apply to all action alternatives.

*Impacts for Lisa Falls Trailhead and Gate Buttruss Trailhead apply to all action alternatives except the Cog Rail Alternative.

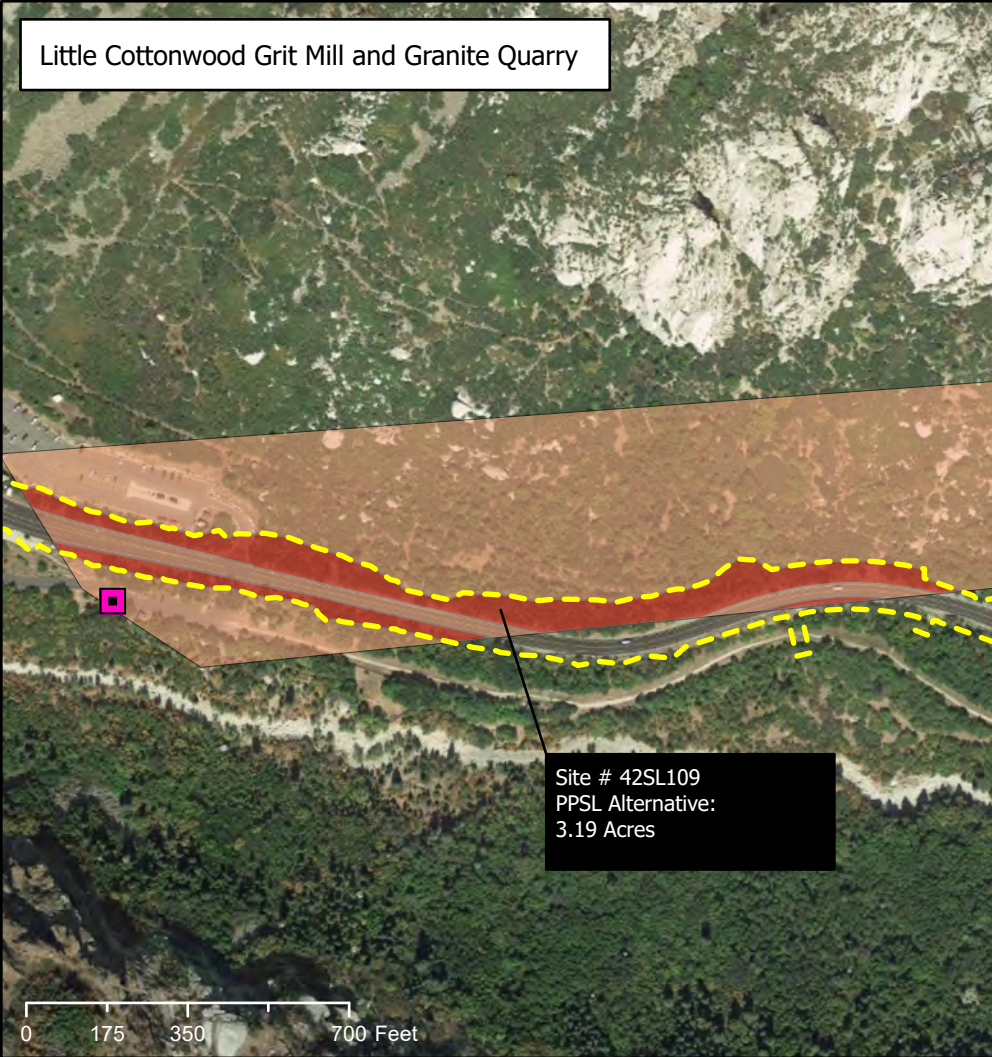


-  Impacted Area PPSL Alternative
-  Archaeological Site Boundary (42SL830)

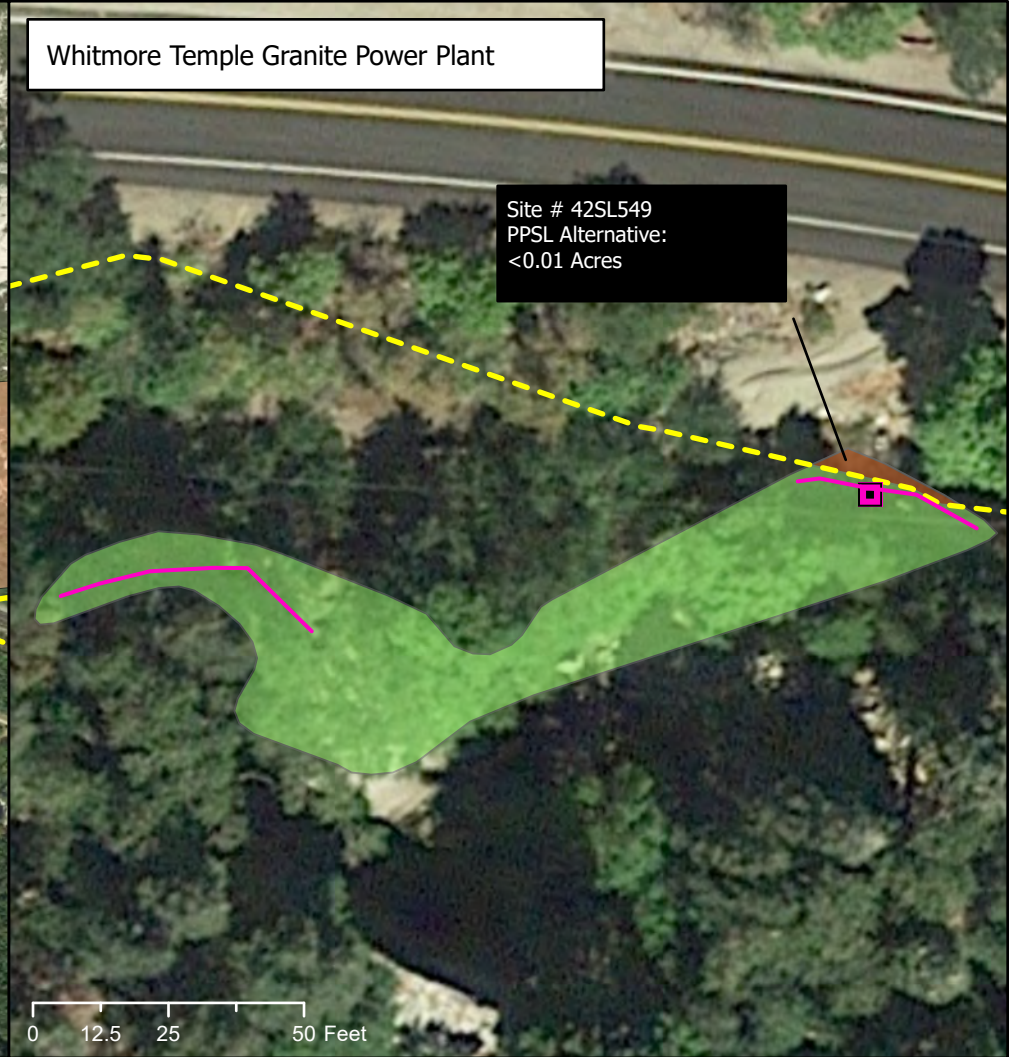
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




Little Cottonwood Grit Mill and Granite Quarry



Whitmore Temple Granite Power Plant

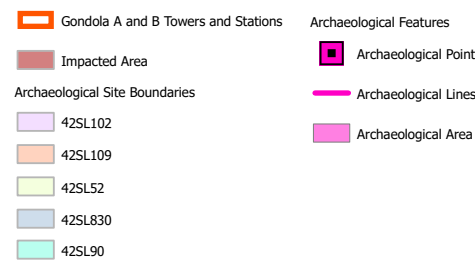
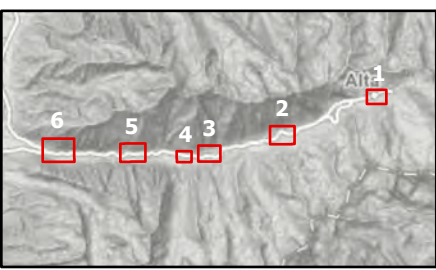
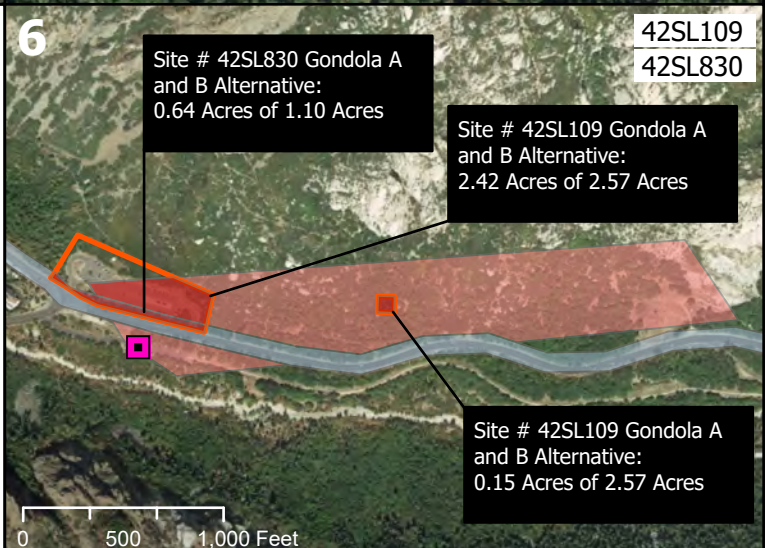
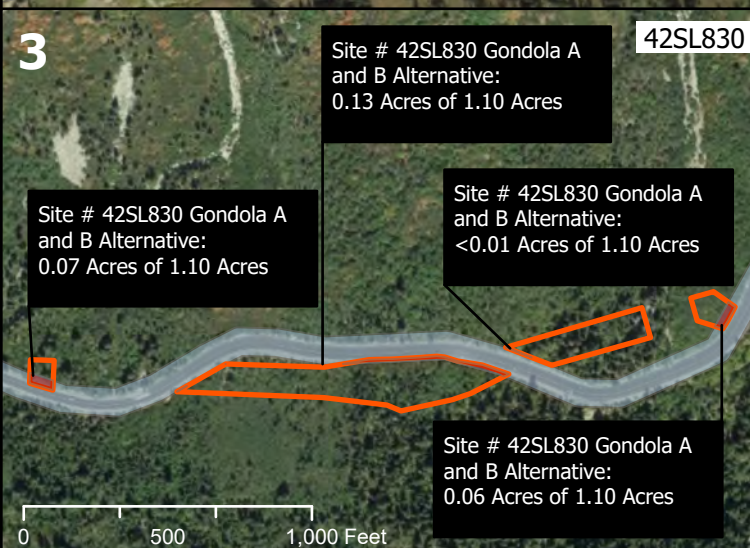
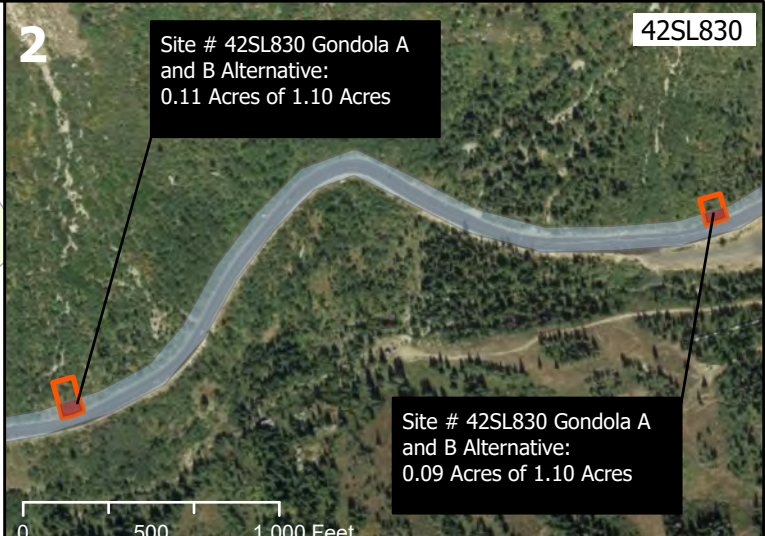


-  PPSL Alternative Impacts
-  Impacted Area
- Archaeological Site Boundaries
-  42SL109
-  42SL549

- Archaeological Features
-  Archaeological Points
-  Archaeological Lines

LITTLE COTTONWOOD CANYON EIS
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**LITTLE COTTONWOOD CANYON EIS
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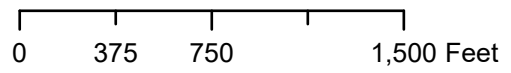


*Impacts on this figure apply to both gondola A and B alternatives.



- Impacted Area
- Gondola B (La Caille Area Only)
- Archaeological Site Boundary (42SL830)

LITTLE COTTONWOOD CANYON EIS
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FINDING OF EFFECT



Lower Little Cottonwood Canyon





Panel 2

Site # 42SL830
Cog Rail Alternative:
33.55 Acres

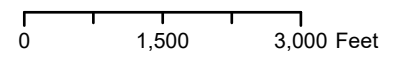
Upper Little Cottonwood Canyon



Panel 1

-  Impacted Area Cog Rail Alignment Alternative
-  Archaeological Site Boundary (42SL830)

LITTLE COTTONWOOD CANYON EIS
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Little Cottonwood Grit Mill and Granite Quarry

Rail Base Station









Site # 42SL109
Cog Rail Alternative:
10.62 Acres

Site # 42SL830
Cog Rail Alternative:
33.55 Acres



Site # 42SL830
Cog Rail Alternative:
(Base Station Area):
6.91 Acres



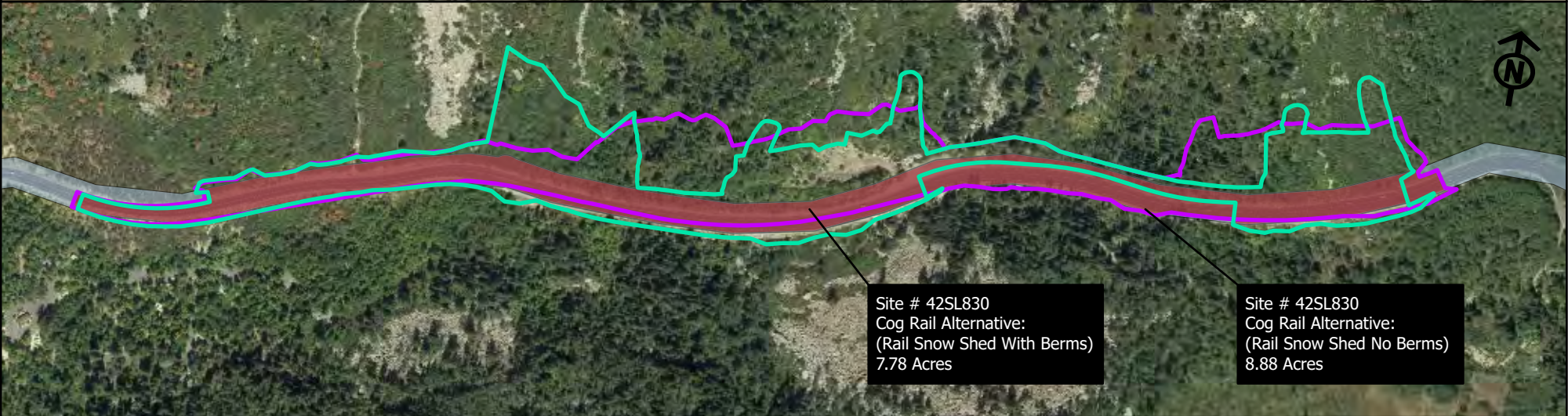
-  Archaeological Feature - Point
-  Rail Base Station
-  Rail Alignment Total Impacts Area
-  Impacted Area Cog Rail Alternative
-  Archaeological Site Boundary (42S109)
-  Archaeological Site Boundary (42S109)

LITTLE COTTONWOOD CANYON EIS
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Site # 42SL830
Cog Rail Alternative:
(Upper Canyon Snow Shed)
2.44 Acres



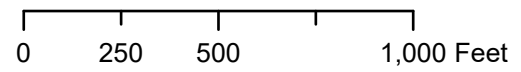
Site # 42SL830
Cog Rail Alternative:
(Rail Snow Shed With Berms)
7.78 Acres

Site # 42SL830
Cog Rail Alternative:
(Rail Snow Shed No Berms)
8.88 Acres



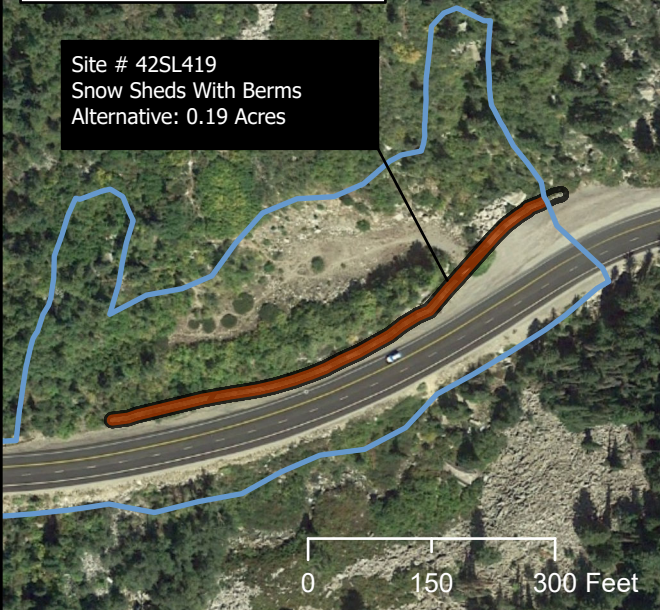
- Rail Snow Shed Upper Canyon
- Rail Snow Shed With Berms
- Rail Snow Shed No Berms
- Impacted Area Cog Rail Alternative
- Archaeological Site Boundary (42SL830)

LITTLE COTTONWOOD CANYON EIS
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FINDING OF EFFECT



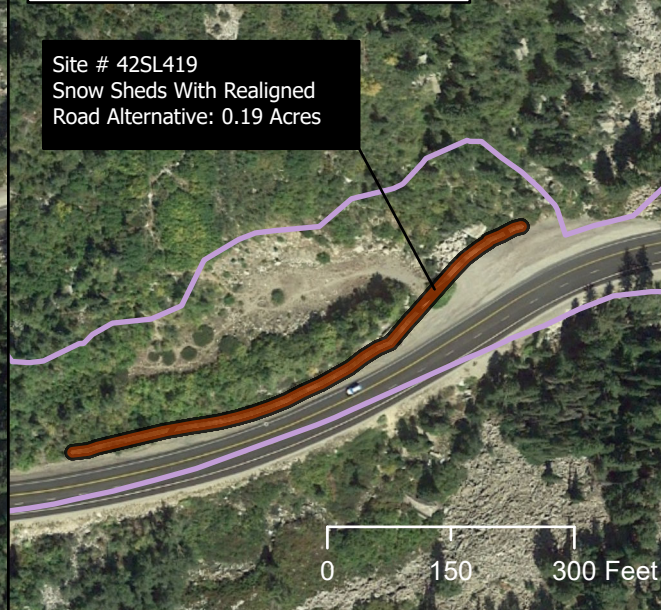
Snow Sheds With Berms

Site # 42SL419
Snow Sheds With Berms
Alternative: 0.19 Acres



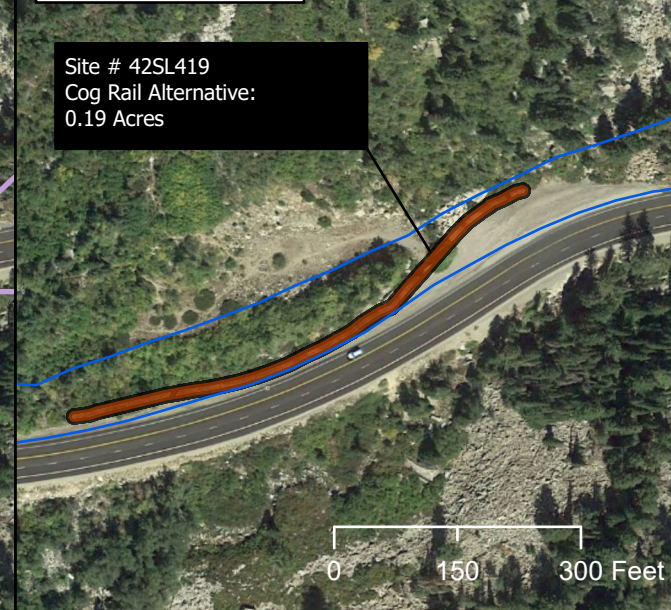
Snow Shed With Realigned Road

Site # 42SL419
Snow Sheds With Realigned
Road Alternative: 0.19 Acres

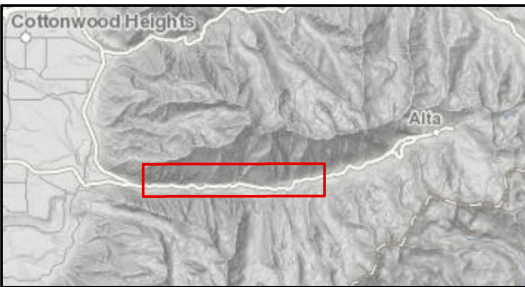







Cog Rail Impacts

Site # 42SL419
Cog Rail Alternative:
0.19 Acres



Overview



-  Snowsheds - Revised Curves
-  Rail Total Impacts without Pavement
-  Snowsheds - With Berms
-  Impacted Area (Snow Sheds With Berms, Snow Sheds with Realigned Road, and Cog Rail Alternatives)
-  Archaeological Site Boundary (42SL419)

LITTLE COTTONWOOD CANYON EIS
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Quarry Trail Cog Rail Alternative Impact

Site # 42SL916
Cog Rail Alternative:
0.01 Acres

0 150 300 Feet

Quarry Trail PPSL Alternative Impact

Site # 42SL916
PPSL Alternative:
0.02 Acres

0 100 200 Feet

Overview

0 1,250 2,500 Feet

- PPSL Impacts Total
- Rail Total Impacts without Pavement
- Impacted Area (Cog Rail and PPSL Alternative)
- Archaeological Site Boundary (42SL416)

LITTLE COTTONWOOD CANYON EIS
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DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



Little Cottonwood Canyon EIS DOE/FOE:
Architecture Impact Table and Figures

Determinations of Eligibility and Findings of Effect

Address / ID	SHPO Rating /NRHP Eligibility	Year Built	Type / Style	Alternative(s) Having Impact	Nature of Impact	Section 106 Effect	Section 4(f) Use/Impact	Figure Reference
2039 East 9400 South (NC1)	NC/ Not eligible	1978	Vernacular grocery store.	N/A	N/A	No historic properties affected	N/A	N/A
6851 South Big Cottonwood Canyon Road (1)	ES/ Eligible	1880	NRHP-listed Granite Paper Mill.	All Alternatives	Partial acquisition: 4.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 1
6999 Gun Club Road (NC2)	NC/ Not eligible	1954	Gun club with one one-story historic-age vernacular building and five non-contributing buildings	N/A	N/A	No historic properties affected	N/A	N/A
3700 East Fort Union Boulevard (NC3)	NC/ Not eligible	1948	Commercial (general) establishment	N/A	N/A	No historic properties affected	N/A	N/A
3720 East Fort Union Blvd (NC4)	NC/ Not eligible	1975	Service station	N/A	N/A	No historic properties affected	N/A	N/A
7326 South Prospector Drive (2)	EC/ Eligible	1978	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7527 South Brighton Point Drive (3)	EC/ Eligible	1974	Contemporary-style single-family dwelling	All Alternatives	Partial acquisition: 0.17 acres; temporary construction easement: 0.09 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 2

7537 South Brighton Point Drive (4)	EC/ Eligible	1975	Ranch-style single-family dwelling	All Alternatives	Partial acquisition: 0.12 acres; temporary construction easement: 0.04 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 2
7561 South Brighton Point Drive (5)	EC/ Eligible	1976	Ranch-style single-family dwelling	All Alternatives	Partial acquisition: 0.08 acres; temporary construction easement: 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 3
7659 South Avondale Drive (6)	EC/ Eligible	1974	Shed-style duplex condominium	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7669 South Avondale Drive (7)	EC/ Eligible	1974	Shed-style duplex condominium	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7685 South Avondale Drive (NC5)	NC/ Not eligible	1972	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
7699 South Avondale Drive (8)	EC/ Eligible	1971	Contemporary-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7709 South Avondale Drive (9)	EC/ Eligible	1972	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7719 South Avondale Drive (10)	EC/ Eligible	1975	Contemporary-style duplex condominium	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7731-7733 South Avondale Drive (NC6)	NC/ Not eligible	1975	Late-twentieth-century other-style duplex	N/A	N/A	No historic properties affected	N/A	N/A
7743-7745 South Avondale Drive (11)	EC/ Eligible	1975	Contemporary-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
3650 East Avondale Drive (12)	EC/ Eligible	1977	Contemporary-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A

3615 East Bengal Boulevard (NC7)	NC/ Not eligible	1977	Contemporary-style duplex	N/A	N/A	No historic properties affected	N/A	N/A
3625 East Bengal Boulevard (NC8)	NC/ Not eligible	1973	Contemporary-style duplex condominium	N/A	N/A	No historic properties affected	N/A	N/A
3637 East Bengal Boulevard (130)	EC/ Eligible	1973	Contemporary-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
3647 East Bengal Boulevard (NC9)	NC/ Not eligible	1975	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3638-3648 East Bengal Boulevard (14)	EC/ Eligible	1977	late twentieth-century other-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7825-7827 South Honeycomb Road (15)	EC/ Eligible	1977	Split-level-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7835-7837 South Honeycomb Road (NC10)	NC/ Not eligible	1977	Late twentieth-century other-style duplex	N/A	N/A	No historic properties affected	N/A	N/A
7845 South Honeycomb Road (16)	EC/ Eligible	1976	Contemporary-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7855 South Honeycomb Road (17)	EC/ Eligible	1977	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
7865 South Honeycomb Road (18)	EC/ Eligible	1972	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8166 South Wasatch Boulevard (NC11)	NC/ Not eligible	1965	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8282 South Wasatch Boulevard (NC12)	NC/ Not eligible	1944	Detatched garage	N/A	N/A	No historic properties affected	N/A	N/A
8296 South Wasatch Blvd (19)	EC/ Eligible	1953	Early ranch-style single-family dwelling	All Alternatives	Partial acquisition: 0.04 acres; temporary construction easement: 0.02 acres (WIL)	No adverse effect	Yes/ <i>de minimis</i>	Figure 4

					Partial acquisition: 0.06 acres; temporary construction easement: 0.02 acres (W5L)	No adverse effect	Yes/ <i>de minimis</i>	Figure 4
8304 South Wasatch Boulevard (NC13)	NC/ Not eligible	1953	Early ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3461 East Kings Hill Drive (20)	EC/ Eligible	1974	Split-level-style single-family dwelling	All Alternatives	Temporary construction easement: 0.02 acres	No adverse effect	No/ Temporary occupancy	Figure 5
3475 East Kings Hill Drive (21)	EC/ Eligible	1971	Split-level-style single-family dwelling	All Alternatives	Temporary construction easement: less than 0.01 acres	No adverse effect	No/ Temporary occupancy	Figure 5
3485 East Kings Hill Drive (NC14)	NC/ Not eligible	1965	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3495 East Kings Hill Drive NC15)	NC/ Not eligible	1965	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3509 East Kings Hill Drive (NC16)	NC/ Not eligible	1972	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8342 South Wasatch Blvd (22)	EC/ Eligible	1970	Ranch-style single-family dwelling	All Alternatives	Partial acquisition: 0.03 acres; temporary construction easement: 0.05 acres (WIL)	No adverse effect	Yes/ <i>de minimis</i>	Figure 6
					Partial acquisition: 0.05 acres; temporary construction easement: 0.04 acres (W5L)	No adverse effect	Yes/ <i>de minimis</i>	Figure 6
Fffdfa3454 East Kings Hill Drive (NC17)	NC/ Not eligible	1972	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A

3460 East Kings Hill Drive (NC18)	NC/ Not eligible	1972	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3484 East Kings Hill Drive (23)	EC/ Eligible	1972	Contemporary-type single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
3492 East Kings Hill Drive (NC19)	NC/ Not eligible	1972	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3510 East Kings Hill Drive (NC20)	NC/ Not eligible	1971	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8376 South Dynasty Way (NC21)	NC/ Not eligible	1949	Minimal Traditional-style, single-family dwelling	N/A	N/A	No Historic Properties Affected	N/A	N/A
8530 South Kings Cove Drive (25)	EC/ Eligible	1968	Contemporary-type single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8542 South Kings Cove Drive (25)	EC/ Eligible	1971	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8552 South Kings Cove Drive (NC22)	NC/ Not eligible	1971	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8566-8568 South Wasatch Blvd (26)	EC/ Eligible	1977	American vernacular-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8574 South Wasatch Blvd (27)	EC/ Eligible	1977	American vernacular-style duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8566 South Kings Cove Dr (NC23)	NC/ Not eligible	1973	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8565 South Kings Cove Drive (NC24)	NC/ Not eligible	1977	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8590-8592 South Wasatch Boulevard (NV1)	EC/ Eligible	1977	Potential historic age duplex	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8640 South Russell Park (NV2)	EC/ Eligible	1972	Potential historic age single-family dwelling	All Alternatives	Temporary construction easement: 0.06 acres	No adverse effect	No/ Temporary occupancy	Figure 7

8660 South Alpen Circle (28)	EC/ Eligible	1974	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8635 South Russell Park Road (NC25)	NC/ Not eligible	1977	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8662 South Alpen Circle (29)	EC/ Eligible	1974	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8664 South Alpen Circle (30)	EC/ Eligible	1975	Contemporary-style single family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8659 South Grand Oak Drive (31)	EC/ Eligible	1973	Contemporary-style single family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8672 South Alpen Circle (32)	EC/ Eligible	1976	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8673 South Grand Oak Drive (NC26)	NC/ Not eligible	1965	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8682 South Alpen Circle (NC27)	NC/ Not eligible	1976	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8730 South Alpen Way (NC28)	NC/ Not eligible	1968	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8742 South Alpen Way (33)	EC/ Eligible	1970	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8754 South Alpen Way (34)	EC/ Eligible	1970	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
3575 East Golden Hills Ave (35)	EC/ Eligible	1968	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8800 South Alpen Way (36)	EC/ Eligible	1976	Ranch-style single-family dwelling	All Alternatives	Partial acquisition: 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 8
8816 South Alpen Way (37)	EC/ Eligible	1975	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A

8828 South Alpen Way (NC29)	NC/ Not eligible	1972	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8840 South Alpen Way (38)	EC/ Eligible	1975	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8852 South Alpen Way (39)	EC/ Eligible	1972	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8864 South Alpen Way (40)	EC/ Eligible	1971	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8884 South Alpen Way (41)	EC/ Eligible	1976	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8894 South Alpen Way (42)	EC/ Eligible	1976	Contemporary-style single family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8906 South Alpen Way (NC30)	NC/ Not eligible	1976	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8918 South Alpen Way (NC31)	NC/ Not eligible	1977	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8928 South Alpen Way (NC32)	NC/ Not eligible	1977	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
8940 South Alpen Way (43)	EC/ Eligible	1976	American vernacular-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8950 South Alpen Way (44)	EC/ Eligible	1976	Contemporary-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8962 South Alpen Way (45)	EC/ Eligible	1976	Contemporary-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
8974 South Alpen Way (NC33)	NC/ Not eligible	1976	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
3573 East Green Hills Drive (NC34)	NC/ Not eligible	1972	Split-level-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A

9008 South 3605 East (46)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9018 South 3605 East (47)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9005 South 3605 East (48)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9015 South 3605 East (49)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9025 South 3605 East (50)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9035 South 3605 East (51)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9041 South 3605 East (52)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
3590 East 9050 South (53)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
3598 East 9050 South (54)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
3604 East 9050 South (55)	EC/Eligible	1976	Late twentieth-century other-style duplex condominium	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9043 South Despain Way (NC35)	NC/Not eligible	1971	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
9057 South Despain Way (56)	EC/Eligible	1974	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9067 South Despain Way (57)	EC/Eligible	1974	Contemporary-type single-family dwelling	N/A	Property avoided	No historic properties affected	No/N/A	N/A
9075 South Despain Way (58)	EC/Eligible	1974	Split-level-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/N/A	N/A

9046 South Kings Hill Place (59)	EC/ Eligible	1977	Ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
9060 South Kings Hill Place (NC36)	NC/ Not eligible	1977	Contemporary-style single family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
9086 South Kings Hill Place (60)	EC/ Eligible	1978	Contemporary-style single family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
9338 South North Little Cottonwood Road (84)	ES/ Eligible	1908	Victorian Eclectic-style side-passage type single-family dwelling	GB	Partial acquisition: 0.04 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 26
				COG	Partial acquisition: 0.04 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 29
3742 East North Little Cottonwood Road (61)	ES/ Eligible	1898	Victorian Eclectic-style single-family dwelling	PPSL	Temporary construction easement: 0.19 acres	No adverse effect	No/ Temporary occupancy	Figure 9
				GB	Partial acquisition: 0.4336 acres	No adverse Effect	Yes/ <i>de minimis</i>	Figure 27
				COG	Partial acquisition: 0.4336 acres	No adverse Effect	Yes/ <i>de minimis</i>	Figure 30
3744 East North Little Cottonwood Road (NC37)	NC/ Not eligible	1975	Ranch-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
4261 Little Cottonwood Road (NV3)	EC/ Eligible	1973	Potential historic age single-family dwelling	GB	Partial acquisition: 0.05 acres; perpetual easement: 0.163 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 28
				COG	Partial acquisition: 0.03 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 31
4306 Little Cottonwood Road (62)	EC/ Eligible	1947	Early ranch-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A

4700 East Little Cottonwood Canyon (63)	EC/ Eligible	1934	Temple Granite Quarry Historical Marker	PPSL	Temporary construction easement: 0.71 acres	No adverse effect	No/ Temporary occupancy	Figure 10
				COG	Temporary construction easement: 0.14 acres	No adverse effect	No/ Temporary occupancy	Figure 32
4526 East Little Cottonwood Canyon (64)	EC/ Eligible	1930	Twentieth-century other-style hydroelectric energy facility (Whitmore Power Plant)	PPSL	Temporary construction easement: 0.01 acres	No adverse effect	No/ Temporary occupancy	Figure 11
4883 East Wasatch Resort Road (NC38)	NC/ Not eligible	1945	Shed-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
4921 East Granite Cliffs Road (NC39)	NC/ Not eligible	1926	I-house-type single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
4964 East Little Cottonwood Road (NV4)	EC/ Eligible	—	—	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
4945 East Granite Cliffs Road (65)	EC/ Eligible	1975	Shed-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
4967 East Granite Cliffs Road (NC40)	NC/ Not eligible	1925	Colonial Revival-style single-family dwelling	N/A	N/A	No historic properties affected	N/A	N/A
5002 East Little Cottonwood Canyon (66)	EC/ Eligible	1936	Tudor-style single-family dwelling	PPSL	Temporary construction easement: 0.02 acres	No adverse effect	No/ Temporary occupancy	Figure 12
5070 East Granite Cliffs Road (NC41)	NC/ Not eligible	1930	Single-family dwelling with no style, but it features elements of Period Revival and ranch styles	N/A	N/A	No historic properties affected	N/A	N/A
6279 East Little Cottonwood Road (NV5)	EC/ Eligible	1968	Potential historic age commercial building	PPSL	Partial acquisition: 0.06 acres; temporary construction easement: 0.82 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 13
				GA, GB	Partial acquisition: 0.15 acres; perpetual easement: 2.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 21

				COG	Partial acquisition: 2.22 acres; temporary construction easement: 1.23 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 33
?7490 E Little Cottonwood Rd (NC42)	NC/ Not eligible	1950	Park Service Modern-style toll both	N/A	N/A	No historic properties affected	N/A	N/A
9111 East Little Cottonwood (67)	ES/ Eligible	1970	Organic-style single dwelling	PPSL	Partial acquisition: less than 0.01 acres; temporary construction easement: 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 14
				COG	Partial acquisition: 0.08 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 34
9121 East Snowbird Center Drive (68)	ES/ Eligible	1975	Brutalist-style timeshare/condominium (Iron Blossam Lodge)	PPSL	Partial acquisition: 0.12 acres; temporary construction easement: 0.13 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 15
				GA, GB	Visual	No adverse effect	No/ N/A	N/A
				COG	Partial acquisition: 0.36 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 35
9180 East Lodge Drive (69)	EC/ Eligible	1967	Brutalist-style condominium	PPSL	Partial acquisition: 0.05 acres; temporary construction easement: 0.03 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 16
9202 East Lodge Drive (70)	EC/ Eligible	1971	Brutalist-style hotel/condominium (The Inn at Snowbird)	PPSL,	Partial acquisition: less than 0.01 acres; temporary construction easement: less than 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 17
				GA, GB	Perpetual easement: 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 22

9260 East Lodge Drive (71)	ES/ Eligible	1970	Brutalist-style hotel/condominium (The Lodge at Snowbird)	PPSL,	Partial acquisition: 0.1 acres; temporary construction easement: 0.35 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 18
				GA, GB	Perpetual Easement: 0.40 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 23
9385 South Snowbird Center Drive (72)	ES/ Eligible	1977	Brutalist-style Commercial and Recreation/Culture building (Snowbird Center)	PPSL	Partial acquisition: 0.05 acres; temporary construction easement: 0.78 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 19
				GA, GB	Partial acquisition: 0.15 acres; perpetual easement: 1.31 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 24
				COG	Partial acquisition: 1.61 acres; temporary construction easement: 0.02 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 36
9320 South Cliff Lodge Drive (73)	ES/ Eligible	1974	Brutalist-style hotel/condominium (Cliff Lodge)	GA, GB	Visual	No adverse effect	No/ N/A	N/A
9425 East Bypass Road (74)	EC/ Eligible	1975	Brutalist-style apartment/condominium	PPSL	Partial acquisition: less than 0.01 acres; temporary construction easement: 0.01 acres	No adverse effect	Yes/ <i>de minimis</i>	Figure 20
9650 East Little Cottonwood (75)	EC/ Eligible	1970	Shed-style condominium unit (Hellgate Condominiums)	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
9670 East Little Cottonwood (76)	EC/ Eligible	1970	Shed-style condominium unit (Hellgate Condominiums)	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
9920 East Peruvian Acre Road (77)	EC/ Eligible	1978	Side-gabled, vernacular-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A

9931 East Peruvian Acre Road (78)	EC/ Eligible	1978	Vernacular (chalet-style) single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
10000 East Little Cottonwood (79)	ES/ Eligible	1945	Mansard-style hotel (Alta Peruvian Lodge)	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
?10161 East Little Cottonwood (80)	EC/ Eligible	1965	Contemporary-style single family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
10160 East Little Cottonwood (81)	EC/ Eligible	1960	Late-twentieth century other-style hotel (Goldminer's Daughter)	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
10220 East Little Cottonwood (NC43)	NC/ Not eligible	1968	Vernacular ski shop/commercial building (Deep Powderhouse)	N/A	N/A	No historic properties affected	N/A	N/A
10230 East Little Cottonwood (82)	ES/ Eligible	1939	Swiss chalet and International style hotel (Alta Lodge)	GA, GB	Partial acquisition: 0.06 acres; perpetual easement: 0.35 acres; visual	No adverse effect	Yes/ <i>de minimis</i>	Figure 25
10231 East Little Cottonwood (83)	EC/ Eligible	1968	Restaurant with modern stylistic elements (Shallow Shaft), and two-story shed-style single-family dwelling	N/A	Property avoided	No historic properties affected	No/ N/A	N/A
10380 East Little Cottonwood (NC44)	NC/ Not eligible	1973	Brutalist-style hotel (Rustler Lodge)	N/A	N/A	No historic properties affected	N/A	N/A
?10499 East Little Cottonwood (NC45)	NC/ Not eligible	1918	Mine adit (Bay City Tunnel)	N/A	N/A	No historic properties affected	N/A	N/A

Alternative Abbreviations

Action Alternatives (main alternatives being evaluated in detail)

EBS Enhanced Bus Service

PPSL Peak-period Shoulder Lane Alternative

GA Gondola Alternative A

GB Gondola Alternative B

COG Cog Rail Alternative

Sub-alternatives (alternative options that fall under action alternatives)

WIL Wasatch Boulevard Imbalanced-lane Alternative (could apply to all action alternatives)

W5L Wasatch Boulevard Five-lane Alternative (could apply to all action alternatives)

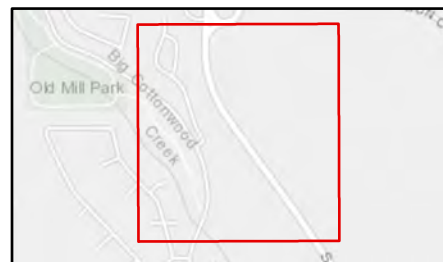


**Mobility Hub Gravel Pit Alternative:
4.01 Acres**

6851 S BIG
COTTONWOODCYN
ID # 1

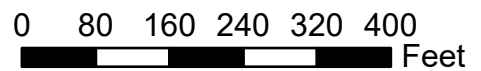
110.0 ft

67.9 ft



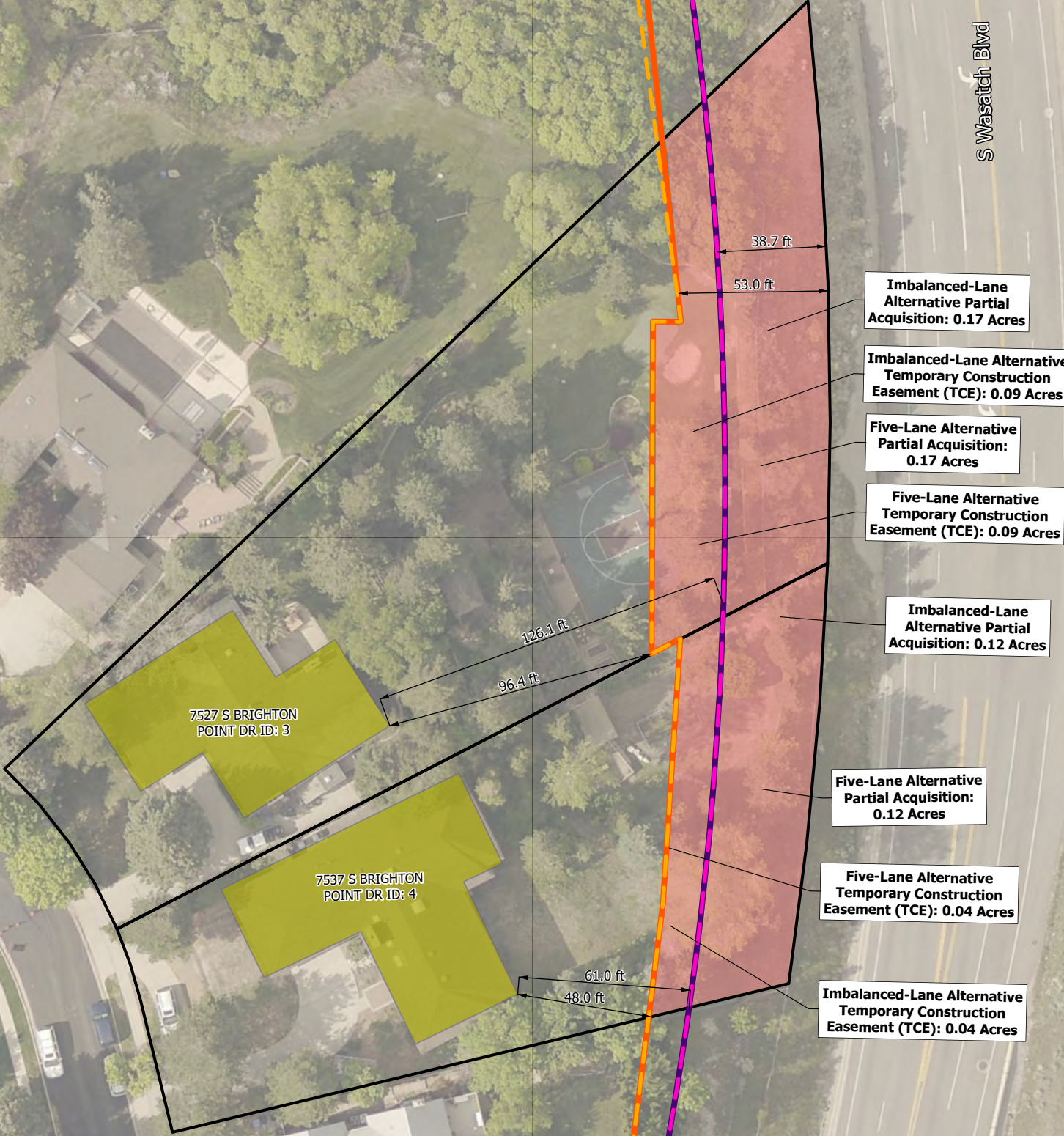
- NRHP-Eligible Historic Building
- Impacted Area
- Historic Parcels
- Gravel Pit Interchange

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



FIVE-LANE ALTERNATIVE AND IMBALANCED-LANE ALTERNATIVE IMPACTS ARE THE SAME IN THIS AREA.

S Wasatch Blvd



Imbalanced-Lane Alternative Partial Acquisition: 0.17 Acres

Imbalanced-Lane Alternative Temporary Construction Easement (TCE): 0.09 Acres

Five-Lane Alternative Partial Acquisition: 0.17 Acres

Five-Lane Alternative Temporary Construction Easement (TCE): 0.09 Acres

Imbalanced-Lane Alternative Partial Acquisition: 0.12 Acres

Five-Lane Alternative Partial Acquisition: 0.12 Acres

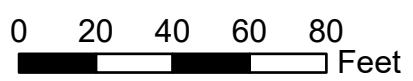
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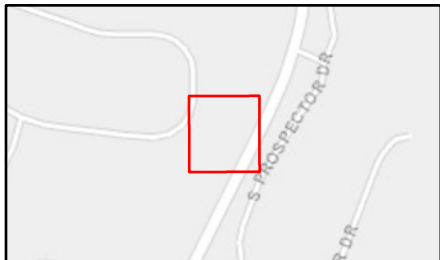
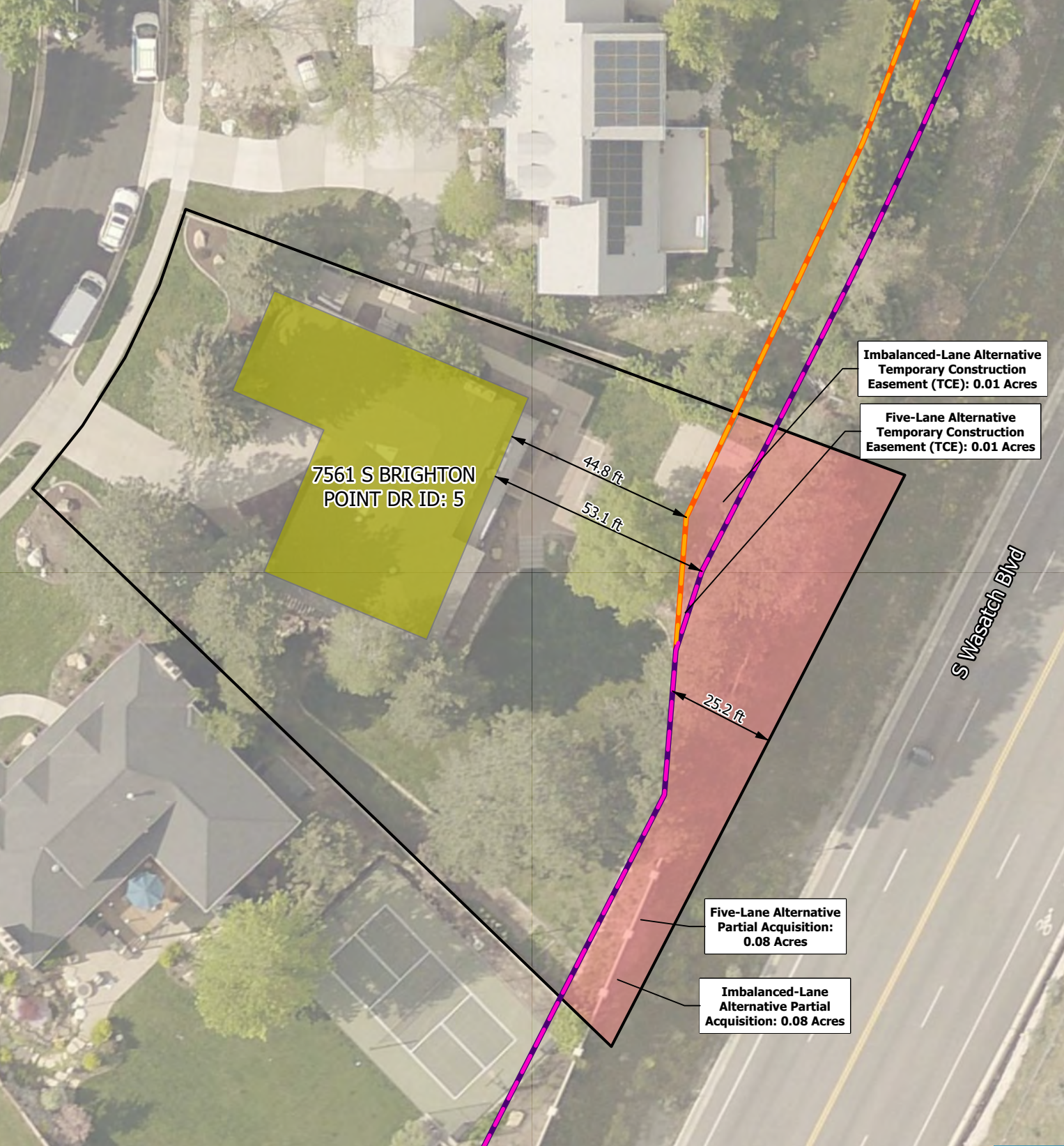
Imbalanced-Lane Alternative Temporary Construction Easement (TCE): 0.04 Acres



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Five-Lane Alternative TCE
- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

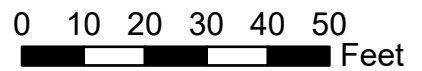
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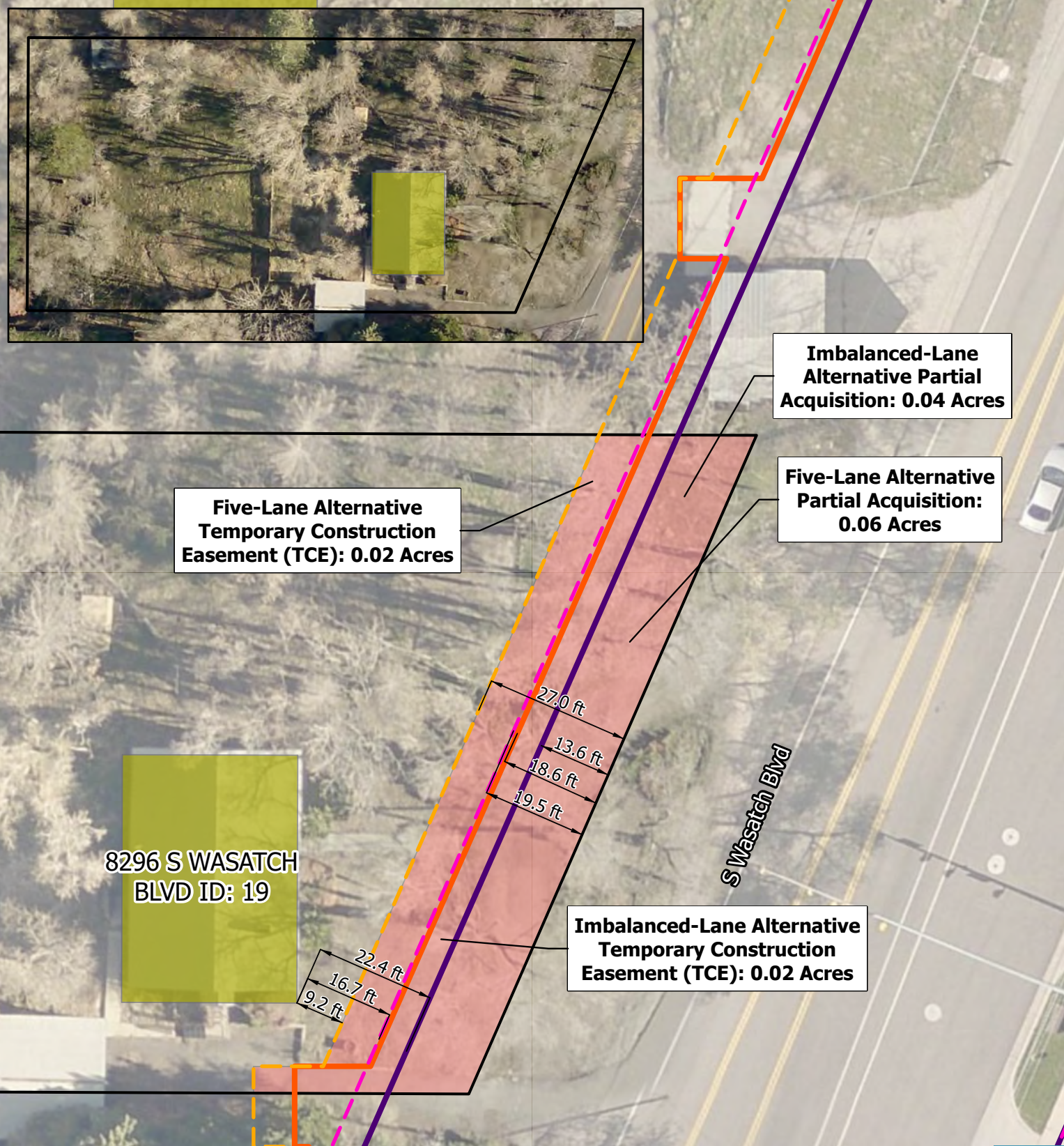




- NRHP-Eligible Historic Building
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- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

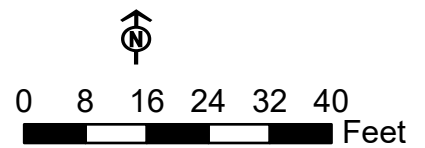
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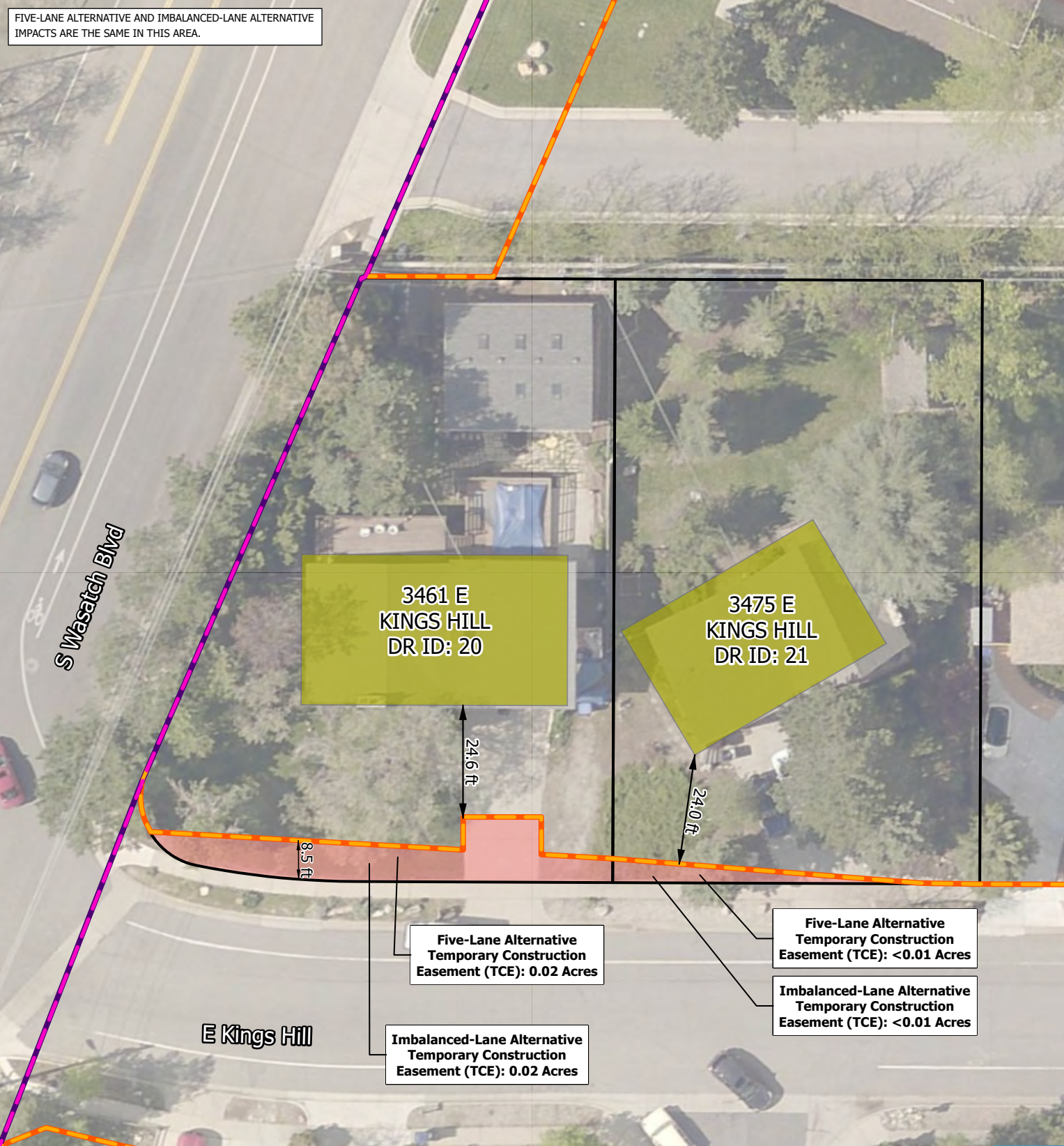


- NRHP-Eligible Historic Building
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- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

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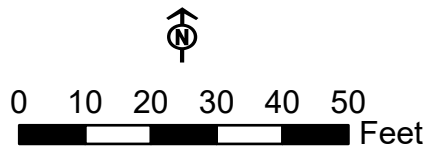


FIVE-LANE ALTERNATIVE AND IMBALANCED-LANE ALTERNATIVE IMPACTS ARE THE SAME IN THIS AREA.



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Five-Lane Alternative TCE
- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

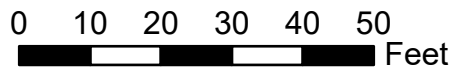
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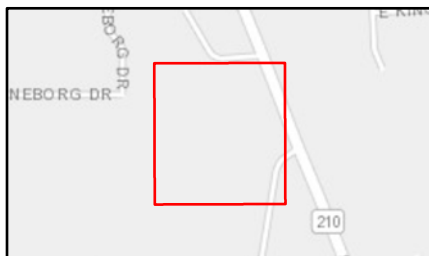
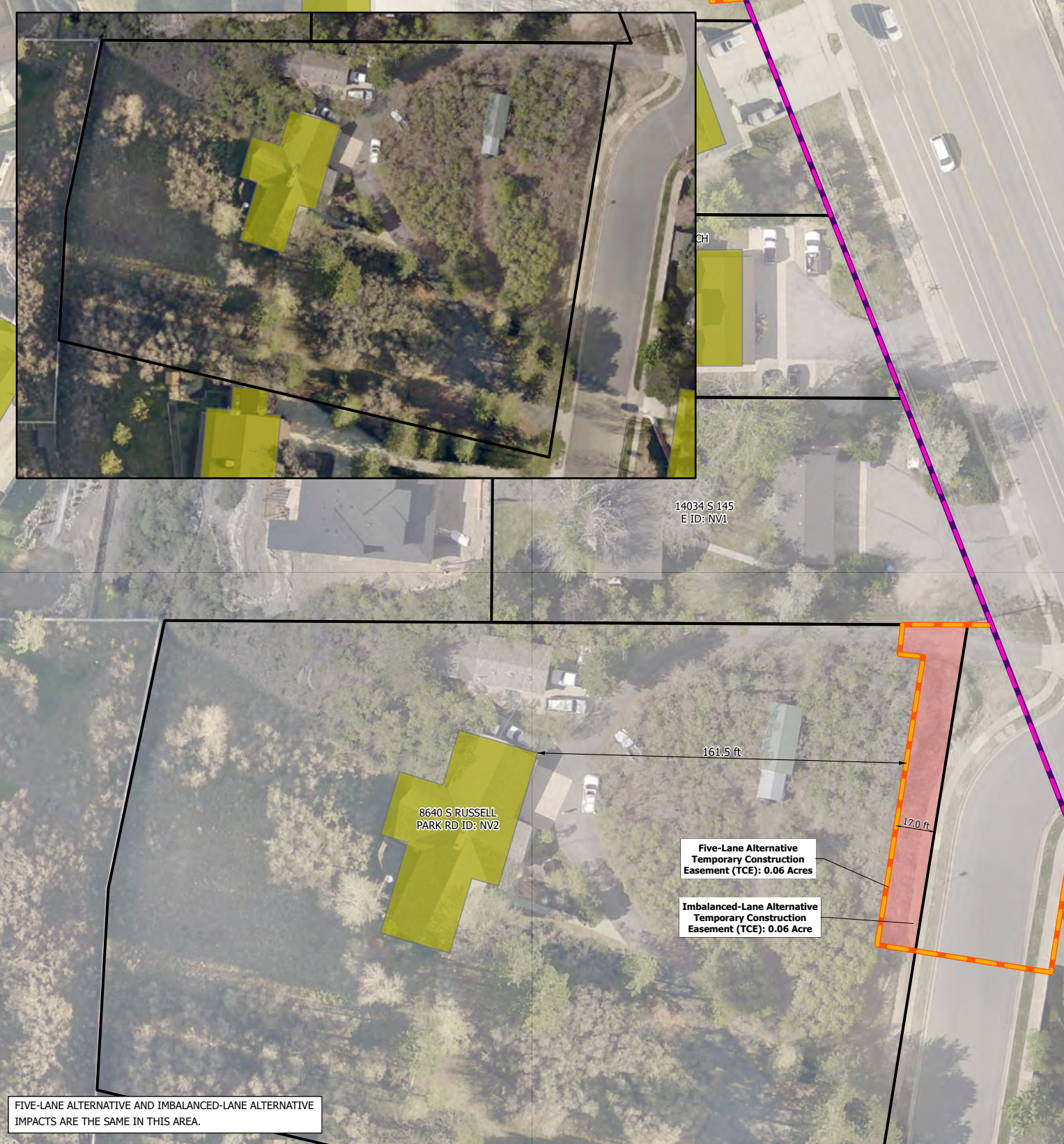




- NRHP-Eligible Historic Building
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- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

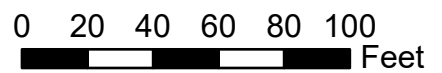
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- NRHP-Eligible Historic Building
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FIVE-LANE ALTERNATIVE AND IMBALANCED-LANE ALTERNATIVE IMPACTS ARE THE SAME IN THIS AREA.

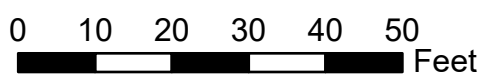
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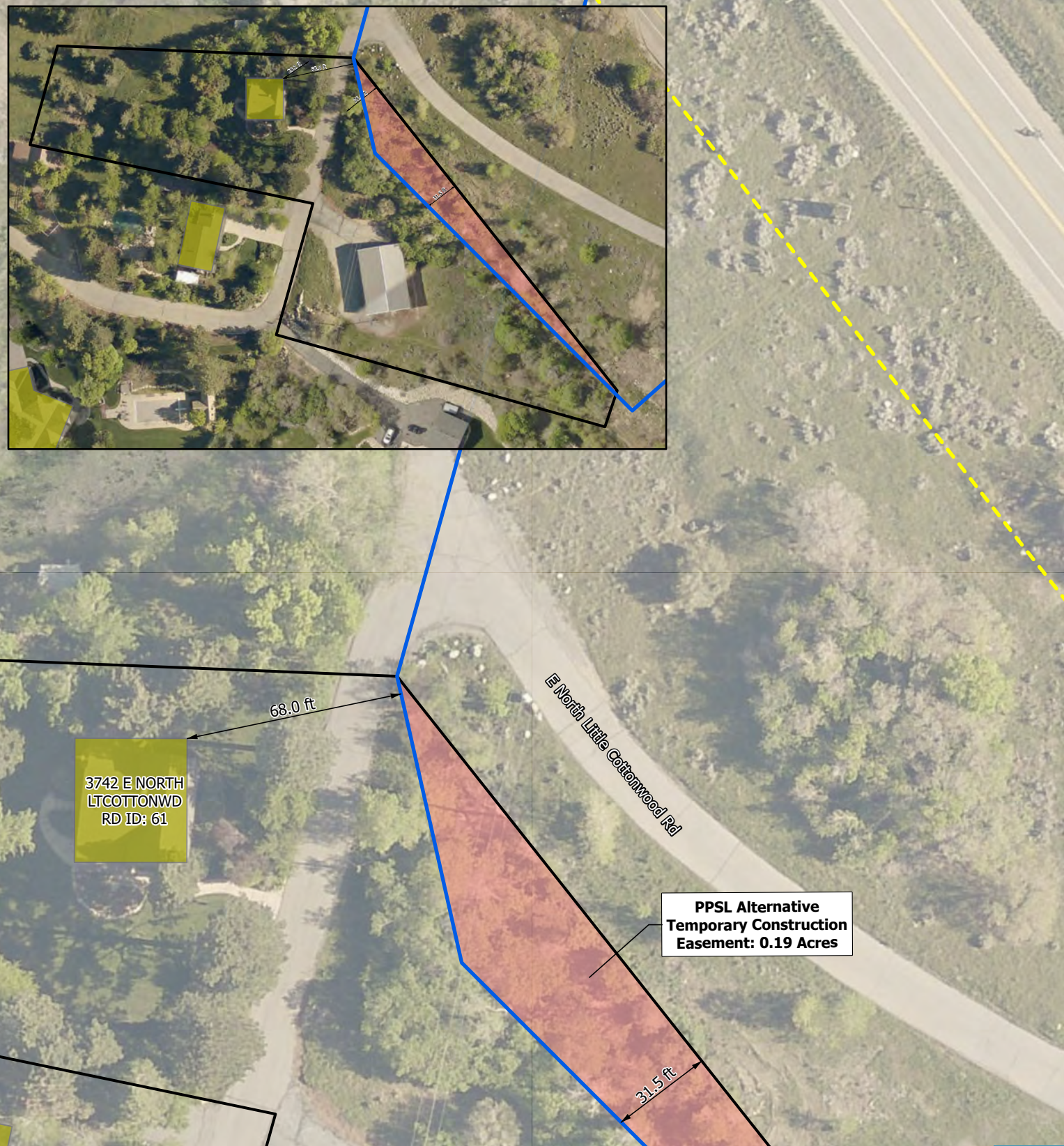
Imbalanced-Lane Alternative Partial Acquisition: 0.01 Acres



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Five-Lane Alternative TCE
- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

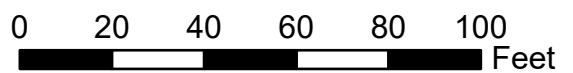
**LITTLE COTTONWOOD CANYON EIS
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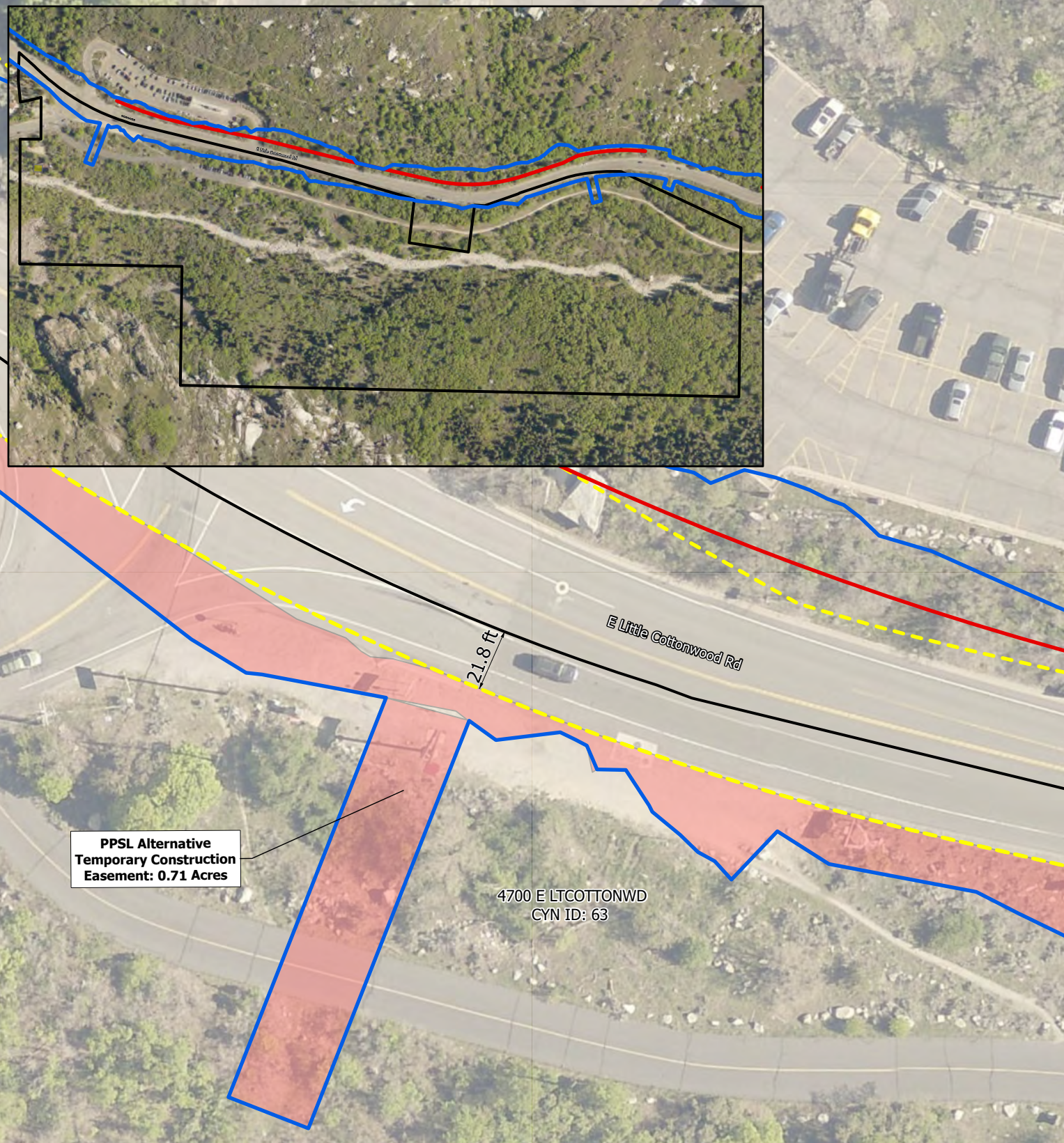




- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Temporary Construction
Easement: 0.71 Acres**

4700 E LTCOTTONWD
CYN ID: 63

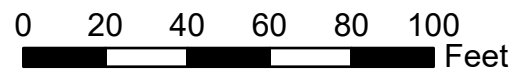
21.8 ft

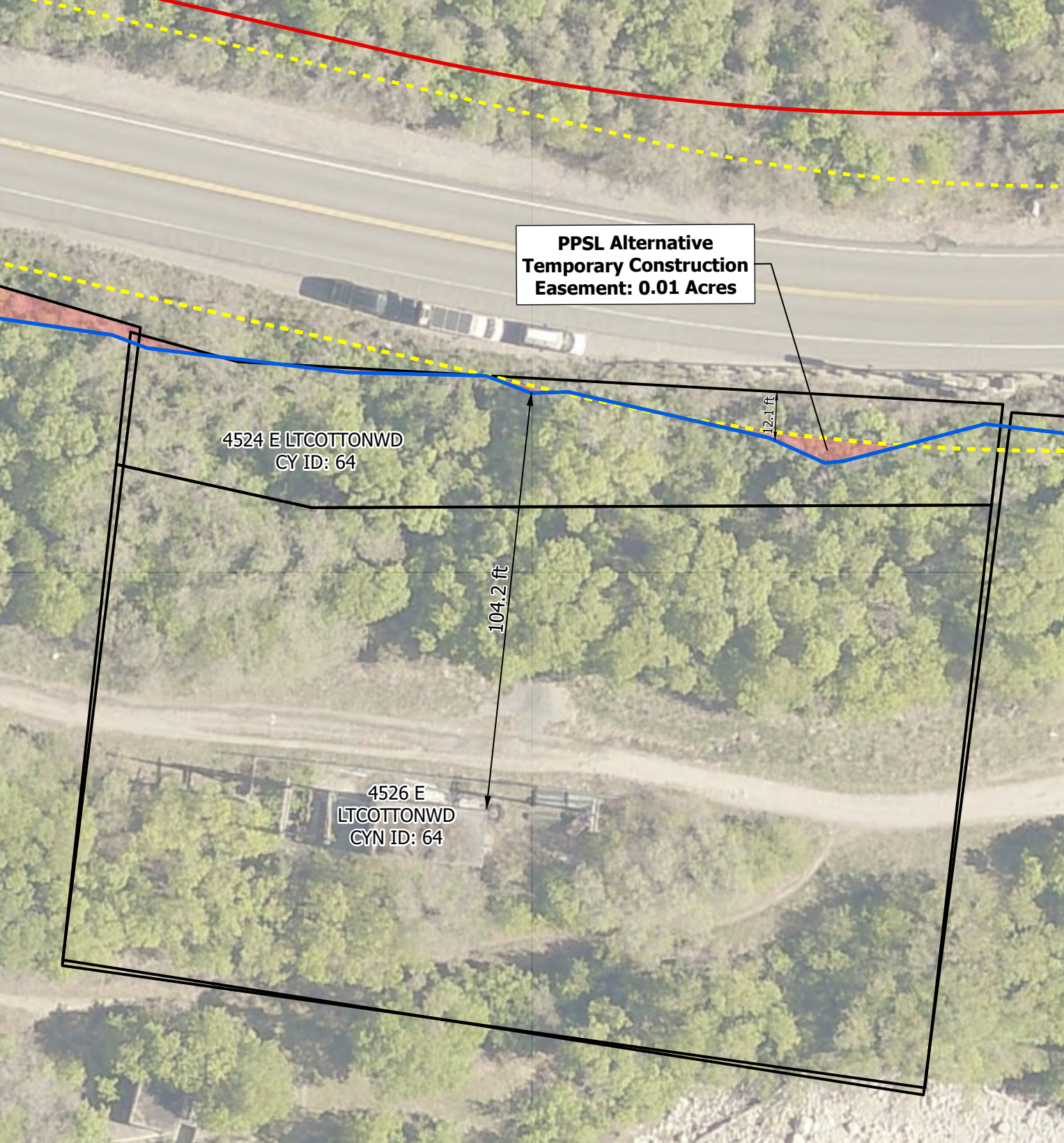
E Little Cottonwood Rd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

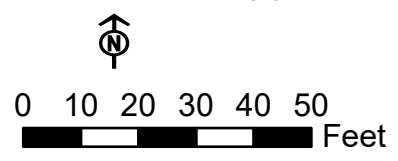
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

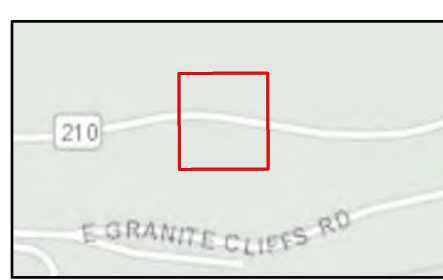




- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

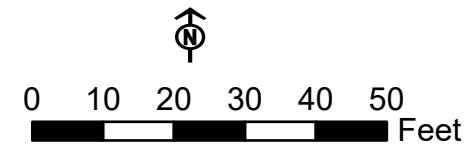
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





6279 E LTCOTTONWD
CYN ID: NV5



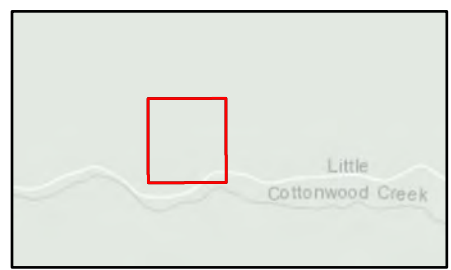
**PPSL Alternative
Temporary Construction
Easement: 0.82 Acres**







**PPSL Alternative
Partial Acquisition:
0.06 Acres**

478.9 ft
545.8 ft

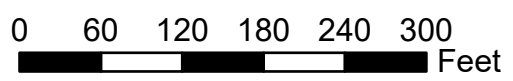
E Little Cottonwood Rd

16.5 ft
12.2 ft



-  NRHP-Eligible Historic Building
-  Historic Parcels
-  Impacted Area
-  PPSL New ROW
-  PPSL Easement
-  PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Partial Acquisition:
<0.01 Acres**

**PPSL Alternative
Temporary Construction
Easement: 0.01 Acres**

**9111 E Little
Cottonwood
ID: 67**

78.1 ft
74.1 ft

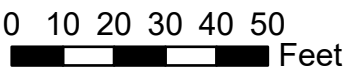
6.1 ft
2.2 ft

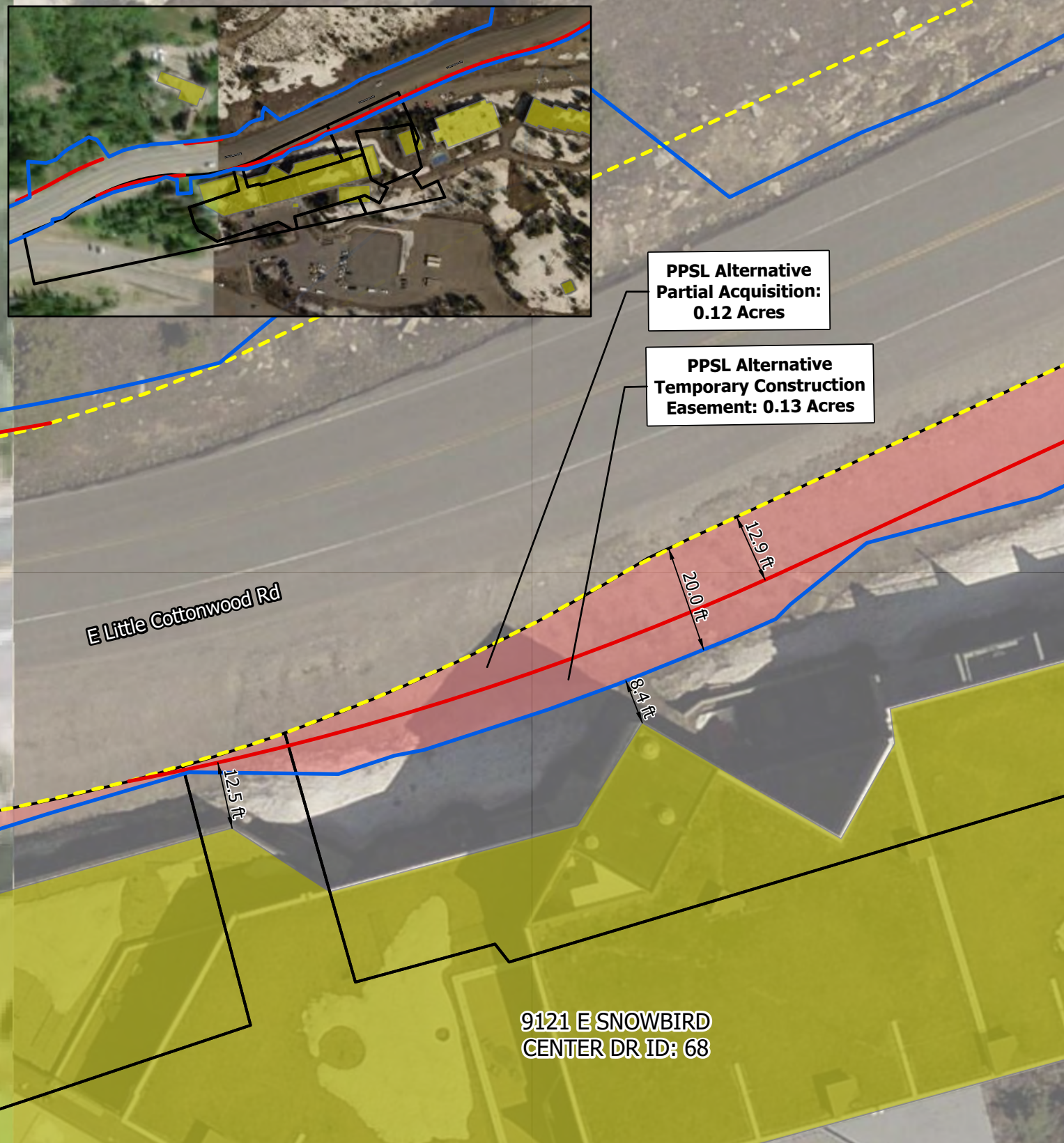
E Little Cottonwood Rd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Partial Acquisition:
0.12 Acres**

**PPSL Alternative
Temporary Construction
Easement: 0.13 Acres**

E Little Cottonwood Rd

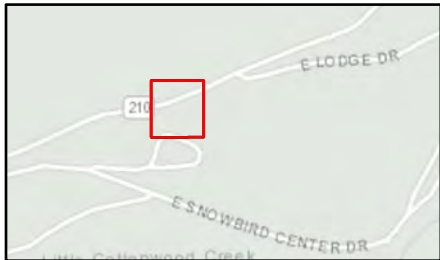
9121 E SNOWBIRD
CENTER DR ID: 68

12.5 ft

8.4 ft

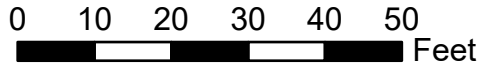
20.0 ft

12.9 ft



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





PPSL Alternative Partial Acquisition: 0.05 Acres

PPSL Alternative Temporary Construction Easement: 0.03 Acres

E Little Cottonwood Rd

9180 E LODGE DR ID: 69

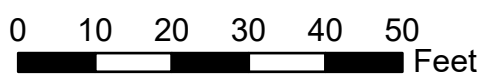
19.7 ft
6.4 ft

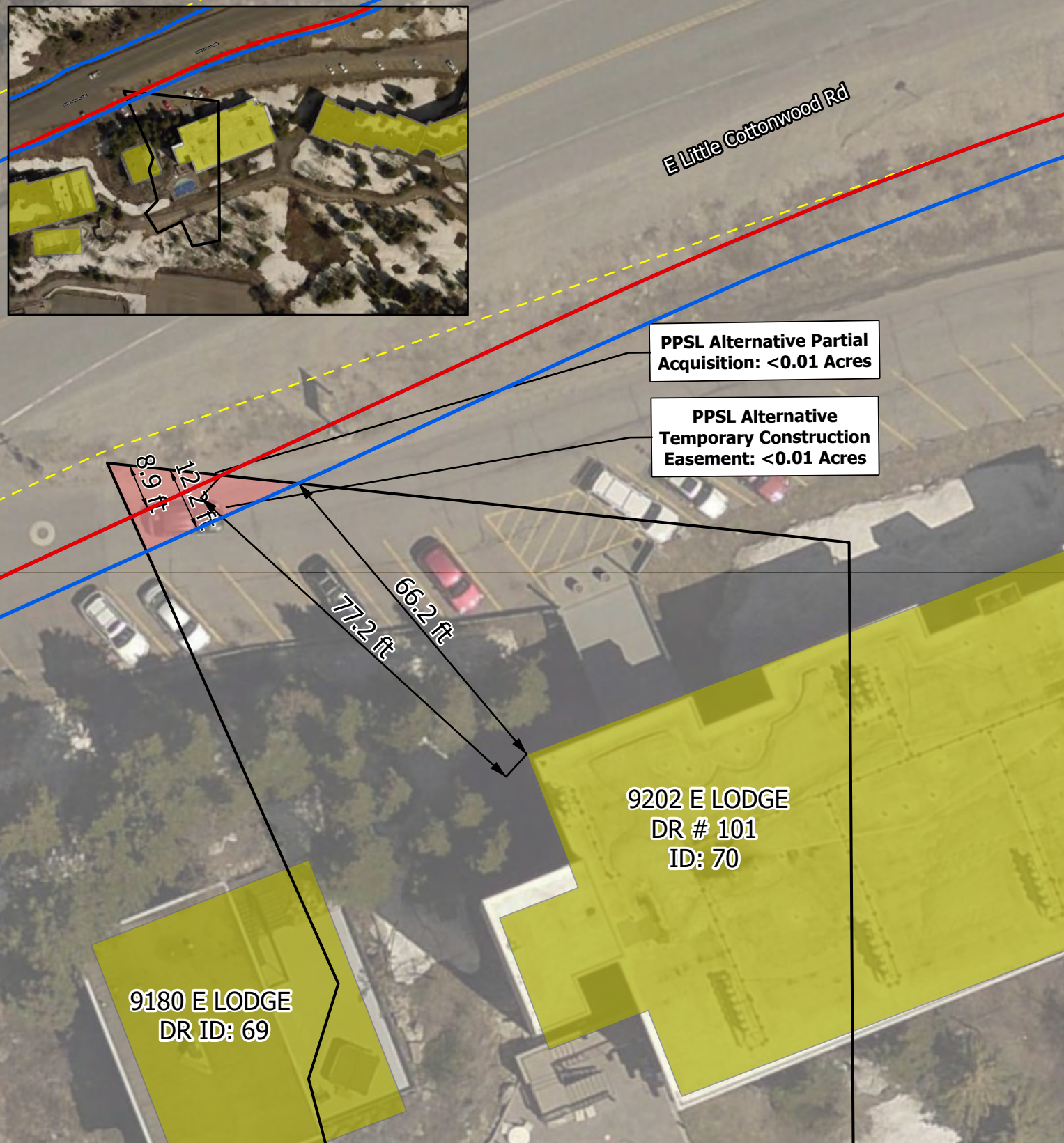
62.9 ft
69.5 ft



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

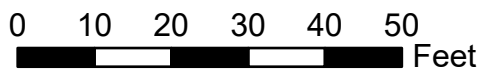
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

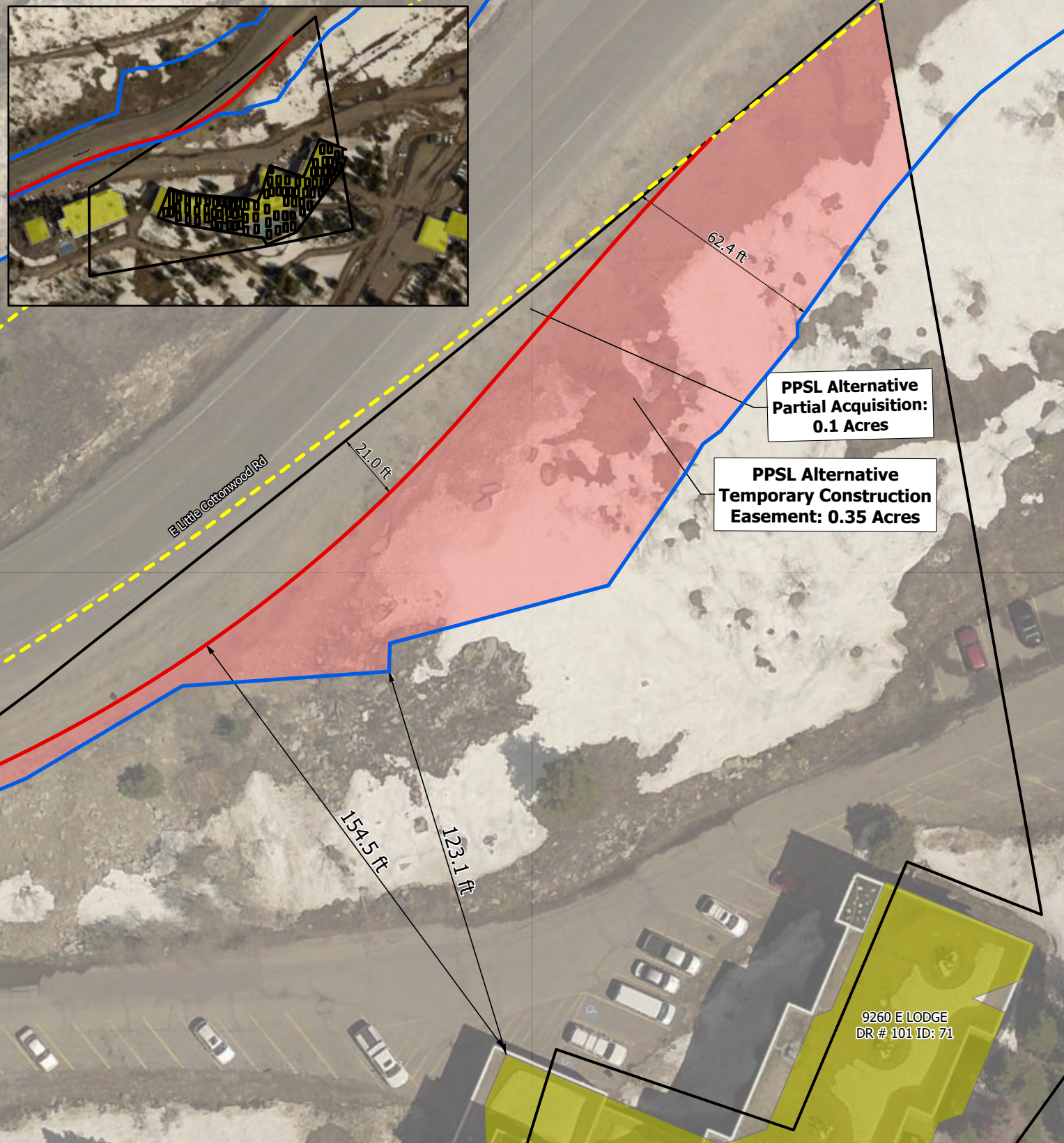




- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Partial Acquisition:
0.1 Acres**

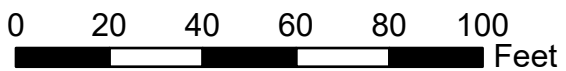
**PPSL Alternative
Temporary Construction
Easement: 0.35 Acres**

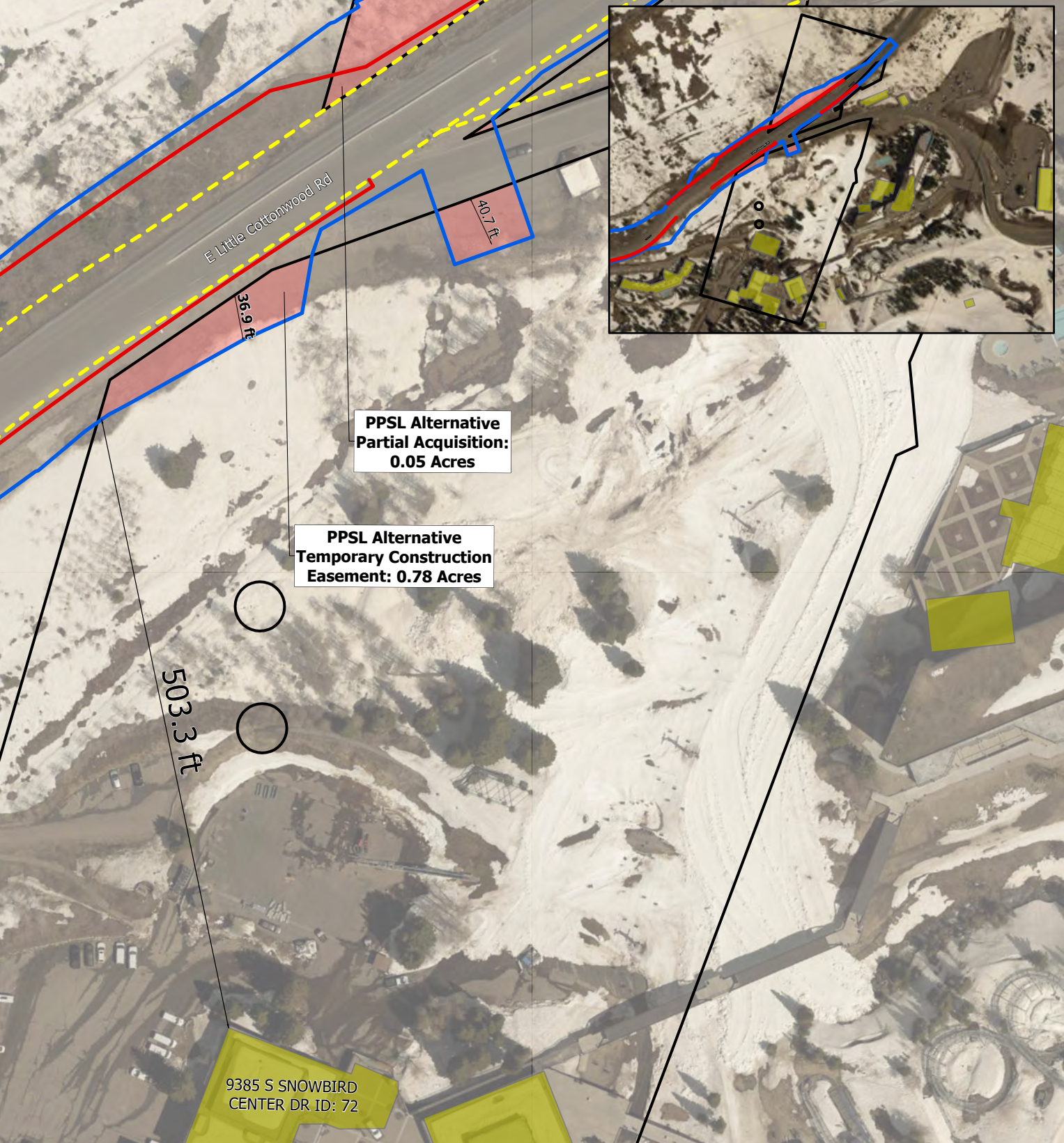
9260 E LODGE
DR # 101 ID: 71



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



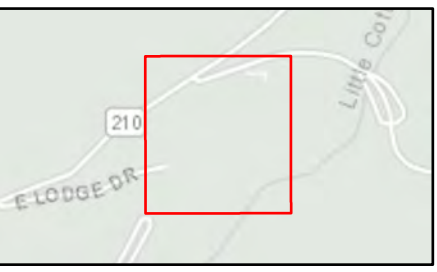


**PPSL Alternative
Partial Acquisition:
0.05 Acres**

**PPSL Alternative
Temporary Construction
Easement: 0.78 Acres**

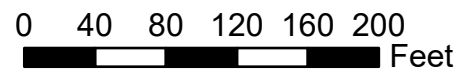
503.3 ft

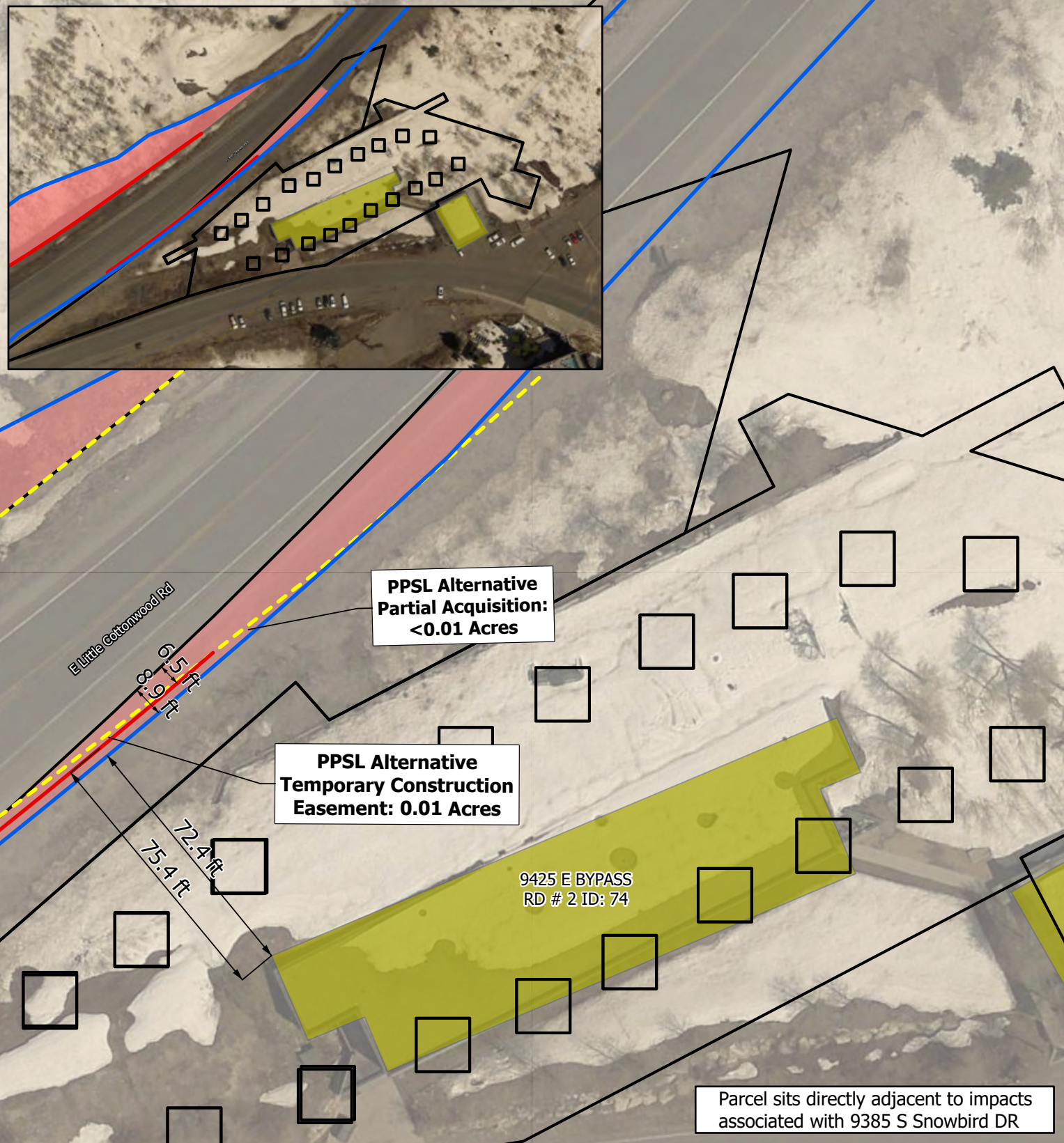
9385 S SNOWBIRD
CENTER DR ID: 72



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Partial Acquisition:
<0.01 Acres**

**PPSL Alternative
Temporary Construction
Easement: 0.01 Acres**

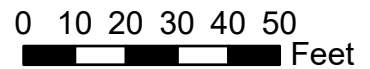
9425 E BYPASS
RD # 2 ID: 74

Parcel sits directly adjacent to impacts
associated with 9385 S Snowbird DR



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





6279 E LTCOTTONWD
CYN ID: NV5

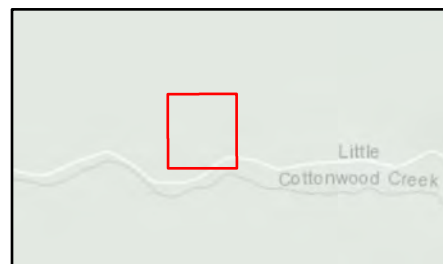
660.5 ft

559.7 ft

**Gondola A Towers
and Stations
Impacts: 0.15 Acres**

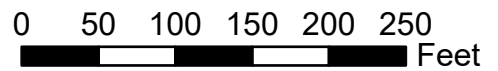
**Gondola A
Easement
2.01 Acres**

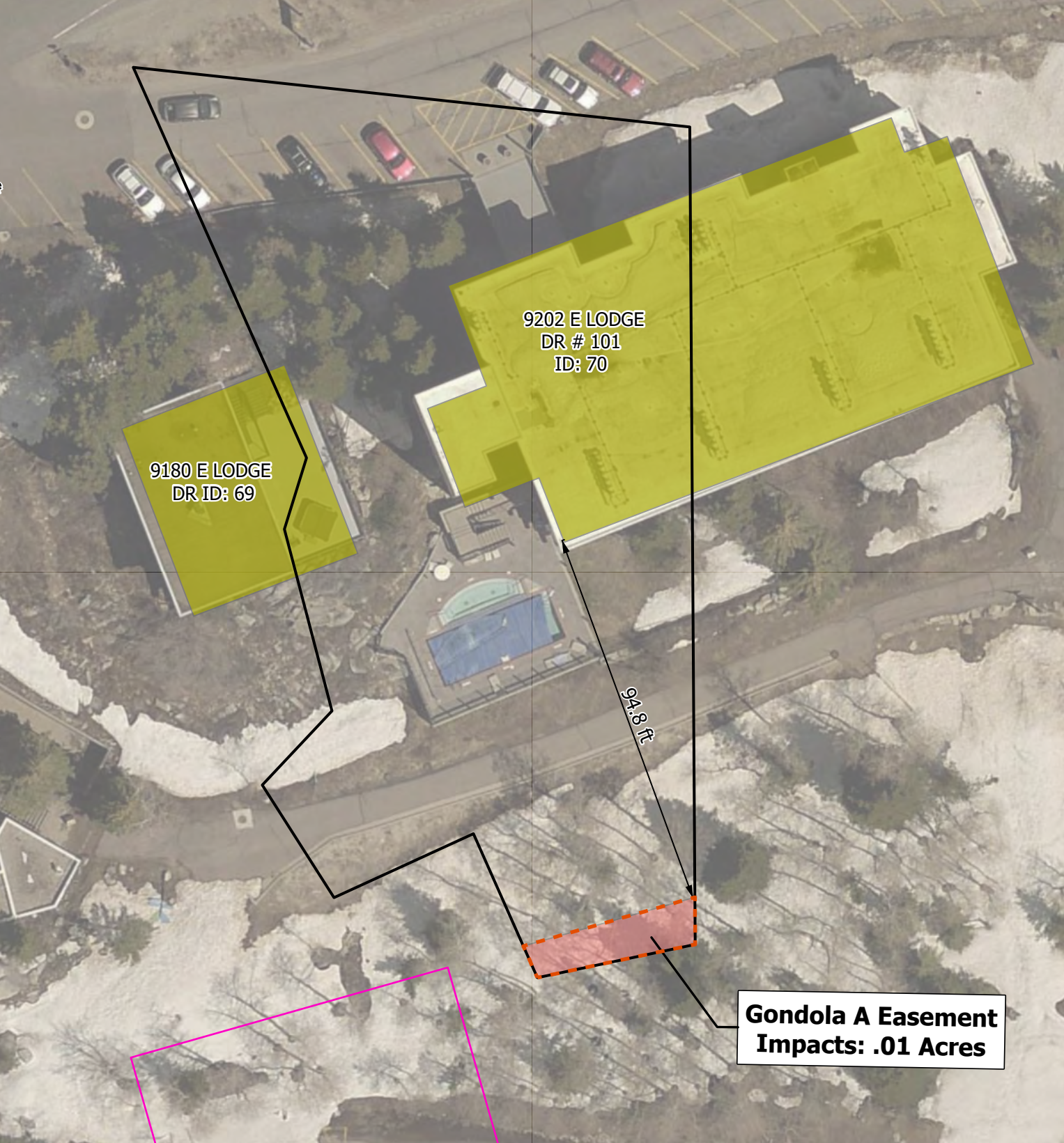
E Little Cottonwood Rd



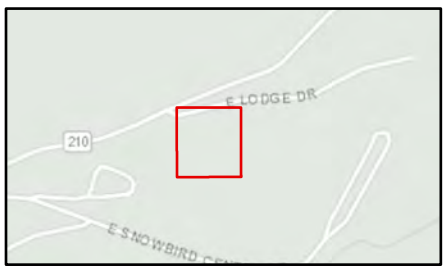
- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Easement Boundary

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



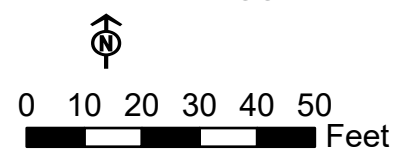


**Gondola A Easement
Impacts: .01 Acres**



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Easement Boundary

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



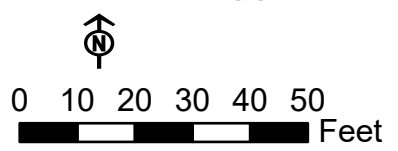


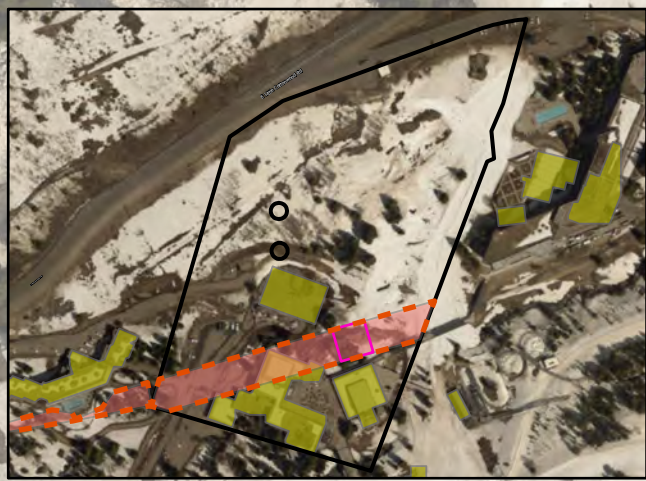
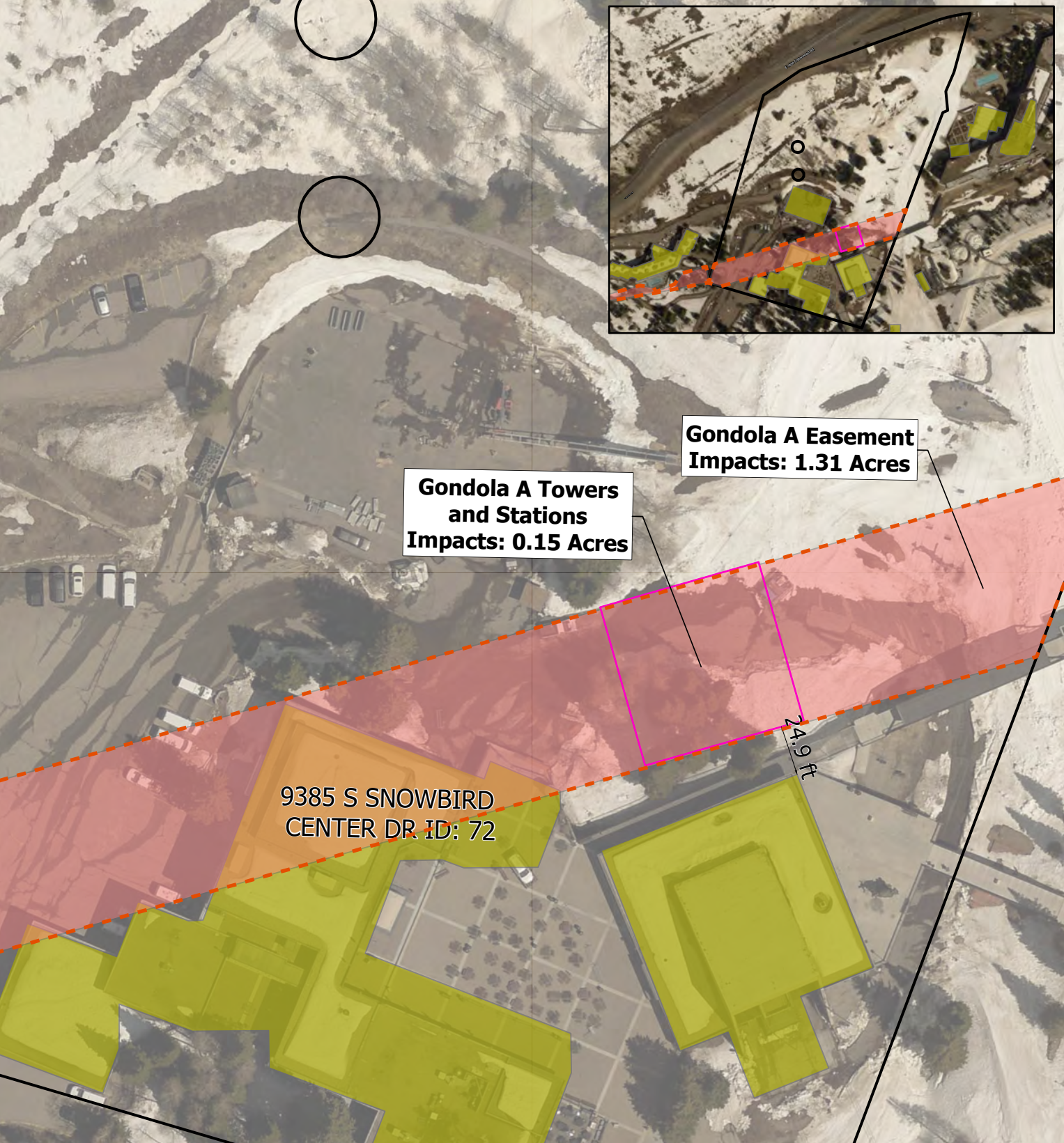
**Gondola A Easement
Impacts: .4 Acres**



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Easement Boundary

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**Gondola A Towers and Stations
Impacts: 0.15 Acres**

**Gondola A Easement
Impacts: 1.31 Acres**

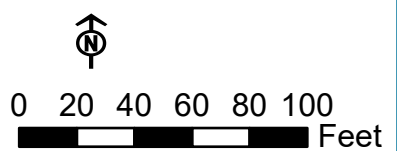
9385 S SNOWBIRD
CENTER DR ID: 72

24.9 ft



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Easement Boundary

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





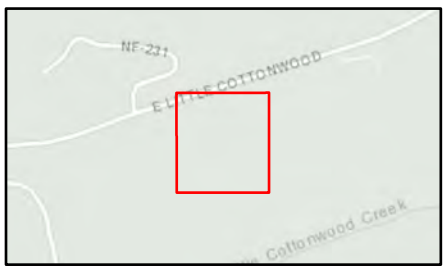
10230 E LITTLE COTTONWOOD
CANYON RD ID: 82

**Gondola A Towers
and Stations
Impacts: 0.06 Acres**

**Gondola A
Easement
0.35 Acres**

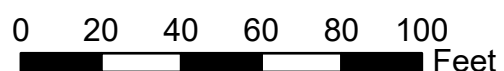
88.4 ft

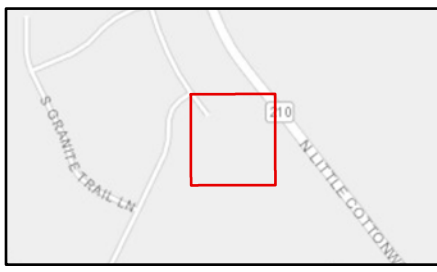
37.3 ft



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Easement Boundary
- Gondola A Towers and Stations

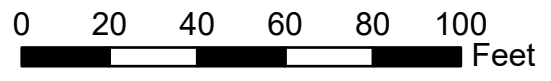
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Gondola A Easement
- Gondola B (La Caille Area Only)
- Gondola B Easement

LITTLE COTTONWOOD CANYON EIS
 PROJECT S-R299(281); PIN 16092
 DETERMINATION OF ELIGIBILITY AND
 FINDING OF EFFECT





3742 E NORTH
LTCOTTONWD
RD ID: 61

Gondola B Alternatives
Partial Acquisition:
0.43 Acres

Garage

12.9 ft

28.1 ft

68.0 ft

35.9 ft

E North Little Cottonwood Rd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Gondola A Towers and Stations
- Gondola A Easement
- Gondola B (La Caille Area Only)
- Gondola B Easement

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

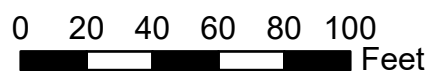


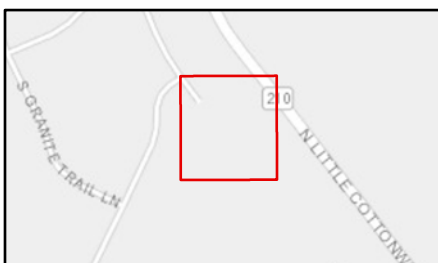
0 10 20 30 40 50
Feet



- NRHP-Eligible Historic Building
- Impacted Area
- Historic Parcels
- Gondola B Easement

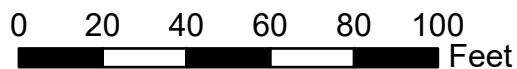
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





- NRHP-Eligible Historic Building
- Historic Parcels
- Rail Base Station
- Impacted Area

LITTLE COTTONWOOD CANYON EIS
 PROJECT S-R299(281); PIN 16092
 DETERMINATION OF ELIGIBILITY AND
 FINDING OF EFFECT





Rail Base Station Impacts: 0.43 Acres

3742 E NORTH LTCOTTONWD RD ID: 61

E North Little Cottonwood Rd

28.1 ft

35.9 ft

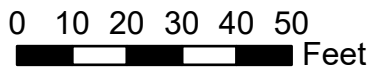
12.9 ft

Garage



- NRHP-Eligible Historic Building
- Historic Parcels
- Rail Base Station
- Impacted Area

**LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT**





**Rail New ROW
Impacts:
0.03 Acres**

4261 LTCOTTONWD
RD ID: NV3

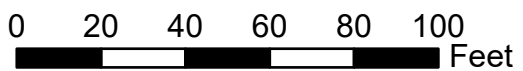
75.1 ft

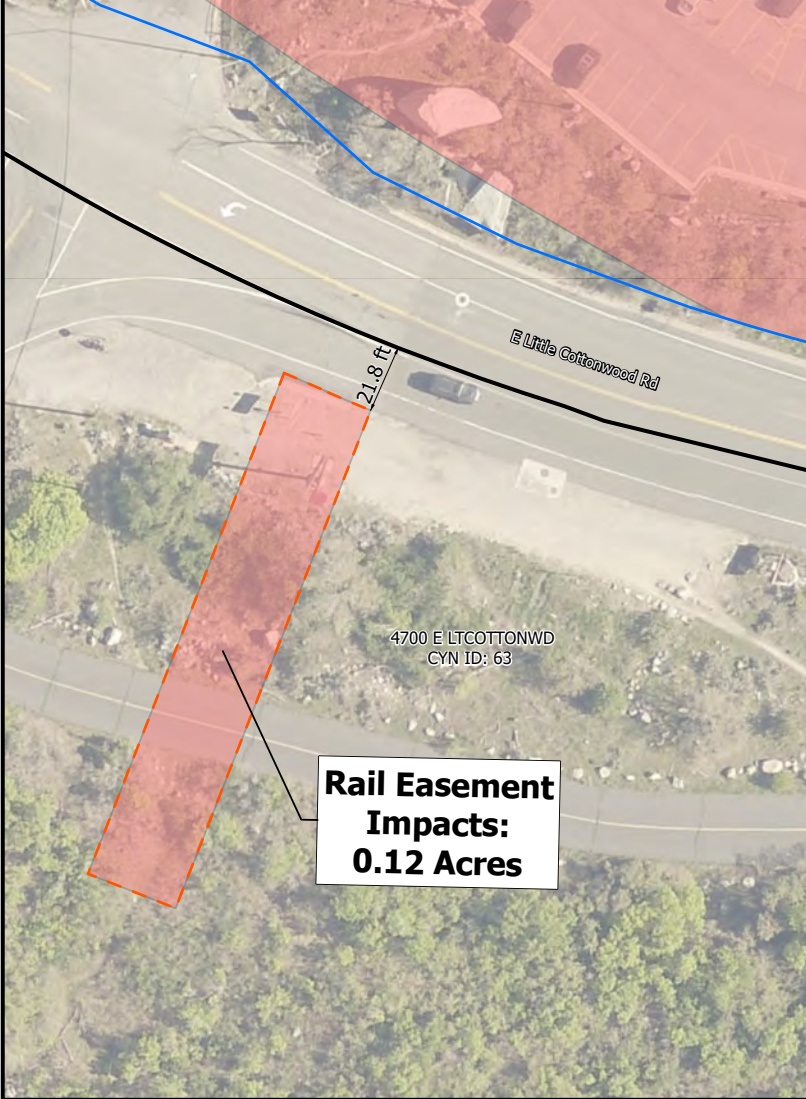
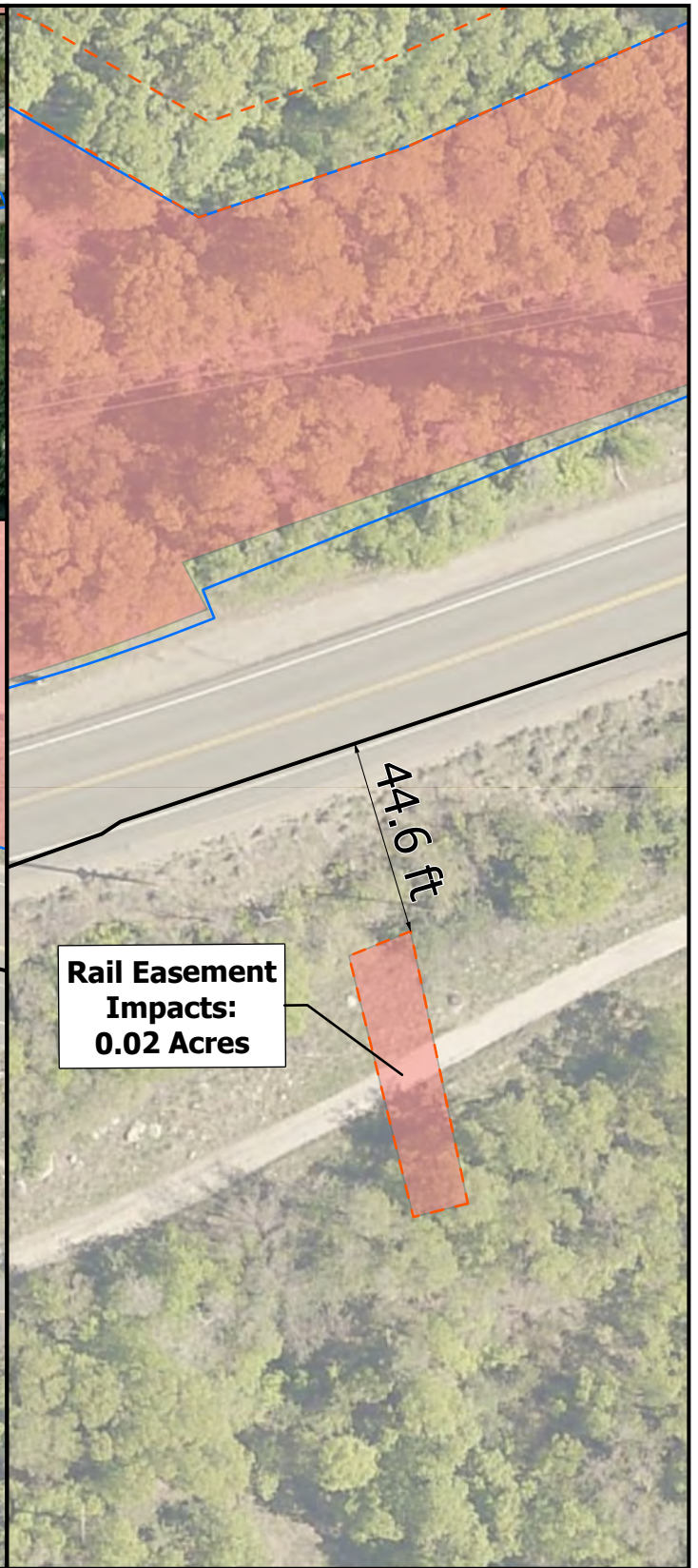
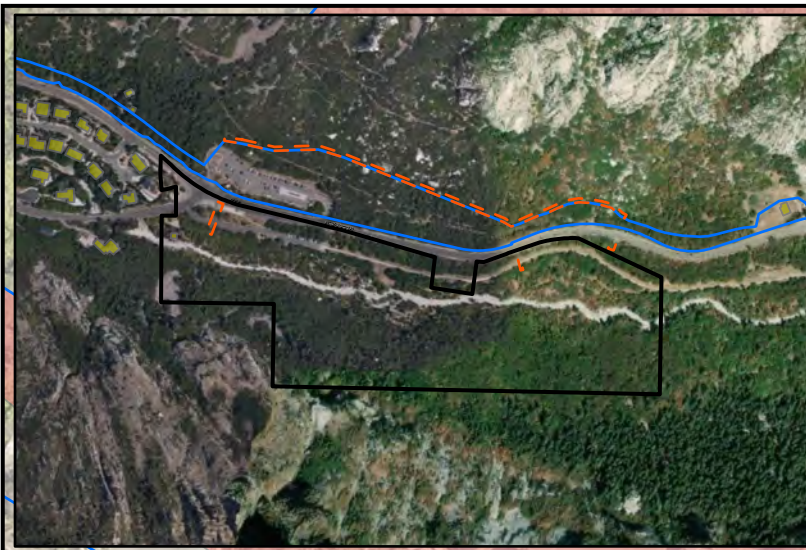
3.0 ft



- NRHP-Eligible Historic Building
- Historic Parcels
- Rail New ROW
- Impacted Area

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**Rail Easement
Impacts:
0.02 Acres**

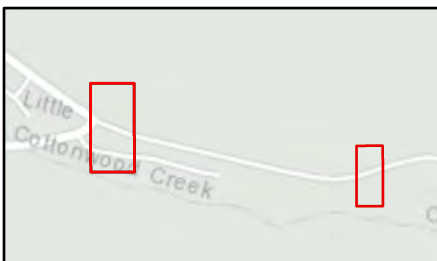
**Rail Easement
Impacts:
0.12 Acres**





21.8 ft

44.6 ft

E Little Cottonwood Rd

4700 E LITCOTTONWD
CYN ID: 63



-  Historic Parcels
-  Impacted Area
-  Rail Easement
-  Rail New ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

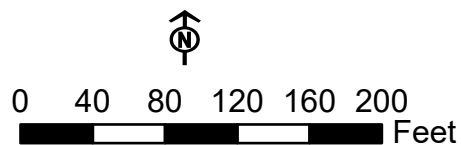


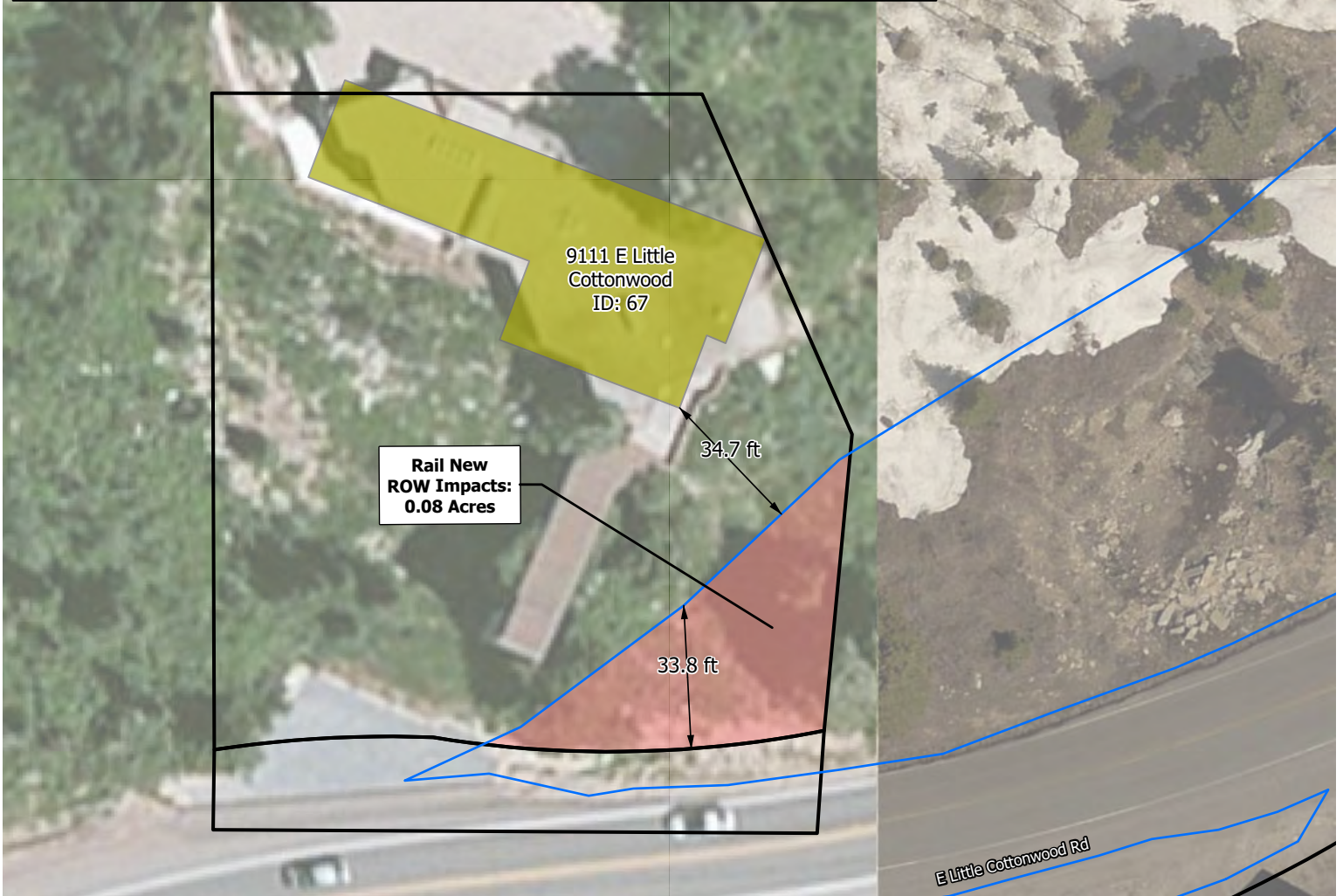
0 20 40 60 80 100
Feet



- NRHP-Eligible Historic Building
- Historic Parcels
- Rail Easement
- Rail New ROW
- Impacted Area

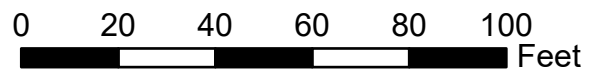
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

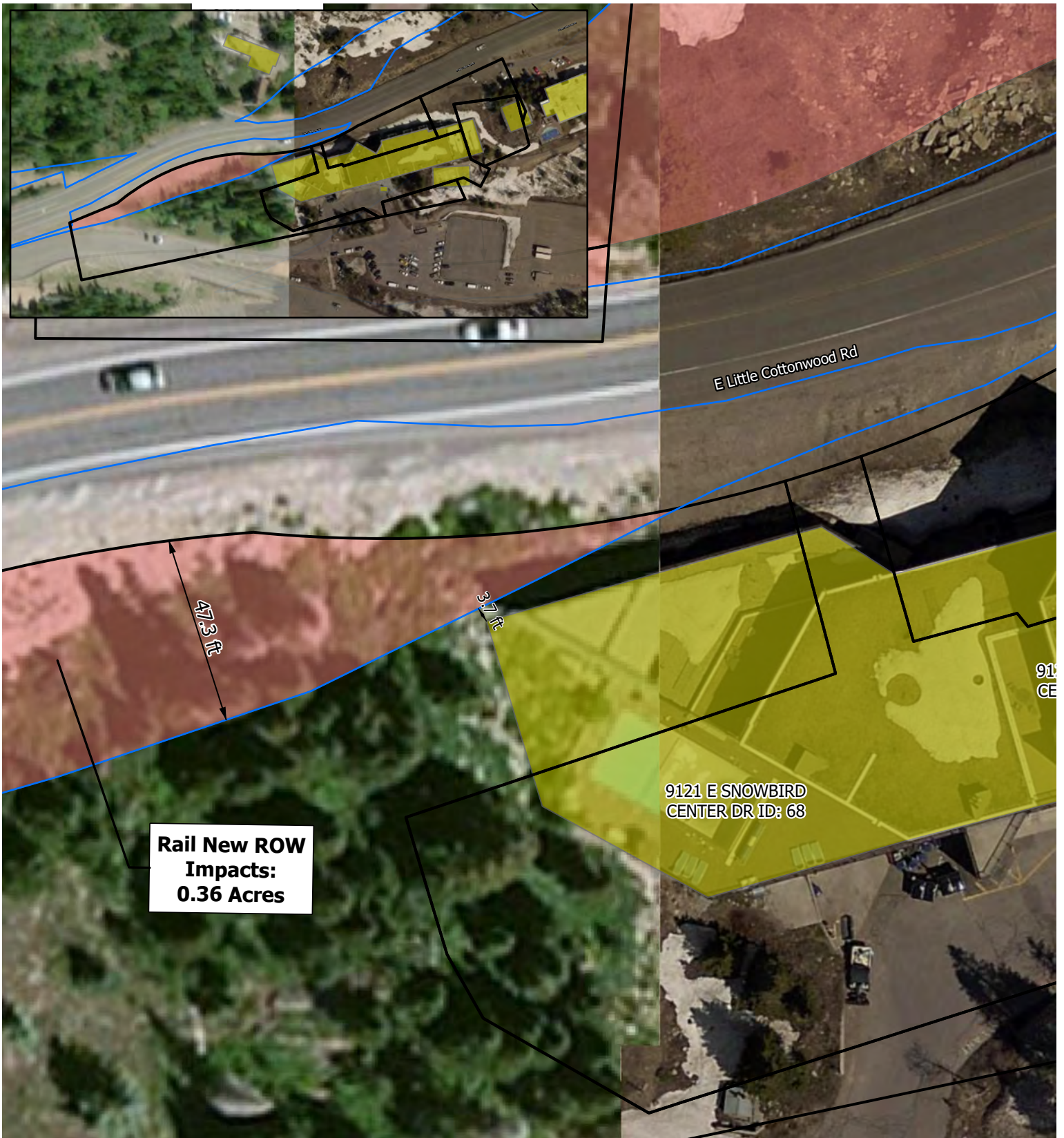




- NRHP-Eligible Historic Building
- Historic Parcels
- Rail New ROW
- Impacted Area

LITTLE COTTONWOOD CANYON EIS
 PROJECT S-R299(281); PIN 16092
 DETERMINATION OF ELIGIBILITY AND
 FINDING OF EFFECT





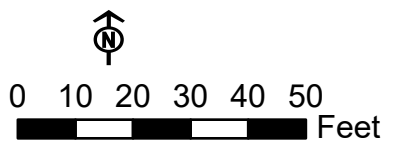
**Rail New ROW
Impacts:
0.36 Acres**

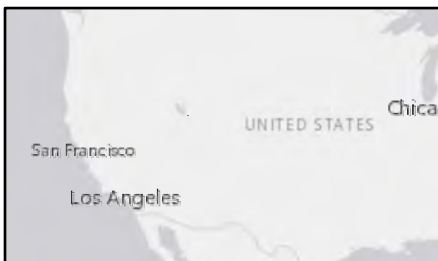
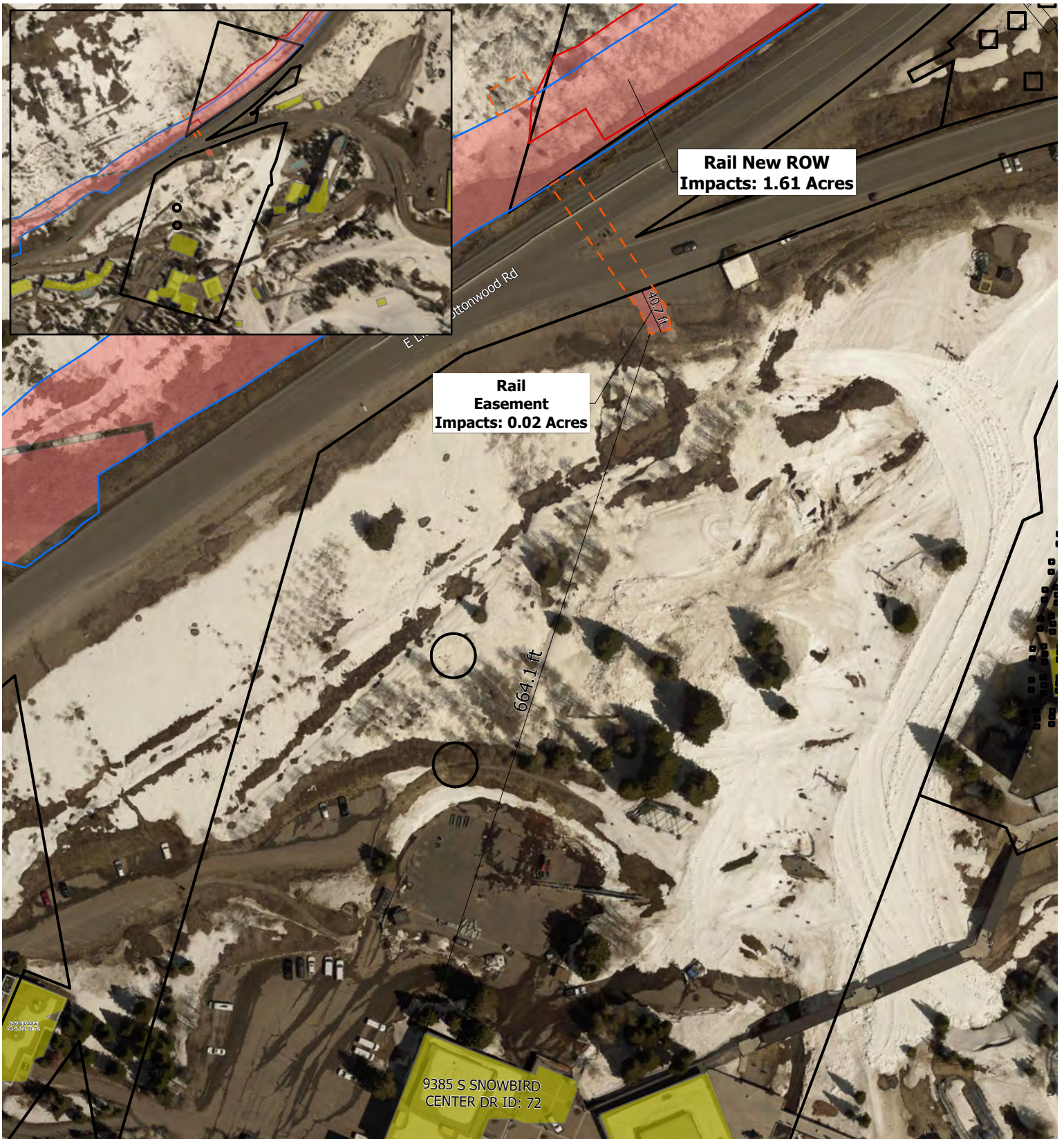
9121 E SNOWBIRD
CENTER DR ID: 68



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Rail New ROW

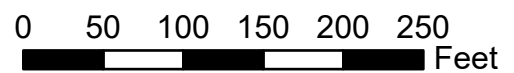
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Rail Easement
- Rail New ROW
- Rail Snow Shed Upper Canyon

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



Little Cottonwood Canyon EIS DOE/FOE:
Snowbird Historic Property Memo

TECHNICAL MEMORANDUM

To: Elizabeth Giraud, AICP
Utah Department of Transportation
4501 South 2700 West
Box 148450
Salt Lake City, Utah 84114-8450

From: Megan Daniels, Architectural Historian

Date: November 6, 2020

Re: **Significance of Snowbird Ski Resort: Little Cottonwood Canyon SR-210 Environmental Impact Statement / SWCA Project No. 45832**

RESEARCH SUMMARY

Due to the sensitive nature of the historic architectural resources and their potential to be impacted by the Gondola Alternatives, additional research was conducted on the Snowbird Ski Resort (Snowbird). This memorandum summarizes SWCA Environmental Consultants' findings on the construction sequence and design intent of Snowbird and is intended to 1) establish the themes relevant to the resort's significance and 2) evaluate the potential effects to its historic integrity posed by the Gondola Alternatives of the Little Cottonwood Canyon SR-210 project.

Significance

Margaret Supplee Smith, architectural historian and author of *American Ski Resort: Architecture, Style and Experience*, notes, "Ski resorts rarely are considered architecturally significant, but Snowbird was so unusual—for its era—so ecologically sound that it attracted extensive media attention and widespread acclaim" (Smith 2013:119). She describes the architecture as using "unabashedly brute concrete" designed by architects that, "were young, committed modernists, passionate environmentalists, and expert skiers" (Threndyle 2014). The resort is described as "following in the French pattern . . . planning all the structure and integrating them all into a single compact, connected entity" (Smith 2013:125). Described by Smith as "[h]igh-rise and high-density, Snowbird opened in December 1971, after years of environmental and architectural planning" (Smith 2013:119). The research revealed the following overarching themes: planning, ecological compatibility, modernism, and verticality.

Planning

Avid skier and manager of Alta Lodge, Ted Johnson conceptualized Snowbird in the early 1960s (Smith 2013). Johnson was adamantly opposed to a traditional "alpine lodge" theme with individual chalets sprawled throughout the canyon defacing acres of land with numerous small buildings requiring access roads and utility lines. He considered them impractical and realized their vulnerability in the path of Little Cottonwood Canyon's avalanche zones (McFall 2016). Instead, Johnson envisioned a dense, compact resort that would fit into the limited available land without disrupting the landscape. With the help of Jack

Smith, architect and ski cohort of Johnson's, and avalanche expert Ed LaChapelle, Johnson laid out a preliminary design with buildings, lifts, and runs to accommodate the conditions of Little Cottonwood Canyon within the narrow strip mining claims he had quietly purchased one by one beginning in 1963 (Smith 2013). Smith developed a relationship with renowned modernist landscape architect and avid skier, Dan Kiley, while teaching at the University of Utah. At Kiley's suggestion, Smith formed the Snowbird Design Group (SDG) with Robert Bliss, Martin Brixen, and James Christopher. Kiley served as SDG's site planning consultant during the initial stages of design (Cultural Landscape Foundation 2013). By 1967, the SDG developed the initial master plan for a year-round resort that would then be branded for marketing the resort to potential investors (Huffaker 2012; Smith 2013). Initially, "Smith envisioned a megastructure, one big hotel turned on its side to make a bridge that would span the canyon walls. . . . Skiers would leave their cars seven miles down the canyon, take a tram up to the resort, and then another tram up the mountain to ski" (Smith Associates 2020; Smith 2013:121). However, Johnson ultimately vetoed the concept for more realistic ideas that could be pitched to potential investors (Smith 2013). In 1969, Dick Bass, a Texas oil and gas mogul, avid skier, and Vail investor agreed to finance Snowbird (Smith 2013).

With funding secured, Smith and M. Ray Kinston—both architects with Brixen & Christopher—left the firm to form the partnership, Enteleki Architects (Enteleki), that would work solely on further developing the master plan for Snowbird. They were joined by Franklin T. Ferguson and John Irving Perkins. In 1971, the U.S. Forest Service (USFS) approved Enteleki's Snowbird Master Plan, of which "the heart was the megastructure [tram terminal]" (Smith 2013:123). Johnson recalled in 2001, "The awesome massiveness of the tramway and its terminal buildings-to-be set the stage for the bold architectural statements of all of Snowbird" (Snowbird 2020). The plan included an integrated series of multi-level buildings that provide commerce and lodging. The vertical lodges were arranged in a linear fashion following the contours of the natural landscape and were connected to the village plaza by gently sloping pedestrian trails (Allen 1974). The architects heeded Kiley's suggestion to place the tram terminal and the village plaza north of the creek and connect it to the mountain by a skier's bridge to take advantage of a gentle ski run out in the natural terrain (Cultural Landscape Foundation 2013; Smith 2013). The architects involved from the conception of the master plan subsequently collaborated on the buildings at Snowbird, "which the architects planned as vertical villages" (Smith 2013:123). These signature buildings were constructed between 1971 and 1974 (Figure 1 and Table 1).

Snowbird Ski Resort

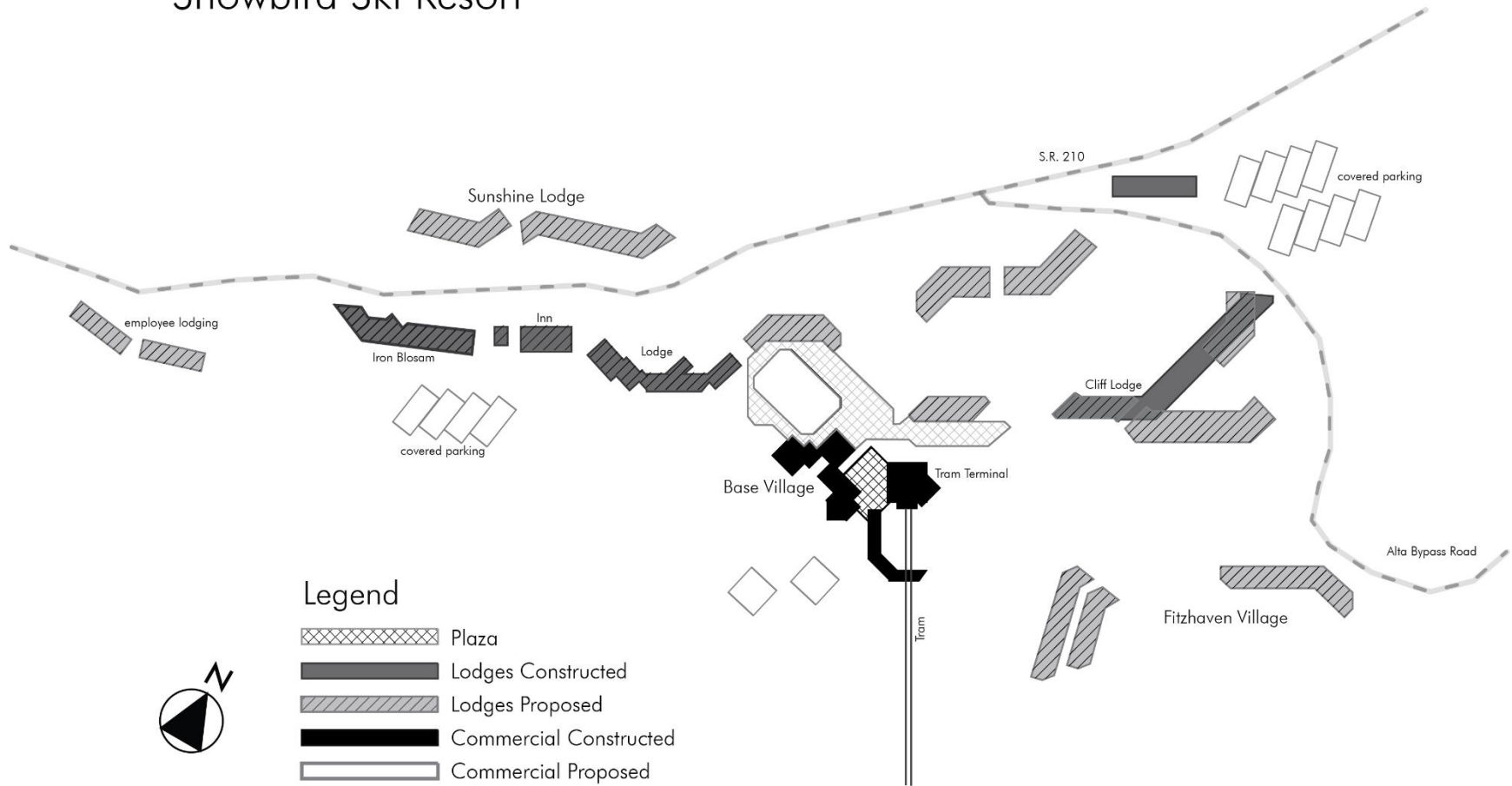


Figure 1. Diagram of buildings proposed in the 1971 Snowbird Master Plan and buildings constructed.

Table 1. Snowbird Ski Resort Construction Summary

Year	Description	Architect / Firm	Reference
1967	Unfinished site design for Snowbird	Robert Bliss / Bliss & Campbell	UCFA 2016b
1967	Snowbird Model building	Snowbird Design Group	Smith 2013; Oliver 2012
1971	Snowbird Master Plan	Enteleki Architects	Smith 2013 Smith Associates 2020
1971	Snowbird Tram Terminal	Jim Christopher / Brixen & Christopher	UCFA 2016a
1971	Snowbird Village Plaza and Bridge	Jim Christopher / Brixen & Christopher	UCFA 2016a
1971	Inn at Snowbird	Jim Christopher / Brixen & Christopher	UCFA 2016a
1971	Lodge at Snowbird	Jim Christopher / Brixen & Christopher	Smith 2013
1973, 1985	Cliff Lodge	M. Ray Kinston / Enteleki Architects	Smith 2013
1974	Iron Blossam	John Irving Perkins / Enteleki Architects	Smith 2013
1974	Mid-Gad Valley Restaurant and Gad Valley Warming Hut	Franklin Ferguson / Enteleki Architects	Huffaker 2012; Smith 2013

Ecological Compatibility

Johnson envisioned a resort composed of a unified grouping of avalanche-proof, reinforced concrete structures, narrow and long, multilevel and fireproof, yet large enough to be a resort (Smith 2013). Johnson’s vision for an ecologically compatible resort was influenced by his travels to the French Alps where he witnessed the negative impacts of sprawling resorts and multitudinous chalets on the natural landscape (Huffaker 2012). The master plan focused on a megastructure concept concentrating development on fewer acres and keeping as much land as possible in its virgin state (McFall 2016). The architects further sought to preserve as many trees as possible and minimize water run off (Allen 1974). Jim Christopher, architect and partner of Brixen & Christopher, described Snowbird as a “high-density project” that the design team was forced into by the limited fee simple land amidst the USFS land (Oliver 2012). Thus, Snowbird was designed on a narrow footprint to withstand the perils of the avalanche-prone canyon, earthquake dangers, heavy snows, and strong winds while consciously minimizing impacts to the natural environment and the Little Cottonwood Canyon watershed (Allen 2014; Smith 2013).

Modernism

Snowbird is rare among American ski resorts for its emulation of the modern, brutalist high-rise buildings akin to those designed by Marcel Breuer in the French Alps (Smith 2013). A modernist and environmentalist, Smith was influential in the modernist concept of Snowbird and the connection between Johnson and Brixen & Christopher. Christopher acknowledged that “modern was a given for us” and that the design team “bought into the concept of a concrete frame with cedar and glass infill panels and an accent of granite. That’s it. That’s Snowbird” (Oliver 2012). In addition to modernism, context was an important factor for Christopher. When observing Little Cottonwood Canyon, he noted that the predominant feature was rock, not forests or woods (McFall 2016). Based on this context and interpretation, Christopher’s Snowbird megastructure design featured the lavish use of concrete, representing his intent to blend the buildings into the surroundings canyon walls and mountain peaks.

Over forty years after Snowbird opened, Margaret Supplee Smith hailed Snowbird as “a perfect time capsule of mid-century modernism” as it continues to emulate the bold modernist ideals of its designers (Threndyle 2014).

Verticality

In 1974 *Architectural Record* described Snowbird as “in scale with the mountains,” mimicking the surrounding peaks with vertically oriented buildings that preserved the vulnerable landscape with minimal footprints (Smith 2013: 120). Tantamount to ecological compatibility and modernism, Snowbird was conceptualized with narrow, multilevel buildings that would limit disruption of the terrain while creating the capacity for a resort. The vertical megastructure concept for Snowbird precluded piecemeal, replication of small cabins or chalets sprawling across the canyon and destroying the natural landscape with access roads and utilities. Instead, vertical lodges were designed and constructed in scale with the surrounding mountains to provide necessary residential accommodations (Allen 1974).

Evaluation

UDOT and SHPO are evaluating the impacts of the proposed Gondola Alternatives on Snowbird. Particular concern was raised about the visual intrusion of the gondola towers into the viewshed from the lodges to the ski slopes. The literature revealed only two references to the buildings being designed to take advantage of the mountain views. In *Architectural Record*, the Lodge condominium units are described as being, “arranged along single-loaded corridors so that they all have the advantage of facing the sun and the ski runs,” and the Cliff Lodge is described as, “skewed from rectangle to parallelogram in order to attain longer views up and down the canyon” (Allen 1974: 124-125). However, in the same article, greater emphasis is placed on the design principles of Snowbird as high-density through vertically oriented buildings and ecologically compatibility. It is also worth noting that the Snowbird Master Plan proposed three lodges with 150 to 200 rooms each to be constructed south of the Cliff Lodge within the Fitzhaven Village. Presumably, the unbuilt phase of development would have been constructed with similar modernist, vertical design principles and would have been in the Cliff Lodge viewshed toward the mountains, further reinforcing the fact that uninterrupted natural views were not a primary concern of the designers.

Instead, the research firmly and consistently reiterates that the predominant focus of Johnson and the architects of Snowbird was emulating modernist and environmentalist ideals. For this reason, the character-defining features of Snowbird are the planning, ecological compatibility, modernism, and verticality of megastructures with narrow footprints. These interrelated features qualify the Snowbird campus and buildings for listing in the National Register of Historic Places as they embody Snowbird’s significance as a high-density, brutalist, high-rise resort designed to preserve and withstand the ecological conditions of the site in Little Cottonwood Canyon.

Although the proposed Gondola Alternatives would place towers within the viewshed of the lodges, the towers would not change the original spatial layout of the masterplan, modernist design, ecological compatibility, or verticality. Further, the focal point of the Snowbird Master Plan was the tram terminal and the aerial tram, which consists of 70 to 140 foot lattice towers carrying passenger cabins from the village to the mountain. The Gondola Alternatives are compatible with the original bold statement of the megastructure terminal and one of the longest and largest aerial tramways in the world (Snowbird 2020). The gondola towers would also be consistent with Snowbird’s modernist megastructure concept, in regard to the transparent structural appearance of modernist architecture—particularly brutalist—and in regard to the limited footprint within the landscape. The proposed Gondola Alternatives are compatible with the intent of the approved master plan to maintain as much natural landscape as possible and eliminate the need for future surface parking lots. And finally, the proposed Gondola Alternatives appear consistent

with Jack Smith's original vision of an aerial tram transporting patrons from a parking lot at the base of the canyon to Snowbird Ski Resort.

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2016b Robert Lewis Bliss. Utah Center for Architecture. Available at: <http://www.utahcfa.org/architect/robert-lewis-bliss>. Accessed October 15, 2020.



Spencer J. Cox
Governor

Deidre M. Henderson
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts



Christopher Merritt
State Historic Preservation Officer

Kevin Fayles
Interim Director

May 14, 2021

Liz Robinson
Cultural Resources Program Manager
Utah Dept of Transportation (UDOT)
4501 Constitution Blvd
Salt Lake City, UT 84119

RE: PIN 16092_Little Cottonwood Canyon EIS_ S-R299(281)0

For future correspondence, please reference Case No. 21-0815

Dear Ms. Robinson,

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced undertaking on April 14, 2021. Based on the information provided to our office, we concur with your determinations of eligibility for the project area, and we concur with a finding of Adverse Effect for the undertaking. We'll look forward to further consulting with you and developing a Memorandum of Agreement to address effects to historic properties.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have questions, please contact me at (801) 245-7239 or by email at clhansen@utah.gov.

Sincerely,

Christopher Hansen
Preservation Planner/Utah SHPO



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

TERIANNE S. NEWELL, P.E.
Deputy Director of Planning and Investment

LISA J. WILSON, P.E.
Deputy Director of Engineering and Operations

March 14, 2022

Mr. Chris Hansen
Historic Preservation Specialist
Utah Division of State History
300 Rio Grande
Salt Lake City, UT 84101-1182

RE: UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah (PIN 16092)
Addendum to Determination of Eligibility and Finding of Adverse Effect.

Dear Mr. Hansen:

The Utah Department of Transportation (UDOT) in conjunction with the United States Forest Service, Uinta-Wasatch-Cache National Forest (USFS), is preparing to undertake the subject federal-aid project. In accordance with Parts 3.1.1 and 3.2 of the *Memorandum of Understanding Between the Federal Highway Administration and the Utah Department of Transportation Concerning State of Utah's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 USC §327* (executed January 17, 2017), the UDOT assumes responsibility, assigned by the Federal Highway Administration (FHWA), for ensuring compliance with Section 106 of the NHPA and with Section 4(f) of the DOT Act of 1966, as amended. Also in accordance with the *Third Amended Programmatic Agreement among the FHWA, the Utah State Historic Preservation Officer, the Advisory Council on Historic Preservation, the USACE Sacramento District, and the UDOT Regarding Section 106 Implementation for Federal-Aid Transportation Projects in the State of Utah* (executed August 23, 2017), Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 300101 et seq.), and U.C.A.9-8-404, the UDOT has taken into account the effects of this undertaking on historic properties, and is affording the Utah State Historic Preservation Officer (SHPO) an opportunity to comment on the undertaking. Additionally, this submission is in compliance with Section 4(f) of the Department of Transportation Act of 1966, 23 U.S.C. § 138 (as amended) and 49 U.S.C. § 303 (as amended).

PROJECT DESCRIPTION

The Utah Department of Transportation (UDOT) began an Environmental Impact Statement (EIS) in the spring of 2018 for the Little Cottonwood Canyon and Wasatch Boulevard in partnership with Utah Transit Authority and the USDA Forest Service. The purpose of the EIS is to provide an integrated transportation system that improves the reliability, mobility, and safety for all users on SR-210 from Fort Union Boulevard through the town of Alta. UDOT has developed five action alternatives to meet the purpose and need for this project: Enhanced Bus Service Alternative (EBS), Enhanced Bus Service in Peak-period Shoulder Lanes Alternative (PPSL), Gondola Alternative A (GA), Gondola Alternative B (GB) and Cog Rail (COG). Additional information on the alternatives can be found at www.littlecottonwoodeis.udot.utah.gov/draft-alternatives.

A Determination of Eligibility and Finding of Effect (DOE/FOE) document was submitted to SHPO for concurrence in May 2021 (UDSH Case No. 21-0815) and was included in the Draft Environmental Impact Statement (DEIS). The DOE/FOE presented impacts on historic properties from the five studied action alternatives but a single

preferred alternative has not been identified. The purpose of this document is to present information on additional impacts to historic properties that were identified during continuing project design development. These properties include archaeological site 42SL52 and architectural property 6851 S. Big Cottonwood Canyon Rd. Both of these properties were included in the survey and documentation submitted with the original DOE/FOE. However, as the mobility hub would extend outside of the previous survey area into undeveloped property, additional survey for archaeological resources was conducted under State Antiquities Project Number U21ST0930, and the complete results are reported in *Second Addendum for the Class III Archaeological Inventory for the Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah*. Although no further documentation was necessary for historic architecture, a memo has been prepared discussing the significance of 6851 S. Big Cottonwood Canyon Rd. to support the effects discussion.

A small additional survey area is also included that is necessary for a construction access road. This survey was conducted under State Antiquities Project Number U22ST0041, and the complete results are reported in *Class III Archaeological Inventory for the Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah—Addendum 3*. As this survey area is entirely undeveloped, a survey for historic architecture was not conducted. No cultural resources were observed.

ARCHAEOLOGICAL RESOURCES

Site 42SL52 constitutes the historic Alta townsite which includes approximately 80 acres at the top of Little Cottonwood Canyon. In addition to the transportation improvements in this area, the proposed project now includes a transit stop structure to be built mainly on a mine tailings pile which currently supports a parking pull-out between the Alta Lodge and the Rustler Lodge on the shoulder of SR-210. This facility would only be built under the EBS and PPSL Alternatives. The transit stop would encompass a 0.99 acre area and will accommodate bus travelers with amenities and access to the canyon floor from SR-210 above. This structure would disturb subsurface materials on the western side of the tailings pile and impact the canyon floor underneath the pile and directly in front of it for the transit stop foundation. The total height of the facility is approximately 30 feet and would mostly be below street level similar to the neighboring lodges.

From available historical sources, UDOT has determined that the mine tailings pile is the remains of the Tom Moore Dump, a deposit of materials extracted between 1887 and 1915 during construction and extension of the Tom Moore Tunnel to better access the Flagstaff Mine. Due to winter snow cover, a field visit to this feature has not been possible to confirm the condition of this feature and its ability to contribute to the eligibility of the site as a whole. However, given the archival research available, it is assumed that this feature is within the boundaries of Site 42SL52, and is assumed to be a contributing feature to the significance of the site as a whole. Although the Dump has likely been re-contoured to accommodate SR-210 and the parking pull-outs, it generally remains in its historic location and is likely one of the few remaining landscape features from the mining period at Alta. Therefore, the proposed transit stop is considered to have an Adverse Effect to Site 42SL52 under the EBS and PPSL project alternatives. This status will be reviewed and a final determination will be issued once a field visit is completed.

ARCHITECTURAL RESOURCES

As a result of public comment, UDOT investigated re-locating the mobility hub and bus maintenance facilities on Wasatch Blvd. from the east side to the west side of the road. As the mobility hub is included in all action alternatives outlined in the DEIS, either location could be selected as part of the Preferred Alternative in the Final EIS. This location is currently undeveloped and directly adjacent to property 6851 S. Big Cottonwood Canyon, also known as the Granite Paper Mill (Old Mill). This property is listed on the National Register of Historic Places and functioned as an early paper mill in the 1880s, and was converted to a tavern which operated from the 1920s to 1970.

The proposed mobility hub occupies 7.54 acres directly south of the extant Old Mill buildings. The Old Mill structures will not be impacted themselves but the hub facilities pose a substantial impact to the setting of this property. The hub consists of a bus maintenance garage encompassing 3.0 acres, at least 18 feet tall, and situated 47.6 feet south of the Old Mill buildings. The mobility hub also includes a six-level parking garage that encompasses approximately 6 acres and includes a new roadway to connect Wasatch Blvd. to Big Cottonwood Canyon Rd. Although the parking garage would be nearly ¼ mi from the Old Mill, it is anticipated to be an

imposing structure in an area dominated by single-family residences. Due to this visual intrusion and obstruction of what remains of the historic viewshed from the Old Mill to the south, UDOT has determined that the proposed mobility hub would result in an Adverse Effect to this property and a Section 4(f) use with greater-than-de minimis impacts.

CONSULTATION EFFORTS

No additional Native American consultation was necessary as a result of this addendum. Information concerning the Section 4(f) impacts to the Old Mill will be included in a revised DEIS chapter that will be released for public review mid-December 2021. Public comments will be solicited at other stages of the EIS with updated information on impacts to cultural resources as they are known and will be addressed throughout the project.

SUMMARY

All action alternatives equally impact 6851 S. Big Cottonwood Canyon resulting in a finding of Adverse Effect and a Section 4(f) use with Greater than *de minimis* impacts. Adverse Effects to Site 42SL52 were previously identified under the Gondola alternatives and it is assumed that the project will now adversely affect the site under the EBS and PPSL Alternatives.

Therefore, the project as a whole will result in a finding of Adverse Effect and Section 4(f) greater than *de minimis* impact for up to 2 archaeological sites and 1 architectural property, No Adverse Effect and Section 4(f) *de minimis* impact for up to 4 archaeological sites and 22 architectural properties, and a finding of No Historic Properties Affected for all remaining architectural properties and archaeological sites. Therefore, the potential Finding of Effect for the proposed UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah, remains **Adverse Effect**. UDOT will submit a final Finding of Effect and continue consultation for the project once a Preferred Alternative is selected.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by UDOT pursuant to 23 *USC* §327 and a Memorandum of Understanding dated January 17, 2017, and executed by FHWA and UDOT.

Please review this document and, providing you agree with the findings contained herein, provide written concurrence. Should you have any questions or need additional information, please feel free to contact Liz Robinson at 801-910-2035 or lizrobinson@utah.gov, or Elizabeth Giraud at 801-633-8484 or egiraud@utah.gov.

Sincerely,



Liz Robinson
Cultural Resources Program Manager
UDOT Central Environmental



Elizabeth Giraud, AICP
Architectural Historian
UDOT Central Environmental

Enclosures

cc: Joshua VanJura, Project Manager
Brandon Weston, Environmental Director

TECHNICAL MEMORANDUM

To: Elisabeth Robinson, Cultural Resources Program Manager
Utah Department of Transportation
4501 South 2700 West
Box 148450
Salt Lake City, Utah 84114-8450

From: Trevor Mark, Assistant Staff Architectural Historian, SWCA Environmental Consultants, and
Lisa Krussow, Project Archaeologist, SWCA Environmental Consultants

Date: February 9, 2022

Re: **Research and Literature Review on the Tom Moore Dump / UDOT Project No. S-
R299(291); UDOT PIN 16092**

INTRODUCTION

The Utah Department of Transportation (UDOT) conducted a preliminary analysis of historic photographs and historic aerials of the town of Alta, Utah, and concluded that the road base supporting State Route (SR) 210 and the parking lot between the Alta Lodge and the Rustler Lodge *may* represent the primary deposition location of a historic mine dump (referred to here as the Tom Moore Dump). If this conclusion is accurate, the Tom Moore Dump may be one of the few intact mining-era landscape features within the Town Site of Alta, Utah, a National Register of Historic Places (NRHP)–eligible site (42SL52).

As part of the Little Cottonwood Environmental Impact Statement (EIS), UDOT determined that additional research was necessary to confirm and document the Tom Moore Dump to evaluate the potential effect of constructing a bus stop as part of the Enhanced Bus Service alternatives presented in the Little Cottonwood Canyon EIS (UDOT 2021). SWCA Environmental Consultants (SWCA) conducted this additional research and has prepared this memorandum to summarize the history and evolution of the Tom Moore Dump and to document the dump’s association with the Tom Moore Tunnel. Maps and photographs supporting this memorandum are found in Appendix A, Figures A-1 through A-15. Appendix B provides an updated Utah Archaeology Site Form (UASF) for 42SL52.

EXISTING DOCUMENTATION

The Tom Moore Tunnel and associated dump are tangible evidence of Alta’s mining heritage. Based on a primary drawing provided to SWCA by UDOT, the proposed bus stop is west of the Tom Moore Dump; however, the contours of the dump may be affected by required cut and fill for the construction of the bus stop building and curb (see Figure A-1).

The Tom Moore Tunnel and Tom Moore Dump do not appear in any previous documentation or site forms; however, a Utah Office of Historic Preservation Historic Site Form (architecture form) was written

for the “Alta Privy,” also known as the Tom Moore Toilet, during a land exchange in 2014 (Flanigan 2014). The privy is a stone structure most likely constructed in the 1960s and made to look similar to a nearby Civilian Conservation Corps–constructed garage (Flanigan 2014). However, there is no documentation to support this claim, so Flanigan concludes that the date of construction is unknown and is most likely between the 1930s and 1960s (Flanigan 2014). From 2018 through 2021, SWCA conducted cultural resources archaeological investigations in support of the EIS. As part of the investigations, SWCA updated the Alta Privy site and documented it as part of the Town Site of Alta (42SL52) as F-02. SWCA also documented a stone foundation as F-01 and a possible adit as F-03 as part of 42SL52 (Mohlenhoff et al. 2018).

The Tom Moore Dump is near the center of the previously recorded boundary of 42SL52 and is associated with F-03, the possible adit (see Figure A-1). SWCA was subcontracted to conduct the cultural resources assessment of the study area, including both architectural and archaeological resources. A buffer of at least 100 feet from the edge of the pavement on either side of SR 210 was included as the study area, although in places this was widened or shifted to accommodate canyon topography and early alternatives development in coordination with UDOT and the primary EIS contractor, HDR. Site 42SL52 was updated only in the study area.

ADDITIONAL RESEARCH METHODS

In February 2022, SWCA searched photographs in The University of Utah J. Willard Marriott Digital Library, U.S. Geological Survey (USGS) publications, and newspaper articles to create the outline history presented in this memorandum, further document the history of the dump, and evaluate its NRHP eligibility as a contributing feature of 42SL52. Select photographs supporting this memorandum are in Appendix A.

HISTORY OF THE FLAGSTAFF MINE AND THE TOM MOORE TUNNEL AND DUMP

The Flagstaff mining claim was originally located at an altitude of 9,500 feet at a point on Emma Hill directly above the town of Alta (Crittenden 1965). The upper workings of the mining claim (e.g., the shaft house) were developed between the 1870s and 1880s, and the primary ore sought at that time was silver. In the late 1880s, the lower workings of the mining claim, which are on the mountain closer to the town of Alta, would result in the development of the Tom Moore Tunnel, which eventually connected with the lower workings of the Flagstaff Mine. The Tom Moore Tunnel was an adit located on the main east-west-trending wagon road through Little Cottonwood Canyon (later SR 210). The waste rock pile that was deposited at the mouth of the Tom Moore Tunnel would eventually become the Tom Moore Dump, the subject of this memorandum. See Table 1 for a summary of significant events associated with the Flagstaff Mine and the Tom Moore Tunnel and Dump.

The Flagstaff Mine was patented in March 1870 by Groesbeck, Schneider, and others (*Salt Lake Mining Review* 1925a; *Utah Mining Gazette* 1873). The first ore from the Flagstaff Mine shipped to a local smelter in the fall of 1871 (*Corine Daily Journal* 1871). By 1873, the Flagstaff Mine was identified by a Utah mining periodical as the most important mine in Little Cottonwood Canyon (*Utah Mining Gazette* 1873). However, by 1874, London investors began to doubt the output of the Flagstaff Mine and others in the district because of corrupt and unscrupulous business dealings of managers and owners (*Utah Mining Gazette* 1874). Even as investors shifted, a national recession began, and mineral prices changed, the Flagstaff Mine continued to operate and had a crew of 90 working it in 1876 (*Utah Evening Mail* 1876). By 1885, the Flagstaff Mine had a smaller crew of 26 but continued to operate throughout the decade (*Salt Lake Democrat* 1885). In early 1885, nearly the entire town of Alta was destroyed in a deadly avalanche, and operations at the surrounding mines were scaled back while the town was rebuilt. A photograph taken in approximately 1885 or 1886 illustrates that few buildings remained at the old town

site, a shed had been built over the wagon road along the base of Emma Hill, and the Tom Moore Tunnel had not yet been opened yet (Figure A-3).

The first indication of interest in developing the lower part of Emma Hill came in 1887. Diminishing veins in the upper workings of the Flagstaff Mine were exhausted as early as the 1870s. By 1887, the Tom Moore Tunnel was opened to begin the search for the lower extents of the veins originally mined in the Flagstaff Mine (*Salt Lake Herald* 1891). Throughout the 1890s, the Tom Moore Tunnel and Flagstaff Mine operated independently, albeit in pursuit of different levels of the same veins within Emma Hill. A photograph from the 1890s shows the first indication of workings at the Tom Moore Tunnel in the form of a small dump (Figure A-4). In March 1899, nearly all of Alta was again destroyed by a large avalanche, this time one that originated at the Flagstaff Mine property high on Emma Hill (*Salt Lake Tribune* 1899). This presumably destroyed any workings at the Tom Moore Tunnel and any other workings along the wagon road at the base of Emma Hill. At the end of 1899, the Alfred Reed Mining Company purchased both the Flagstaff Mine and Tom Moore Tunnel as well as other properties to consolidate both the upper and lower workings of veins within Emma Hill (*Salt Lake Herald* 1899).

In 1902, after a 20-year period of idleness, the Flagstaff Mine was reopened (*Salt Lake Tribune* 1902). By 1905, engineers and managers saw the potential of connecting the lower and upper workings on Emma Hill, and the official decision to extend the Tom Moore Tunnel 600 feet to the Flagstaff Mine was made (*Salt Lake Herald* 1905). By the following year, the Tom Moore Tunnel was 1,600 feet long (*Ogden Standard* 1906). At the end of 1906, the Tom Moore Tunnel, and its adit to the lower workings of the Flagstaff Mine were attracting attention, and a panorama of the portal and workings was published in the *Deseret Evening News* (Figure A-5) (*Deseret Evening News* 1906). Not until 1908 did the Tom Moore Tunnel finally intersect with the main ore body and shaft of the Flagstaff Mine, however (*Salt Lake Tribune* 1908). Major investment to push the Tom Moore Tunnel deeper resulted in a total length of nearly 1 mile by 1913, however, that year money ran out and the enterprise stalled (*Deseret News* 1913). Two years later, in 1915, more funds and investors were found, and the Tom Moore Tunnel was extended a further 700 feet to reach a total of nearly 5,700 feet from the portal to the furthest working beneath Emma Hill (*Deseret News* 1915). The workings continued to develop in ensuing years. In 1920, a selection of Alta district mines was identified in a photograph included in *The Ore Deposits of Utah* (Butler et al. 1920:281) (Figure A-7), and by 1921, the portal of the Tom Moore Tunnel was again visited by the press when a photographer from the *Salt Lake Tribune* identified the Tom Moore Tunnel as well as surrounding workings in a panoramic photograph (*Salt Lake Tribune* 1921) (Figure A-6). The Tom Moore Tunnel continued to drill into the lower parts of the Flagstaff Mine workings throughout the 1920s. In 1925, another photograph of the portal was published in the *Salt Lake Mining Review* (1925a) (Figure A-9). By April 1925, the workings were extended and surface buildings were enumerated:

During the quarter there was 571 feet of raising and 542 feet of drifts and cross cuts drive for the purpose of exploration, and considerable repairs were made to compressor plant, blacksmith shop, boarding house, transformer station, snow sheds at portal of Tom Moore tunnel and all machinery was placed in first class repair. (*Salt Lake Mining Review* 1925b)

Interest in developing the upper workings of the Flagstaff Mine was revived in 1926 when an aerial tram was constructed at a point west of the Tom Moore Tunnel and a boarding house was constructed higher on Emma Hill (*Salt Lake Tribune* 1926a, 1926b). The Flagstaff Mine continued to operate during the 1930s, though it remains unclear if most of the activity centered on the upper or lower workings (*Salt Lake Telegram* 1931, 1932).

New interest in Little Cottonwood Canyon began to arise in the mid-1930s in the form of recreation. In the summer of 1936, the Works Progress Administration (WPA) began to work on the construction of an automobile road into Little Cottonwood Canyon. The goal was to reach the “winter sports area at Alta,”

which crews achieved in the late autumn of 1937 (*Salt Lake Telegram* 1936; *Salt Lake Telegram* 1937). At this time, the Tom Moore Dump was first leveled, and portal buildings demolished to accommodate the road, which went directly through the site. By 1938, Alta was labeled in a local newspaper as one of seven ski areas along the Wasatch Front within 20 miles of Salt Lake City, and plans by the Salt Lake City Winter Sports Association to construct a ski lift and shelter building at Alta were underway. The lift at Alta was completed in December 1938, and the WPA was in the process of constructing a lodge (*Salt Lake Telegram* 1938).

Although interest in Little Cottonwood Canyon began shifting toward recreation in the mid-1930s, mining operations continued in Alta for several more years. In 1941, ore was reported to have been shipped from the Flagstaff Mine and drilling at the Tom Moore Tunnel was reported as late as 1942 (*Salt Lake Tribune* 1942; *Wasatch Wave* 1941). However, by 1949, mining was over, and a building boom to support the new ski industry at Alta was underway. Buildings as well as features related to the former mining industry were reused and adapted to the new industry, including the former buildings at the Bay City Tunnel portal. The tailings pile at the former Columbia mill and the dumps around the Bay City Tunnel were used as ski jumps as late as the mid-1970s. In the late 1940s, the deteriorating buildings and the recontoured dump near the Tom Moore Tunnel were captured in photographs and on one map (Figures A-13 through A-16) (Atwater 1949; *Deseret News* 1949). The photographs document that the graded dump has been used as a parking lot since that time, and this use continues to this day with little alteration.

Table 1. Chronological Summary of the Town Site of Alta, Flagstaff Mine, and Tom Moore Tunnel and Dump

Year, Month (if known)	Description	Reference
1868	Woodman, Chisholm, and Day prospected at the base of Emma Hill at modern-day Alta and opened the Monitor Mine.	James et al. (2006: 275)
1869 or 1870	The Flagstaff lode is located by Groesbeck, Schneider, and others.	<i>Salt Lake Mining Review</i> (1926)
1871	Town of Alta is established.	Alta Historical Society (2020)
1873	Following the collapse of the Emma Silver Mining Company in 1872, the Flagstaff Mine is identified as the most important mine in Little Cottonwood Canyon.	<i>Utah Mining Gazette</i> (1873)
1876	The Flagstaff Mine is operating with a crew of 90.	<i>Utah Evening Mail</i> (1876)
1885, February	An avalanche kills 15 people and destroys most of the original town of Alta, which is rebuilt further west at this time.	Alta Historical Society (2020)
1887	The Tom Moore Tunnel is opened.	<i>Salt Lake Herald</i> (1891)
1899, March	An avalanche destroys most of the second town site of Alta.	<i>Salt Lake Tribune</i> (1899)
1899, December	The Alfred Reed Mining company acquires both Flagstaff Mine and the Tom Moore Tunnel.	<i>Salt Lake Herald</i> (1899)
1902	The Flagstaff Mine is reopened after a 20-year period of idleness.	<i>Salt Lake Tribune</i> (1902)
1905	Owners of the Flagstaff Mine decide to extend the Tom Moore Tunnel 600 feet deeper into the mountain to meet with the lower workings of the old Flagstaff Mine.	<i>Salt Lake Herald</i> (1905)
1906	A photograph of the portal of the Tom Moore Tunnel is published in <i>Deseret Evening News</i> (see Figure A-5).	<i>Deseret Evening News</i> (1906)
1908	The Tom Moore Tunnel reaches the ore zone of the Flagstaff Mine.	<i>Salt Lake Tribune</i> (1908)

Year, Month (if known)	Description	Reference
1913	The Tom Moore Tunnel is extended to 5,000 feet, but funds for further development run out. The tram is completed from the Columbia Mill to the Flagstaff and a railroad is constructed within 8 miles of Alta for ore transport.	<i>Deseret News</i> (1913)
1920	The Tom Moore Tunnel is pictured and identified in <i>The Ore Deposits of Utah</i> (see Figure A-7).	Butler et al. (1920:281)
1921	The Tom Moore Tunnel pictured and identified in <i>Salt Lake Tribune</i> (see Figure A-6).	<i>Salt Lake Tribune</i> (1921)
1925, February	The portal pictured and identified in <i>Salt Lake Mining Review</i> but is mislabeled as “Bay City” in the J. Willard Marriott Digital Library (see Figure A-8 and Figure A-9).	<i>Salt Lake Mining</i> (1925a)
1926	The three-tower aerial tram to Flagstaff Mine is built and two shifts operate in the workings.	<i>Salt Lake Tribune</i> (1926a)
1932	The Flagstaff Mine shipped gold ore.	<i>Salt Lake Telegram</i> (1932)
1936	The WPA road project into Little Cottonwood Canyon starts.	<i>Salt Lake Telegram</i> (1936)
1937	Little Cottonwood Canyon road opens to the “winter sports area near Alta;” the Tom Moore Dump is probably partially leveled for the first time to accommodate parking.	<i>Salt Lake Telegram</i> (1937)
1942	This is the final mention of mining at Alta; drilling takes place at the Tom Moore Tunnel for ore.	<i>Salt Lake Tribune</i> (1942)
1949	Ski lodges have been built at Alta, and articles detail ski area construction documenting a complete shift from mining to skiing in the town.	<i>Deseret News</i> (1949)

ELIGIBILITY

The Tom Moore Dump is encompassed by the boundary of the historic Town Site of Alta (42SL52), which has been determined significant under Criteria A and D and eligible for the NRHP. Although not noted as a significant feature on the 2018 42SL52 site form (Mohlenhoff et al. 2018), the dump itself is a significant landscape element because of its association with the Tom Moore Tunnel and Flagstaff Mine, which made a demonstrated impact on the mining history of Little Cottonwood Canyon and the development of the town of Alta. The dump retains integrity in the aspects of location, design, and association, although the top was leveled in approximately 1940 for use as a parking area. The setting and feeling of the dump are compromised by modern ski area development. However, it is recommended that the dump is significant, retains integrity, and is a contributing feature to 42SL52, which is eligible for the NRHP.

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APPENDIX A

Figures

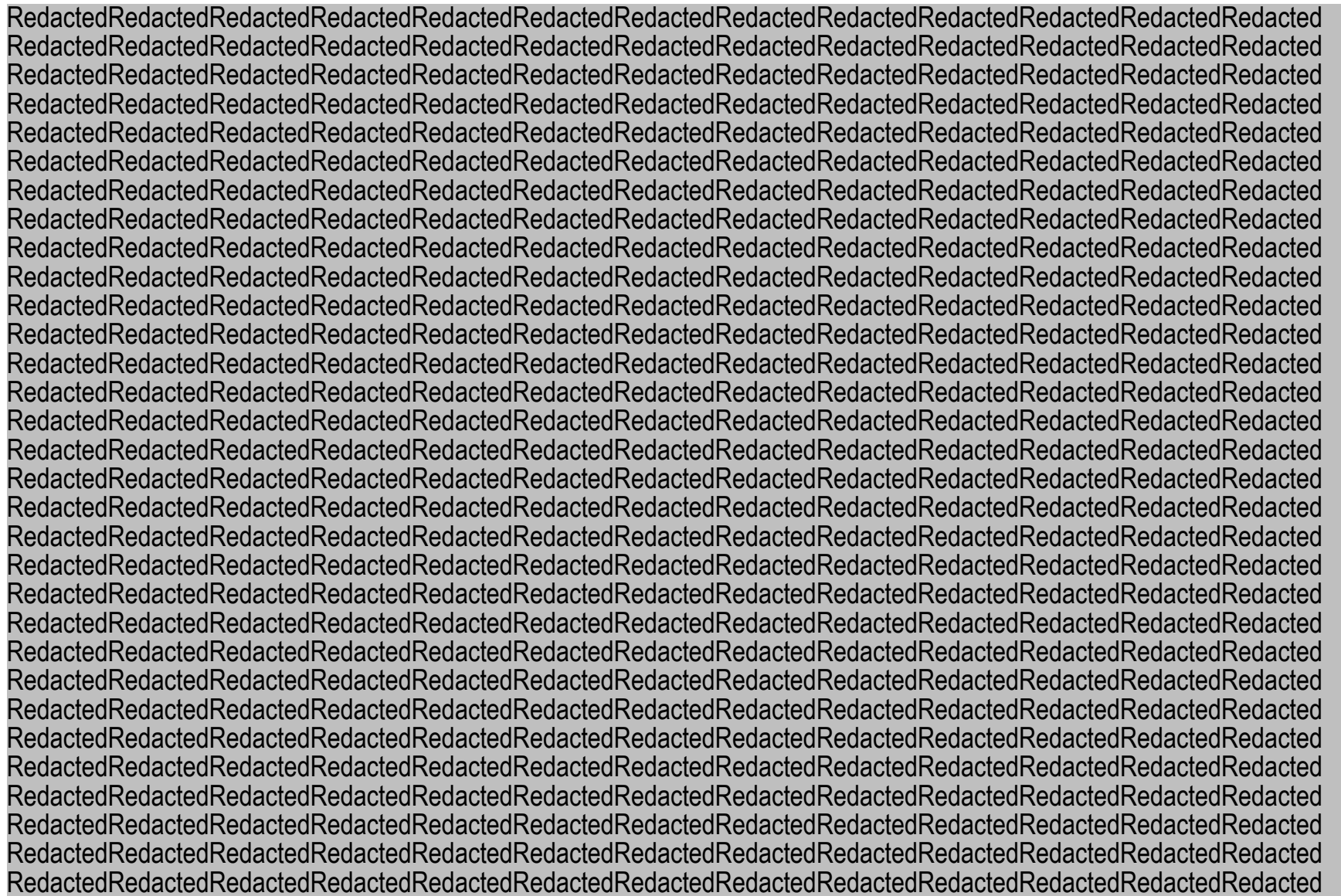


Figure A-1. Feature close-up of the Tom Moore Dump boundary, proposed bus stop, and proposed areas of cut and fill.

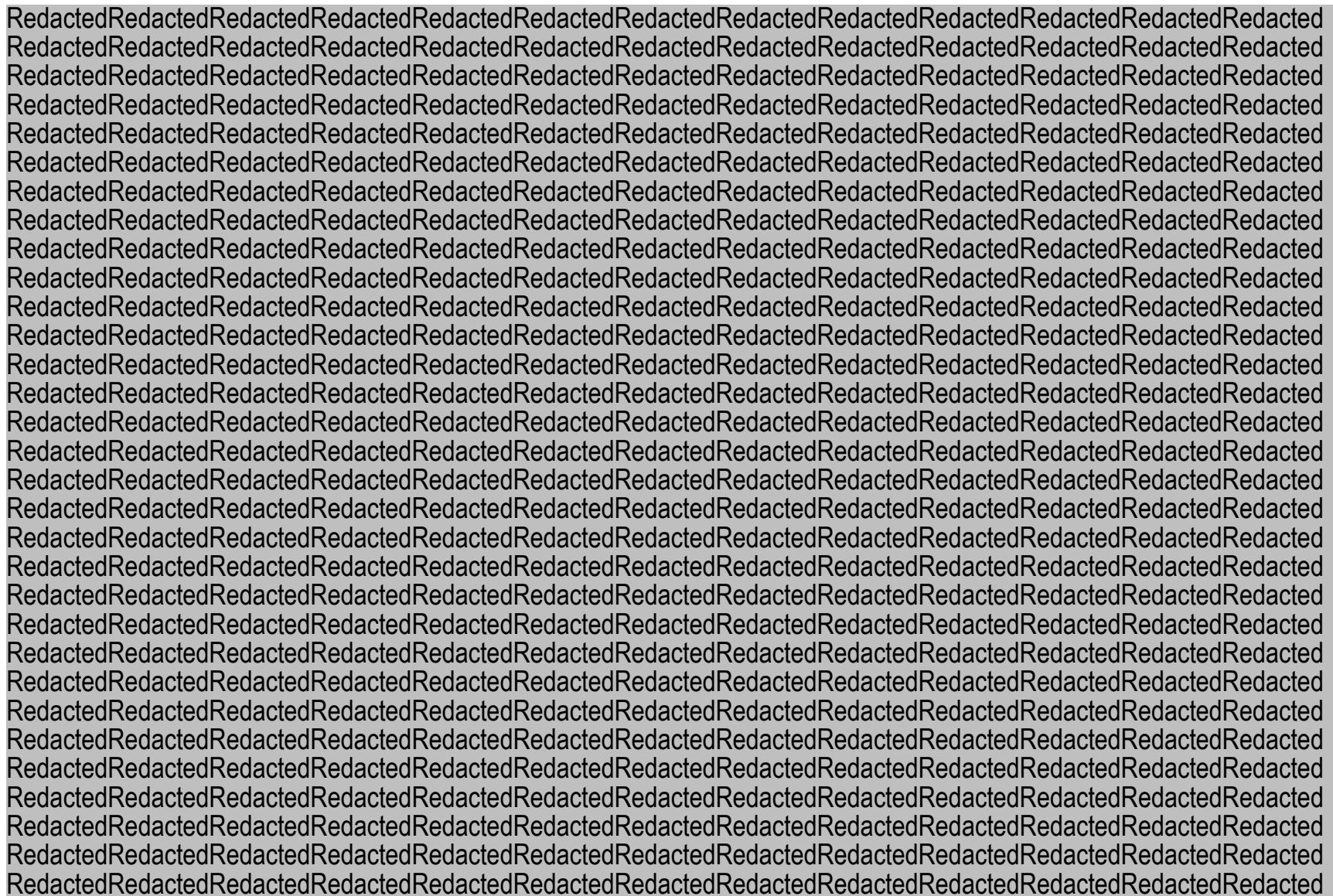


Figure A-2. Overview map of Town Site of Alta (42SL52) with the Flagstaff Mine and other mining features outside the boundary.



Figure A-3. In this detail of an 1885 or 1886 view of Alta, the Tom Moore Dump is not yet present but would be at the location of the arrow within several years. The Bay City Dump is to the right of the photograph. John P. Soule Photograph Collection, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s66t634z>.



Early Alta town photo showing Bucket of Blood Saloon, Alta Club and Gold Miner's Daughter. Present Rustler Lodge in photo center.

Figure A-4. Photograph from the 1890s or early twentieth century showing the beginnings of the Tom Moore Dump (red arrow). The upper workings of the Flagstaff Mine are also visible (blue arrow). Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s6w95z05>.



FLAGSTAFF AND EMMA COPPER CO. TUNNEL AND WORKINGS.

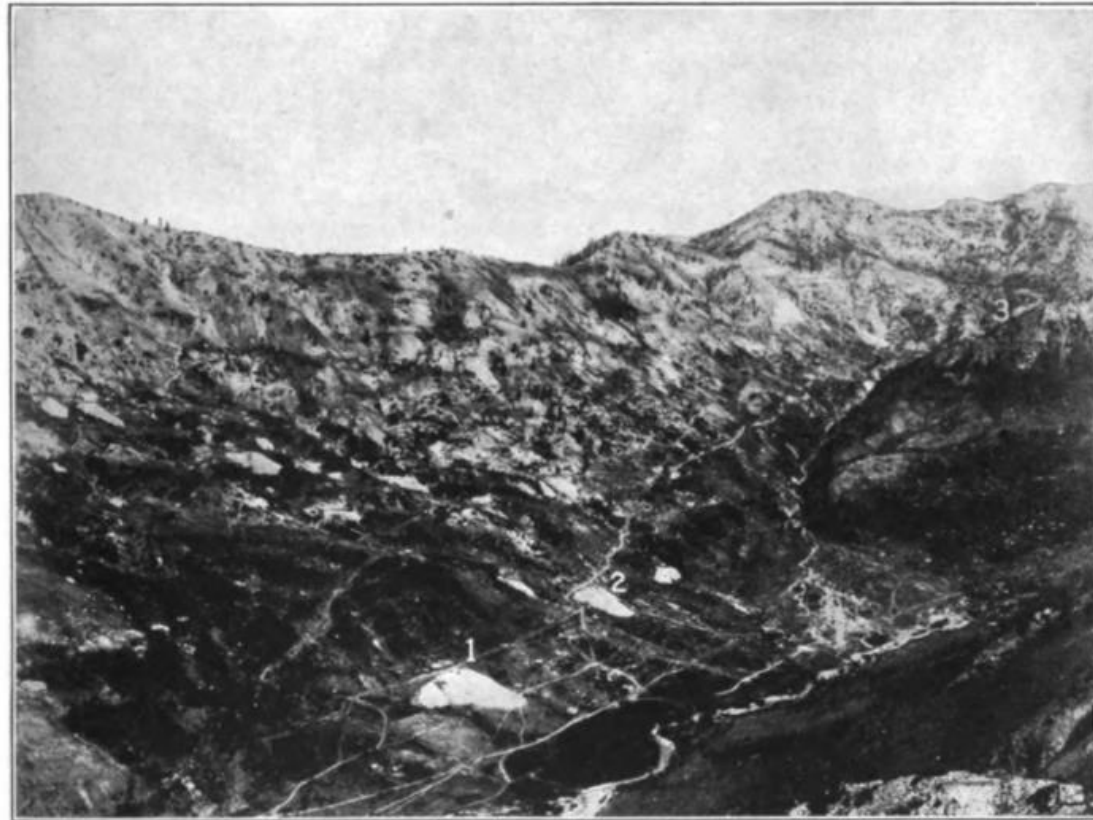
Figure A-5. Panorama of the Tom Moore Tunnel and workings in 1906 (*Deseret Evening News* 1906).

Alta Mineralization Proven Persistent to Depth by Drain Tunnel



General view looking west down the Little Cottonwood canyon from above Alta, showing area on Flagstaff Hill, owned by Wasatch Mines company, and developed mining territory under which the Wasatch drain tunnel is driven. (1) Old Emma tunnel. (2) Bay City tunnel. (3) Tom Moore tunnel, Wasatch Mines company. (4) Illinois tunnel. (5) Vallejo tunnel. (6) South Star tunnel. (7) Flagstaff tunnel, Wasatch Mines company. (8) Columbus-Rexall tunnel, Wasatch Mines company. (9) South Hecla. (10) Columbus mine, Wasatch Mines company.

Figure A-6. In 1921, the *Salt Lake Tribune* published this guide showing the mine locations in the Alta District. The Tom Moore Tunnel is labeled 3 (red), Old Emma Tunnel is labeled 1 (green), the Bay City Tunnel is labeled 2 (purple), and the Flagstaff Tunnel is higher on Emma Hill and labeled 7 (blue) (*Salt Lake Tribune* 1921).



B. VIEW ON NORTH SIDE OF LITTLE COTTONWOOD CANYON NEAR ALTA.

1, Tom Moore tunnel; 2, Big City tunnel; 3, Michigan-Utah mine.

Figure A-7. The Tom Moore Tunnel labeled as 1 and the Bay City Tunnel as 2 in 1920 from (Butler et al. 1920:281).

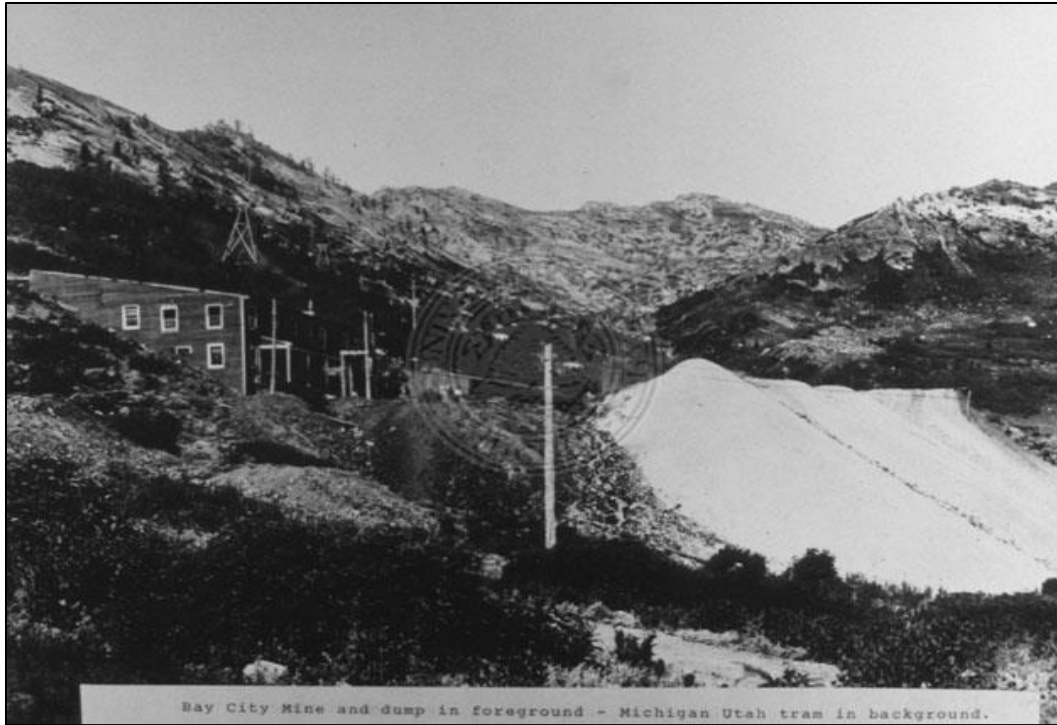


Figure A-8. Although this image is labeled as the “Bay City Mine and dump,” it is in fact the portal to the Tom Moore Tunnel and dump based on the identification of the same image in a contemporary mining journal (see Figure A-9). Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s6k07s39>.



Figure A-9. This image of the Tom Moore portal appeared in the *Salt Lake Mining Review* in 1925 (*Salt Lake Mining Review* 1925a).



Figure A-10. The portal and workings of the Tom Moore Tunnel, ca. 1915. Image courtesy of Utah Ski Archives Photos, University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s676633m>.



Figure A-11. The Tom Moore Tunnel portal and workings, ca. 1935. An early wing of the Snowpine Lodge is to the right of the portal. Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s6z03wx6>.



Figure A-12. The Tom Moore Tunnel dump viewed from the east (left) prior to the construction of State Route 210, ca. 1920. Image courtesy of Wasatch Mountain Club Photograph Collection, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s6yw481x>.



Figure A-13. View of the dump ca. 1940 shortly after the construction of State Route 210 and following grading to create the parking lot. Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s60k2xbs>.



Figure A-14. View of the last remaining building from the Tom Moore portal. Photograph taken from the top of the dump parking lot, ca. 1940s. Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s60g46vj>.



Figure A-15. View of the parking area and the Tom Moore Dump to the right, ca. 1940s. Photograph possibly taken on the same day as Figure A-14. Image courtesy of Utah Ski Archives Photos, The University of Utah, J. Willard Marriott Digital Library. Available at: <https://collections.lib.utah.edu/ark:/87278/s64f2cgt>.



Spencer J. Cox
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Deidre M. Henderson
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Jill Remington Love
Executive Director
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and Community Engagement*



Jennifer Ortiz
Director

Christopher Merritt
State Historic Preservation Officer

March 16, 2022

Liz Robinson and Elizabeth Giraud
Cultural Resources Program Manager & Architectural Historian
Utah Department of Transportation (UDOT)
4501 Constitution Blvd
Salt Lake City, UT 84119

RE: PIN 16092_Little Cottonwood Canyon EIS Addendum (U21ST0930, U22ST0041)

For future correspondence, please reference Case No. 22-0401

Dear Ms. Robinson and Ms. Giraud,

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced undertaking addendum on March 14, 2022. We provided original comment on this undertaking in Case No. 18-1522 and 21-0815.

From the information provided in the historical context prepared by SWCA Environmental Consultants concerning Tom Moore Dump feature of the Alta Town Site (42SL52), we concur that the feature is contributing to the site's eligibility. We expect a full documentation of this feature on an updated Utah Archaeology Site Form to be submitted to our office when the site is accessible after the season's snow melt. In addition, we concur with your determination of "Adverse Effect" to 42SL42 and the Granite Paper Mill and sustained determination of "Adverse Effect" for the Little Cottonwood Canyon EIS. We look forward to continuing consultation related to this undertaking on additional identification and evaluation of historic properties and mitigation of adverse effects.

Utah Code 9-8-404(1)(a) denotes that your agency is responsible for all final decisions regarding cultural resources for this undertaking. Our comments here are provided as specified in U.C.A. 9-8-404(3)(a)(i). This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7246 or by email at sagardy@utah.gov.

March 16, 2022
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Savanna Agardy". The signature is written in a cursive, flowing style with a large initial 'S'.

Savanna Agardy
Compliance Archaeologist



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

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LISA J. WILSON, P.E.
Deputy Director of Engineering and Operations

May 9, 2022

Mr. Chris Hansen
Historic Preservation Specialist
Utah Division of State History
300 Rio Grande
Salt Lake City, UT 84101-1182

RE: UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah (PIN 16092)
Second Addendum to Determination of Eligibility and Finding of No Adverse Effect for 42SL968.

Dear Mr. Hansen:

The Utah Department of Transportation (UDOT) in conjunction with the United States Forest Service, Uinta-Wasatch-Cache National Forest (USFS), is preparing to undertake the subject federal-aid project. In accordance with Parts 3.1.1 and 3.2 of the *Memorandum of Understanding Between the Federal Highway Administration and the Utah Department of Transportation Concerning State of Utah's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 USC §327* (executed January 17, 2017), the UDOT assumes responsibility, assigned by the Federal Highway Administration (FHWA), for ensuring compliance with Section 106 of the NHPA and with Section 4(f) of the DOT Act of 1966, as amended. Also in accordance with the *Third Amended Programmatic Agreement among the FHWA, the Utah State Historic Preservation Officer, the Advisory Council on Historic Preservation, the USACE Sacramento District, and the UDOT Regarding Section 106 Implementation for Federal-Aid Transportation Projects in the State of Utah* (executed August 23, 2017), Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 300101 et seq.), and U.C.A.9-8-404, the UDOT has taken into account the effects of this undertaking on historic properties, and is affording the Utah State Historic Preservation Officer (SHPO) an opportunity to comment on the undertaking. Additionally, this submission is in compliance with Section 4(f) of the Department of Transportation Act of 1966, 23 U.S.C. § 138 (as amended) and 49 U.S.C. § 303 (as amended).

PROJECT DESCRIPTION

The Utah Department of Transportation (UDOT) began an Environmental Impact Statement (EIS) in the spring of 2018 for Little Cottonwood Canyon and Wasatch Boulevard in partnership with the USDA Forest Service. The purpose of the EIS is to provide an integrated transportation system that improves the reliability, mobility, and safety for all users on SR-210 from Fort Union Boulevard through the town of Alta. UDOT has developed five action alternatives to meet the purpose and need for this project: Enhanced Bus Service Alternative (EBS), Enhanced Bus Service in Peak-period Shoulder Lanes Alternative (PPSL), Gondola Alternative A (GA), Gondola Alternative B (GB) and Cog Rail (COG). Additional information on the alternatives can be found at www.littlecottonwoodeis.udot.utah.gov/draft-alternatives.

A Determination of Eligibility and Finding of Effect (DOE/FOE) document was submitted to SHPO for concurrence in May 2021 (UDSH Case No. 21-0815) and was included in the Draft Environmental Impact Statement (DEIS). The first DOE/FOE addendum was submitted to SHPO for concurrence in March 2022 (UDSH Case No. 22-0401).

The previous DOE/FOE presented impacts on historic properties from the five studied action alternatives but a single preferred alternative has not been identified. The purpose of this document is to present information on additional impacts to a historic property that was identified during continuing project design development. The historic property is a collection of historic recreational climbing routes that are being evaluated as a historic district. This resource is located outside of the previous survey areas for this project, and therefore additional survey for archaeological resources was conducted by SWCA, Inc. under State Antiquities Project Number U22ST0244, and the results are reported in *Third Addendum for the Class III Archaeological Inventory for the Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah*. The survey was preceded by extensive archival research which identified the period of significance for these resources, known first ascents during that period, and location of the areas and individual routes. Since traditional archaeological survey techniques would be ineffectual given the terrain and dense vegetation, field documentation was conducted by visiting the established staging area associated with the routes.

ARCHAEOLOGICAL RESOURCES

Site 42SL968 constitutes the Little Cottonwood Canyon Climbing Area Historic District, located on the north side of SR-210 from approximately MP 3.5-6.0 and comprises approximately 270ac. These resources qualify as a site under the NRHP definition since little or no physical evidence was created during their historic use and historic documentation supports the location and timing of the use events. Due to the large number and concentration of individual climbing routes, UDOT determined (in consultation with USFS and SHPO) that documenting these resources as a district with individual routes grouped into areas was the most appropriate method of evaluation.

As a result of this research, UDOT has determined that Site 42SL968 has a period of significance from 1960 to 1974 and is eligible for the NRHP under Criterion A for its contribution to the pattern of early climbing events and development of the climbing community along the Wasatch Front. During this period many of the “classic” routes were established, new hard-rock climbing technology and technique was developed, and local interest groups expanded interest in the sport. Although nationally important figures visited and established routes in 42SL968, the events that represent the important achievements or productive periods of these individuals are located elsewhere; therefore Site 42SL968 is not eligible under Criterion B. As no built resources are present within the district, this site is not eligible under Criterion C. As the routes and the rock formations themselves do not have the potential to answer important research questions about climbing history through associated material cultural resources, Site 42SL968 is not eligible for the NRHP under Criterion D. Site 42SL968 also retains the integrity necessary for conveying its historic significance under Criterion A.

Under Criterion A, the key aspects of integrity that need to be retained are location, design, setting, feeling, and association. The contributing climbing areas and routes remain in their original locations, and the design of the routes and their relationship to each other on the landscape is intact. Minor impacts to the setting and feeling of the district include creation of pullouts, trailheads, and residential development since the 1960s and early 1970s. Viewsheds to and particularly from the district are components of the historic setting, and the feeling of an open and natural area with some development remains relatively unchanged. Taken together, these elements of integrity enable this site to convey its association with historic climbing in Little Cottonwood Canyon.

Site 42SL968 will not be directly impacted by any of the proposed project action alternatives. Indirect impacts to the site may result from some of the action alternatives through a change in auditory and visual conditions.

Auditory Indirect Impacts

Noise conditions through this area were modeled as part of the DEIS Noise Analysis. For areas such as an active climbing area, UDOT’s noise-abatement policy states that a traffic noise impact occurs when a future noise level is equal to or greater than the Noise-abatement criteria of 66dBA (for a NAC category C); or is greater than or equal to an increase of 10dBA over the existing noise level. For reference, according to the Council on Environmental Quality, a soft whisper registers at 30dBA, normal speech at 50dBA, and an air conditioner or light auto traffic at 60dBA. People generally cannot detect a 1-to-2-dBA increase in noise levels. Under ideal listening conditions, differences of 2 or 3 dBA can be detected by some people. A 5dBA change would probably be perceived by most people under normal listening conditions.

Current noise from the roadway averages 58dBA closest to SR-210, and at 500 feet from SR-210 the current noise levels average of 48dBA. At 500 feet from SR-210, the projected noise levels for the EBS averages at 51dBA, and the PPSL averages 54dBA. Noise associated with a gondola system is localized around the towers as operations on the cables produce a negligible level of noise. At tower locations, noise is produced when cabins pass across a tower and therefore the noise analysis focused on noise projections from the gondola towers. Model projections estimate noise levels at 45dBA at a distance of 175 feet from a tower, and decreasing at greater distances. There are three gondola towers in the vicinity of Site 42SL968, the closest distance between a tower and a climbing area is approximately 231 feet from the easternmost tower to the Five Fingers Climbing Area. At this distance, noise from a gondola tower (GA or GB) combined with the SR-210 road noise would be estimated at 59dBA and decreasing for all other areas which are farther from the towers. Site 42SL986 will experience wayside operating noise from the COG, the closest point to the COG operations would be approximately 270 feet from the Church Climbing Area. The noise projections estimated a noise level of 44dBA at 307 feet, and therefore noise from the COG at the Climbing Areas would be 44dBA and below. Therefore, none of the alternatives would result in a noticeably increased noise at the site.

Visual Indirect Impacts

A Visual Effects analysis was produced during the DEIS and outlines the methodology and results of a study of all known historic properties within the viewshed of the project. This analysis evaluated the potential for the project to diminish the integrity of properties for which setting, feeling, or association are qualifying characteristics of eligibility for the NRHP. This methodology was applied to Site 42SL986, although the large size and multiple viewpoints and aspects of the district complicated this evaluation.

The site viewshed allows modern visitors and climbers to understand the dramatic natural environment in which the climbs were developed and the experience of climbers in earlier decades. However, the concept that views were important to early climbers is inferred rather than well documented; the chief focus of the climbers centered around the buttresses and the technical skill required to make first ascents rather than aspects of scenery and available views. The primary view during climbing activities would be towards the rock face where project elements would generally not be visible. As seen in the site photos, many staging areas for the climbing routes are surrounded by dense vegetation and the towers and cables would not be easily visible. Although the climbing routes vary in elevation and aspect, all of the climbing areas have base and summit elevations that are above the top of the gondola towers. Climbers would not be looking at or through a tower during a climbing experience, and the gondola system itself would only be visible in panoramic views as one looks down into the canyon. Climbing practitioners would not be laterally visible from the passing gondola cabins. The PPSL and COG alternatives would place project elements closer to the climbing areas than the existing road, and would be visible at the canyon bottom. The COG alternative would result in slope cuts closer to the climbing areas with the nearest point 273 feet from the Five Fingers Area.

As stated above, Site 42SL986 has been determined eligible for the NRHP under Criterion A with characteristics of integrity including location, design, setting, feeling, and association. The presence of gondola towers below the climbing routes would be a visual intrusion of modern infrastructure and lessens the historic association of the integrity of setting and feeling. However, archival research has not indicated that the views were an important or strategic element of the climbing experience in this district. The presence of the gondola infrastructure will have a minimal impact on the spatial relationships between climbing routes and the associated geologic formations and does not appreciably impact the integrity of location and design of the routes. As a historic district, it derives its importance from the interrelationship between the thematically and functionally-related climbing areas across the distinct exposed granite formation, which remains relatively unchanged since the period of significance. Under Criterion A this district is significant for the development of early hard-rock climbing technique, equipment, and support of the regional climbing community. Visual impacts to this property would not substantially affect the character defining features, important characteristics of integrity or ultimately its ability convey significance under this historic context. Therefore, none of the alternatives would result in a substantial visual intrusion and the district will continue to convey the sense of a historic environment.

UDOT has determined that although the proposed project would result in indirect impacts to Site 42SL986, these impacts are of such a degree that they would not alter the ability of this site to be eligible for or listed on the NRHP; and that therefore the finding of effect is No Adverse Effect.

SECTION 4(F) DETERMINATION

Under Section 4(f), use of a property includes permanent incorporation of land into a transportation facility, significant temporary uses, and constructive uses (i.e., severe proximity impacts). The proposed project will not incorporate any lands from Site 42SL986 or require temporary construction easements within the district boundary and therefore cannot have those types of uses. A constructive use is possible when “the proximity impacts of a proposed project adjacent to, or nearby, a Section 4(f) property result in substantial impairment to the property’s activities, features or attributes that qualify the property for protection under Section 4(f)...the value of the resource, in terms of its Section 4(f) purpose and significance, will be meaningfully reduced or lost” (FHWA Policy Paper). UDOT has demonstrated above that the auditory and visual indirect effects do not result in substantial impacts to the historical qualities of the site and do not qualify as a constructive use under Section 4(f). Additionally, constructive use does not occur when a finding of No Adverse Effect has been made (23 CFR 774.15(f)(1)).

CONSULTATION EFFORTS

No additional Native American consultation was necessary as a result of this addendum. Information concerning the Section 4(f) impacts to Site 42SL986 will be included in the FEIS that will be released in the summer of 2022 for public review. UDOT has consulted and coordinated with the USFS and representatives of the Church of Jesus Christ of Latter Day Saints who are the landowners in the district.

SUMMARY

All action alternatives (except the EBS) indirectly impact Site 42SL986 resulting in a finding of No Adverse Effect and no Section 4(f) use. The project as a whole will result in a finding of Adverse Effect for up to 2 archaeological sites and 1 architectural property, and therefore, the potential Finding of Effect for the proposed UDOT Project No. S-R299(281)0; Little Cottonwood Canyon EIS, Salt Lake County, Utah, remains **Adverse Effect**. Please note that these determinations are to be considered confidential and should not be disclosed or discussed with anyone not involved in determining concurrence until publically released.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by UDOT pursuant to 23 *USC* §327 and a Memorandum of Understanding dated January 17, 2017, and executed by FHWA and UDOT.

Please review this document and, providing you agree with the findings contained herein, provide written concurrence. Should you have any questions or need additional information, please feel free to contact Liz Robinson at 801-910-2035 or lizrobinson@utah.gov, or Elizabeth Giraud at 801-633-8484 or egiraud@utah.gov.

Sincerely,

Liz Robinson

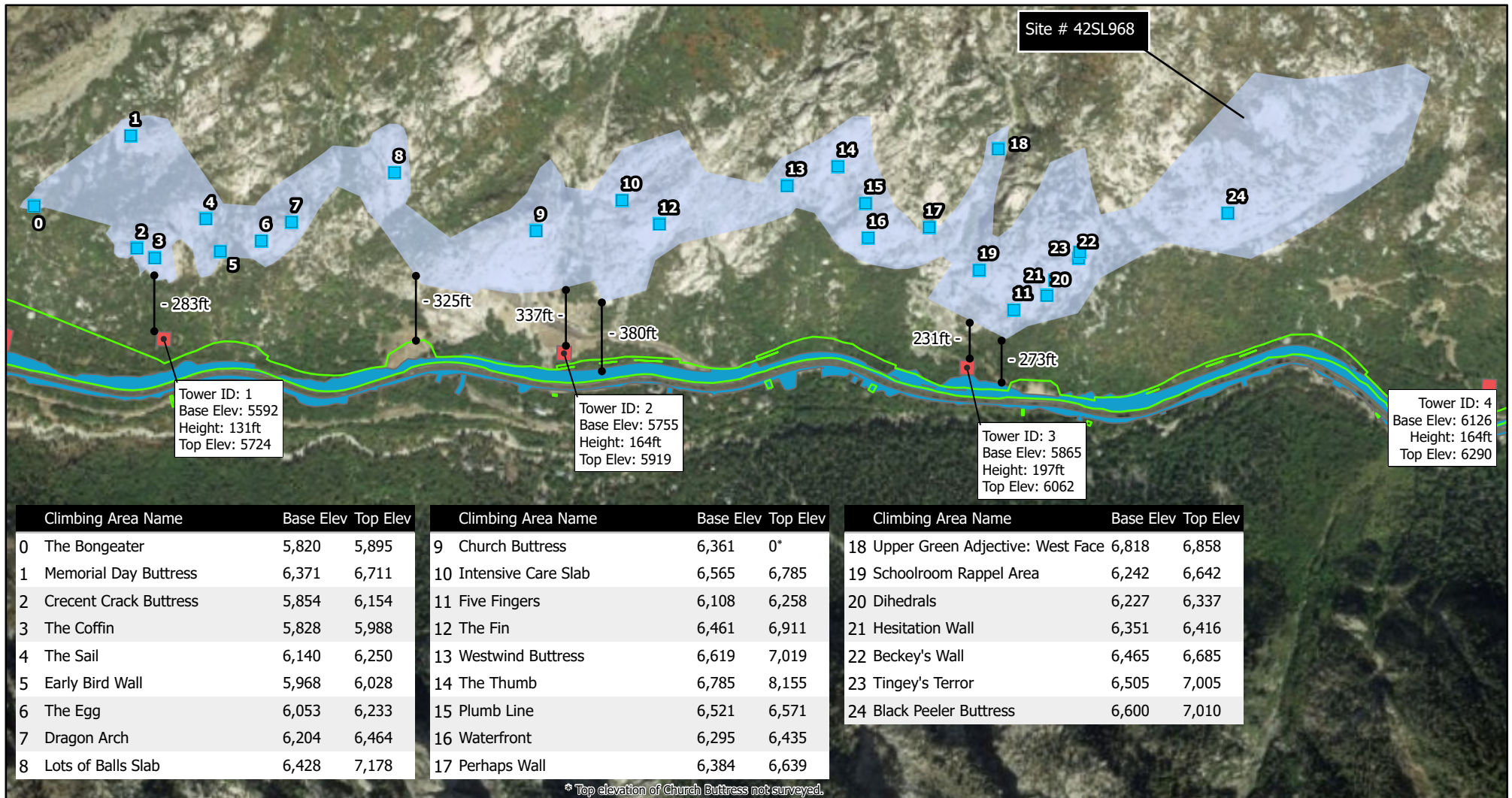
Liz Robinson
Cultural Resources Program Manager
UDOT Central Environmental

Elizabeth Giraud

Elizabeth Giraud, AICP
Architectural Historian
UDOT Central Environmental

Enclosures

cc: Joshua VanJura, Project Manager
Brandon Weston, Environmental Director



Archaeological Site (42SL968)

Climbing Areas

Alternatives

Gondola A & B Footprint^

PPSL Footprint

Cog Rail Footprint

^Tower locations and elevations are preliminary and subject to change.

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



0 500 1,000 2,000 Feet



Spencer J. Cox
Governor

Deidre M. Henderson
Lieutenant Governor

Jill Remington Love
Executive Director
Utah Department of Cultural
and Community Engagement

Christopher Merritt
State Historic Preservation Officer

May 13, 2022

Liz Robinson and Elizabeth Giraud
Cultural Resources Program Manager and Architectural Historian
Utah Dept of Transportation (UDOT)
4501 Constitution Blvd
Salt Lake City, UT 84119

RE: PIN 16092_ Little Cottonwood Canyon EIS Addendum 2 (U22ST0244)

For future correspondence, please reference Case No. 22-0781

Dear Ms. Robinson and Ms. Giraud,

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking addendum on May 09, 2022. We provided comments on the original undertaking consultation and addendums in Case Nos. 21-0815 and 22-0401.

From the information provided, it appears that the undertaking's visual effects will not adversely affect the character defining features of 42SL968. As such, we concur with your determinations of eligibility and "No Adverse Effect" for 42SL968, while the undertaking as a whole remains an "Adverse Effect".

This letter serves as our comment on the determination you have made within the consultation process specified in §36CFR800.4. Additionally, Utah Code 9-8-404(1)(a) denotes that your agency is responsible for all final decisions regarding cultural resources for this undertaking. Our comments here are provided as specified in U.C.A. 9-8-404(3)(a)(i).

If you have questions, please contact me at 801-245-7246 or by email at sagardy@utah.gov.

Sincerely,

Savanna Agardy
Compliance Archaeologist



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

TERIANNE S. NEWELL, P.E.
Deputy Director of Planning and Investment

LISA J. WILSON, P.E.
Deputy Director of Engineering and Operations

July 29, 2022

Mr. Chris Hansen
Senior Historic Preservation Specialist
Utah Division of State History
3760 Highland Dr.
Millcreek, UT 84106

Subject: UDOT Project No. S-R299(281), Little Cottonwood Canyon Environmental Impact Statement, Salt Lake County, Utah (PIN 16092)
Section 4(f) Temporary Occupancy Concurrence Request

Dear Mr. Hansen:

The purpose of this letter is to notify you that the Utah Department of Transportation (UDOT) intends to make a temporary occupancy finding regarding multiple Section 4(f) historic properties under your jurisdiction that would be affected by various alternatives of the proposed Little Cottonwood Canyon Project (also referred to as the S.R. 210 Project) and to request your concurrence with regard to these proposed findings. UDOT has previously consulted with the Utah SHPO on the *de minimis* impacts and those that are greater than *de minimis* in the Determination of Eligibility/Finding of Effect document (UDSH Case No. 21-0815) and its amendments. However, as temporary occupancy impacts that do not constitute a use under Section 4(f) cannot be approved with the Section 106 determinations, this additional concurrence is necessary.

These temporary occupancy findings are pursuant to Section 4(f) of the Department of Transportation Act of 1966; Section 6009 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and 23 Code of Federal Regulations (CFR) Part 774. The review, consultation, and other actions required by these laws and rules are being carried out by UDOT pursuant to 23 United States Code Section 327 and a Memorandum of Understanding dated January 17, 2017, and executed by the Federal Highway Administration and UDOT.

Project Description

UDOT is preparing an Environmental Impact Statement (EIS) for Little Cottonwood Canyon and Wasatch Boulevard in cooperation with the U.S. Department of Agriculture (USDA) Forest Service to provide an integrated transportation system that improves the reliability, mobility, and safety for residents, visitors, and commuters who use State Route (S.R.) 210. The proposed project study area extends from the intersection of S.R. 210 and S.R. 190/Fort Union Boulevard in Cottonwood Heights to the terminus of S.R. 210 in the town of Alta. Transportation improvements are needed to address congestion, improve safety for all users, and enhance the availability of public transportation options in Little Cottonwood Canyon.

Primary Alternatives and Sub-alternatives

Five primary alternatives are being evaluated in detail in the Final EIS:

- Enhanced Bus Service Alternative
- Enhanced Bus Service in Peak-period Shoulder Lane (PPSL) Alternative
- Gondola Alternative A (Starting at Canyon Entrance)
- Gondola Alternative B (Starting at La Caille)
- Cog Rail Alternative (Starting at La Caille)

Each action alternative includes the following items: widening of Wasatch Blvd (WB), two mobility hubs, avalanche mitigation, changes to trailhead parking and no winter roadside parking. Detailed information regarding all of the alternatives is available on the project website at www.littlecottonwoodeis.udot.utah.gov. Avoidance, minimization, and mitigation measures have been considered during the development of the alternatives, and the appropriate measures were incorporated into all of the alternatives.

Section 4(f) Properties and Uses

For a resource to be evaluated under Section 4(f), it must qualify as a Section 4(f) property and be impacted by the project in some way. A Section 4(f) property is defined as any of the following:

- Parks and recreation areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public. Archaeological sites must also be eligible under an NRHP criterion other than Criterion D and warrant preservation in place.

Section 4(f) Use

Once a Section 4(f) property has been identified, the next determination is if the impacts of the project constitute a use. The most common form of use is when land is permanently incorporated into a transportation facility. This occurs either when land from a Section 4(f) property is purchased outright as transportation right of way or when permanent access onto the property such as a permanent easement for maintenance or other transportation-related purpose is granted. Once a Section 4(f) use has been determined, the impact from the project may qualify as a temporary occupancy (either severe impacts constituting a use or with temporary impacts so minimal as to not constitute a use), *de minimis*, or an impact that is greater than *de minimis*.

Temporary Occupancy Definition

Temporary occupancy occurs when a Section 4(f) property is occupied during construction but the impacts are so minimal that they do not constitute a use within the meaning of Section 4(f). The following conditions must be satisfied:

1. The duration must be temporary, that is, less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. The scope of the work must be minor, that is, both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis;
4. The land being used must be fully restored, that is, the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

Historic Properties with Temporary Occupancy

Of the Section 4(f) historic resources on this project, seven will have impacts that qualify as temporary occupancy (Table 1). The temporary occupancy at these properties do not rise to the level of a Section 4(f) use.

Table 1. Historic Properties with Temporary Occupancy

Resources	Description of Use	Section 4(f) Use/Impact	Alternative Affecting Resource
3461E. Kings Hill Dr.	Widening Wasatch Boulevard would require a temporary construction easement of ~0.02 acre. The historic building would not be affected.	No/ temporary occupancy	Wasatch Blvd.
3475E. Kings Hill Dr.	Widening Wasatch Boulevard would require a temporary construction easement of 0.01 acre. The historic building would not be affected.	No/ temporary occupancy	Wasatch Blvd.
8640S. Russell Park Rd.	Widening Wasatch Boulevard would require a temporary construction easement of ~0.06 acre. The historic building would not be affected.	No/ temporary occupancy	Wasatch Blvd.
3742E. North Little Cottonwood Canyon	Widening Little Cottonwood Canyon Road would require a temporary construction easement of ~0.19 acre. The historic building would not be affected.	No/ temporary occupancy	PPSL
4700E. Little Cottonwood Canyon (Temple Quarry Historical Marker)	Widening Little Cottonwood Canyon Road would require a temporary construction easement of ~0.71 acre. The historical marker would not be affected.	No/ temporary occupancy	PPSL and COG
4526E. Little Cottonwood Canyon	Widening Little Cottonwood Canyon Road would require a temporary construction easement of ~0.01 acre. The historic building would not be affected.	No/ temporary occupancy	PPSL
5002E. Little Cottonwood Canyon	Widening Little Cottonwood Canyon Road would require a temporary construction easement of ~0.02 acre. The historic building would not be affected.	No/ temporary occupancy	PPSL

Public Notice and Opportunity for Public Comment

UDOT provided public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of Section 4(f) properties in conjunction with the opportunity for public review of and comments on the Draft EIS. UDOT released the Draft EIS on June 25, 2021, followed by a 70-day public comment period that ended on September 3, 2021. UDOT released a Revised Draft Section 4(f)/Section 6(f) Evaluation on December 10, 2021, followed by a 30-day public comment period that ended on January 10, 2022. UDOT will also have a 45-day public review period for release of the Final EIS. During both public comment periods, UDOT received numerous comments concerning the effects on the protected activities, features, or attributes of the Section 4(f) resources under your jurisdiction. UDOT, developed responses to these comments, and these responses are included in the Final EIS in Section 32.26, *Section 4(f) and Section 6(f) Evaluation*, of Chapter 32, *Response to Comments on the Draft EIS*.

Request for Concurrence

On May 7, 2021, the Utah SHPO concurred with the Section 4(f) impact findings of *de minimis* impacts and impacts greater than *de minimis*. We are now requesting your concurrence with the Section 4(f) temporary occupancy findings listed herein. If you have any questions, please contact me at (801) 910-2035 or lizrobinson@utah.gov.

Sincerely,



Liz Robinson
Cultural Resources Program Manager
Utah Department of Transportation

I concur with the Section 4(f) evaluation described above and with UDOT's intent to make a Section 4(f) temporary occupancy for the properties described above.

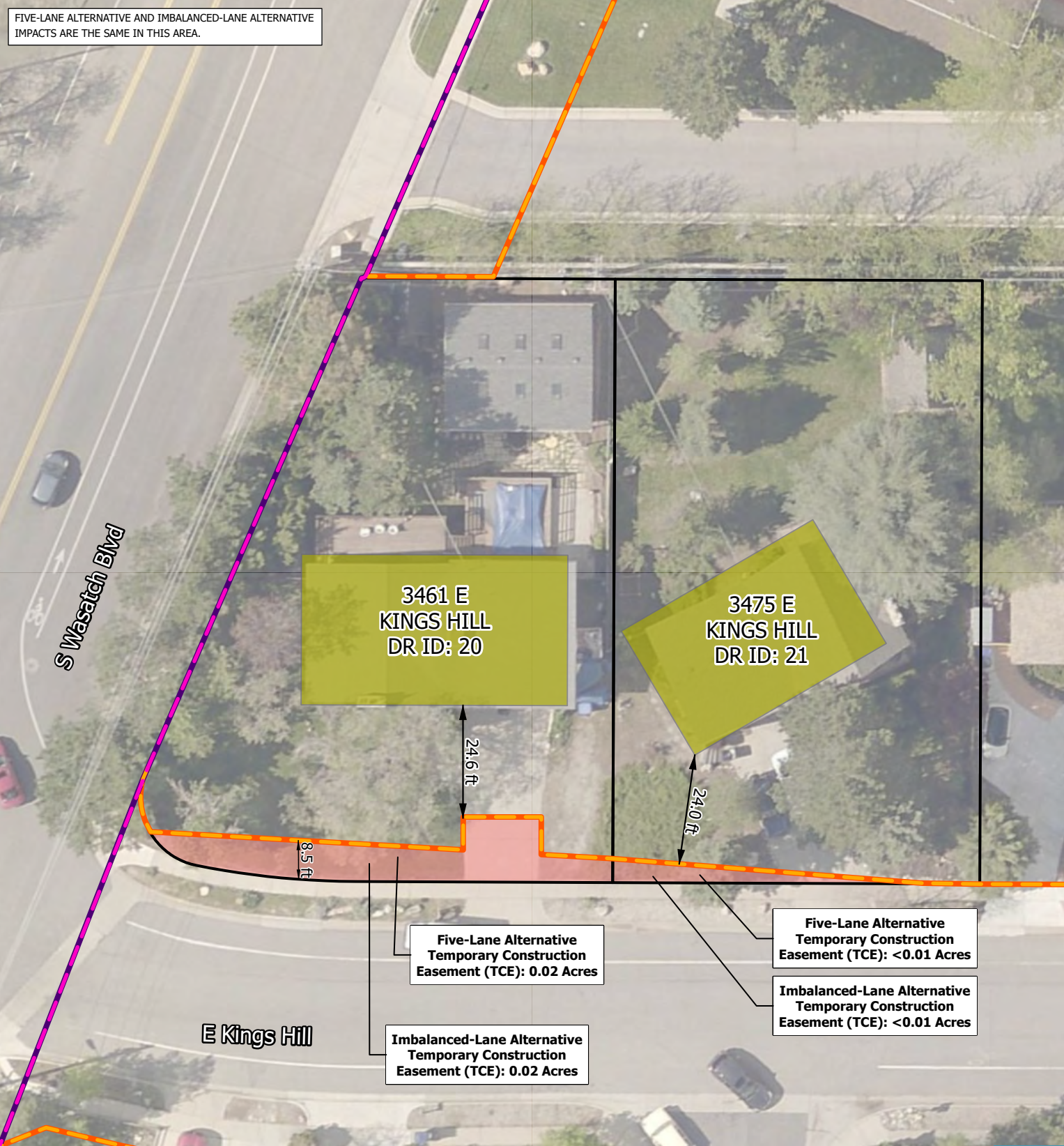


Chris Hansen
Deputy Utah State Historic Preservation Officer

August 1, 2022

Date

FIVE-LANE ALTERNATIVE AND IMBALANCED-LANE ALTERNATIVE IMPACTS ARE THE SAME IN THIS AREA.



E Kings Hill

3461 E
KINGS HILL
DR ID: 20

3475 E
KINGS HILL
DR ID: 21

Five-Lane Alternative
Temporary Construction
Easement (TCE): 0.02 Acres

Five-Lane Alternative
Temporary Construction
Easement (TCE): <0.01 Acres

Imbalanced-Lane Alternative
Temporary Construction
Easement (TCE): 0.02 Acres

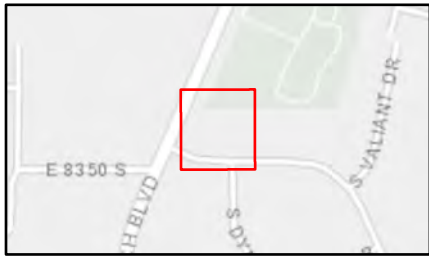
Imbalanced-Lane Alternative
Temporary Construction
Easement (TCE): <0.01 Acres

24.6 ft

24.0 ft

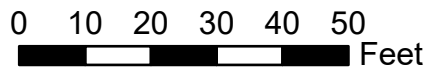
8.5 ft

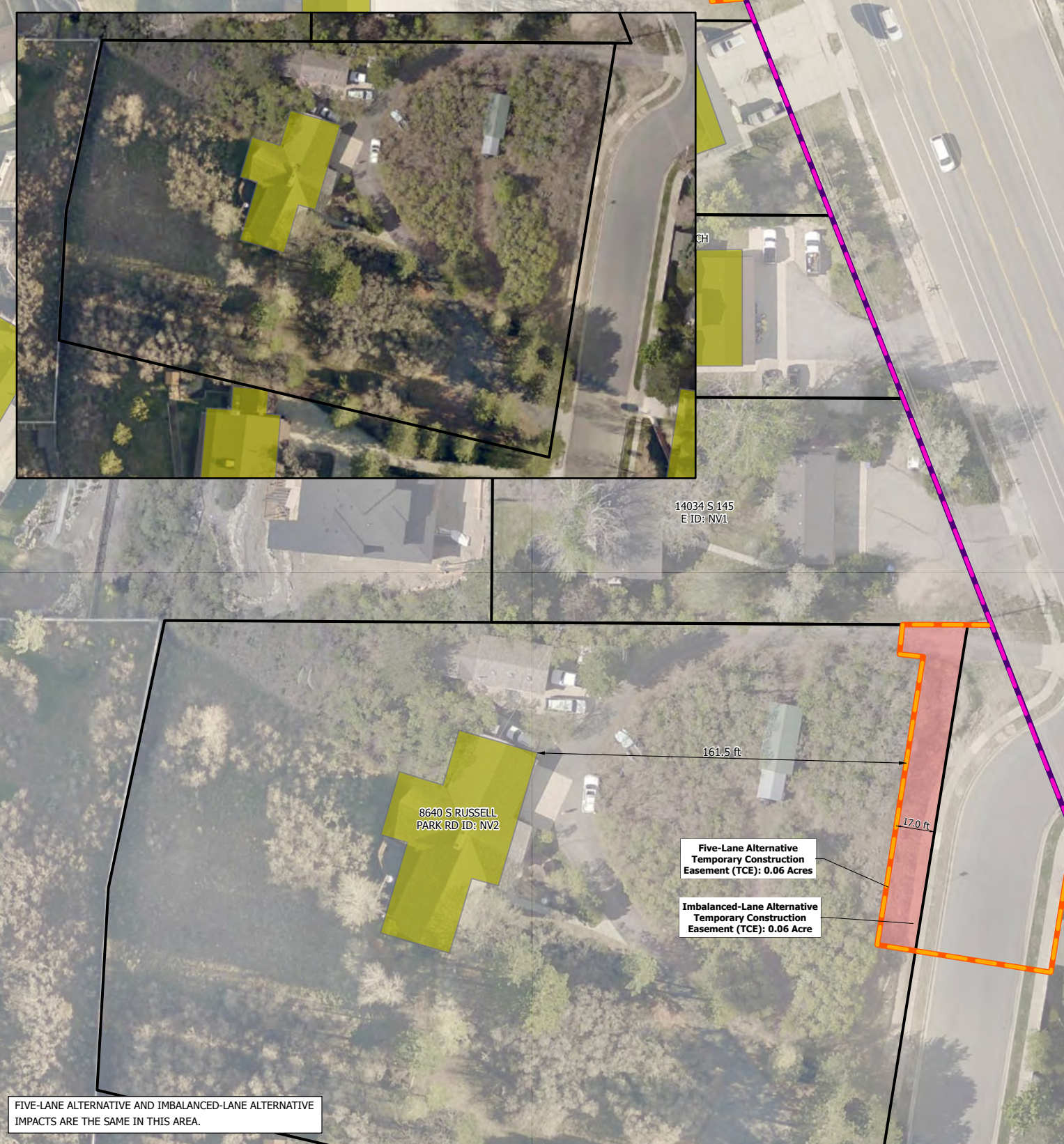
S Wasatch Blvd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Five-Lane Alternative TCE
- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





FIVE-LANE ALTERNATIVE AND IMBALANCED-LANE ALTERNATIVE IMPACTS ARE THE SAME IN THIS AREA.

8640 S RUSSELL
PARK RD ID: NV2

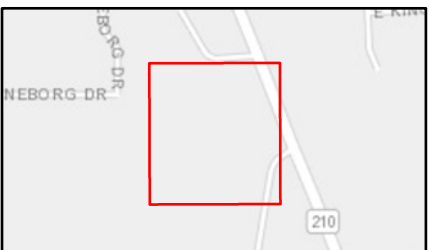
14034 S 145
E ID: NV1

161.5 ft

17.0 ft

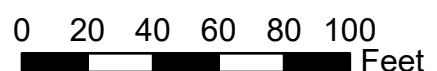
Five-Lane Alternative
Temporary Construction
Easement (TCE): 0.06 Acres

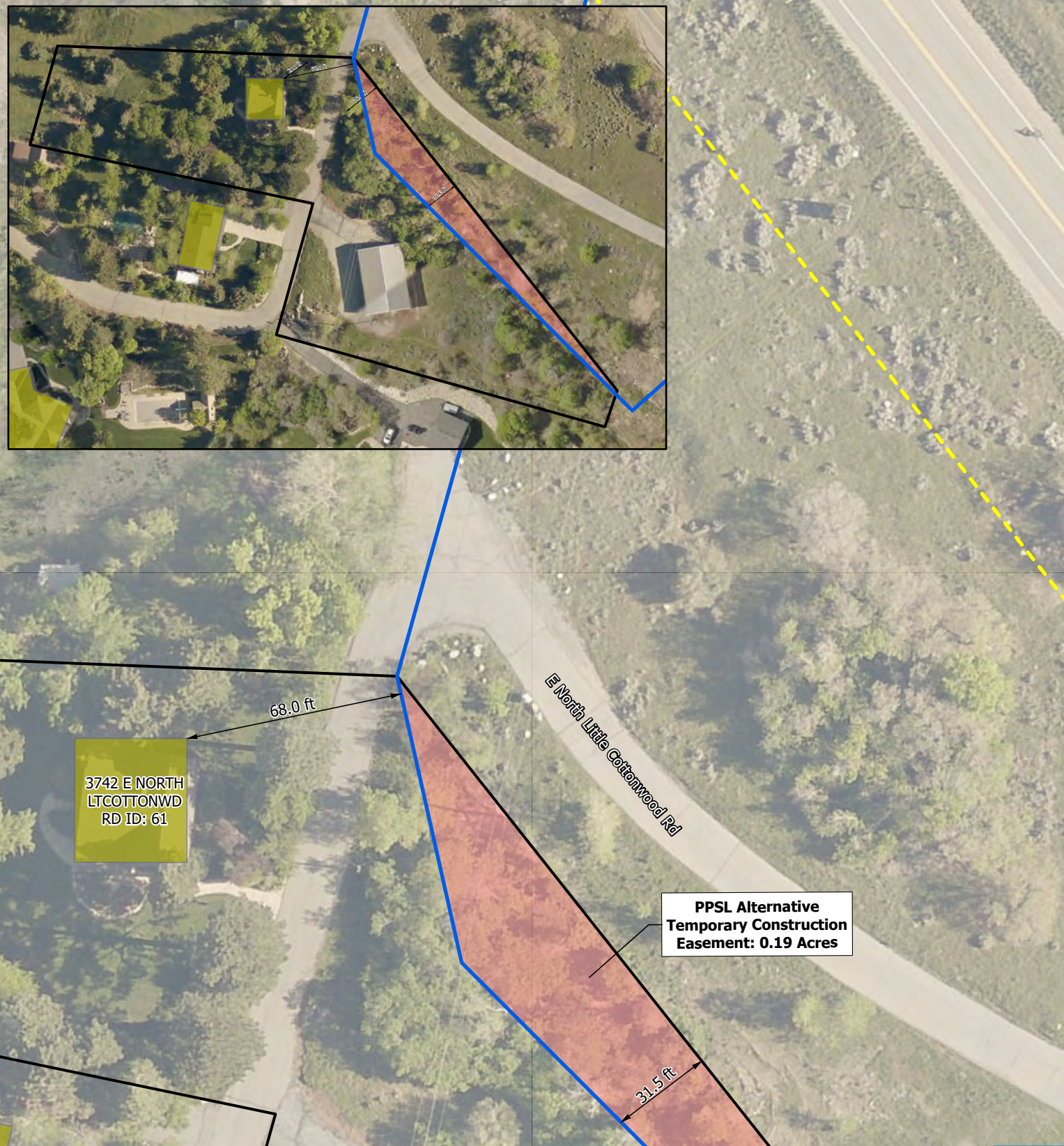
Imbalanced-Lane Alternative
Temporary Construction
Easement (TCE): 0.06 Acre



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- Five-Lane Alternative TCE
- Five-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative Partial Acquisition
- Imbalanced-Lane Alternative TCE

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Temporary Construction
Easement: 0.19 Acres**

**3742 E NORTH
LTCOTTONWD
RD ID: 61**

68.0 ft

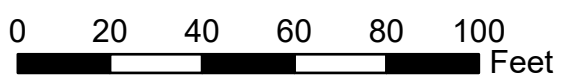
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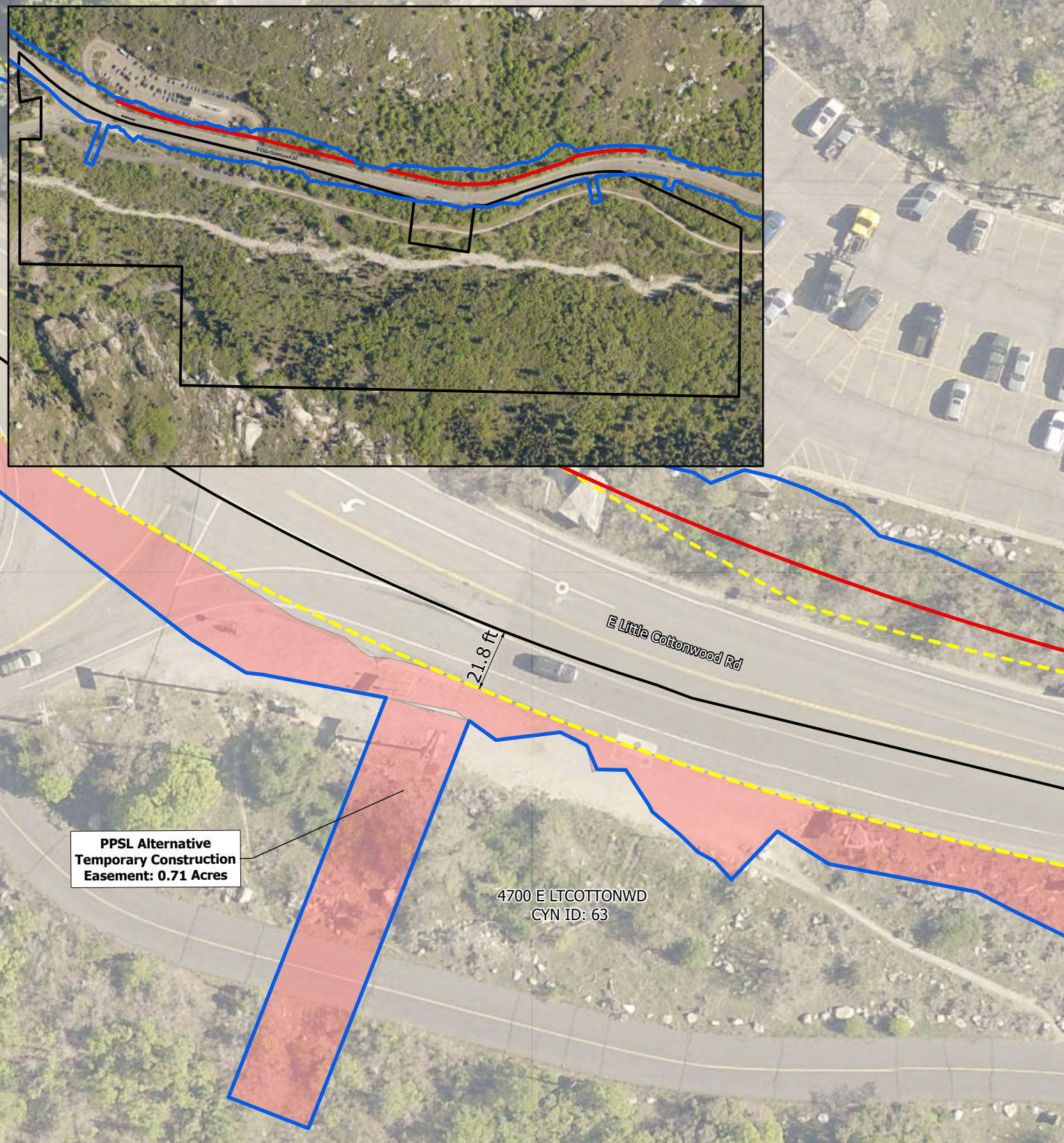
E North Little Cottonwood Rd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





**PPSL Alternative
Temporary Construction
Easement: 0.71 Acres**

4700 E LTCOTTONWD
CYN ID: 63

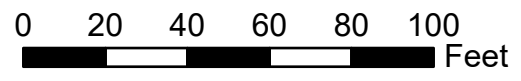
21.8 ft

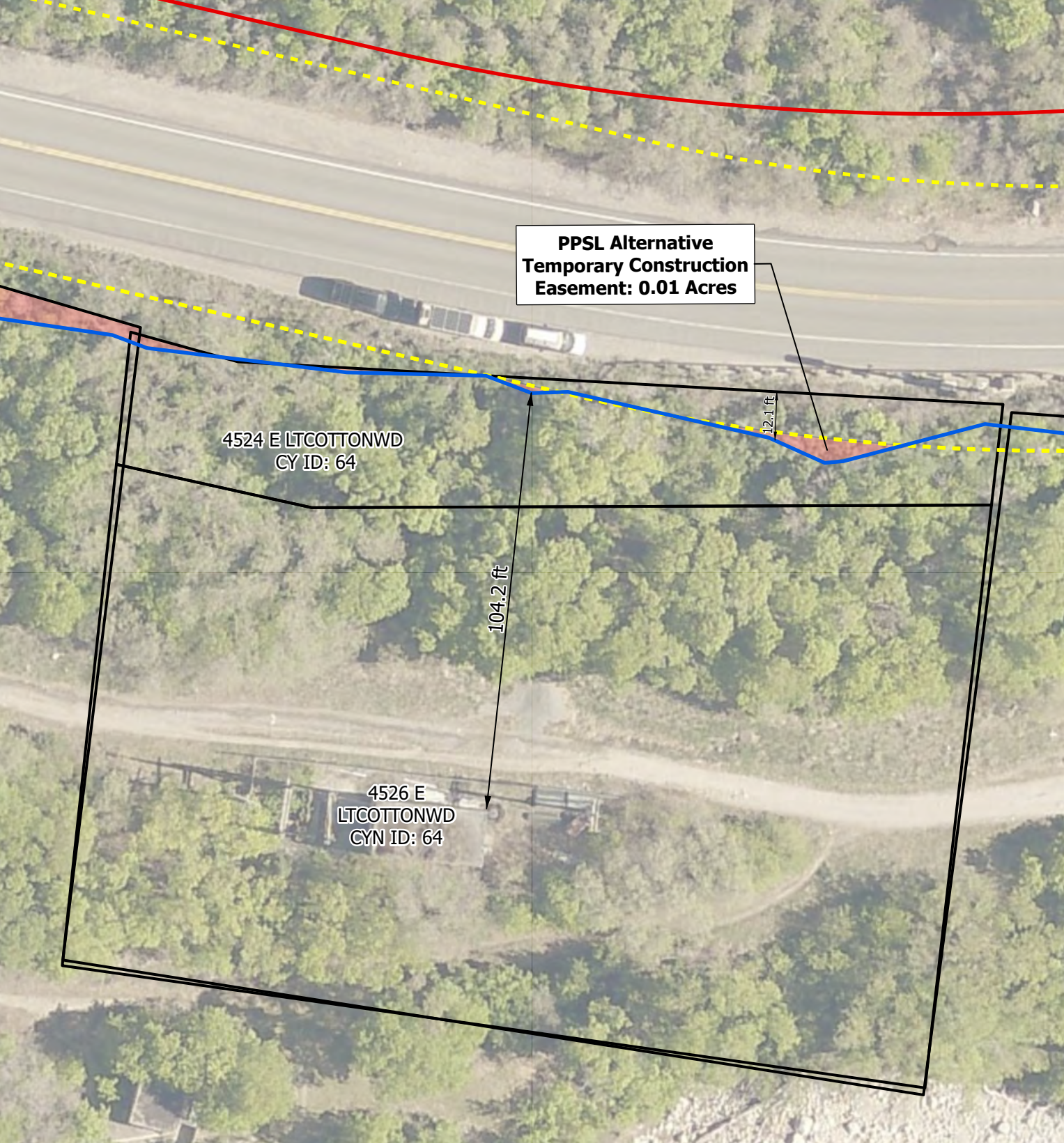
E Little Cottonwood Rd



- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

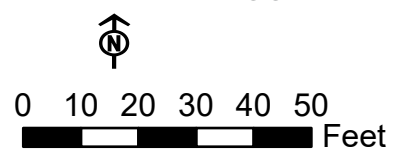
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

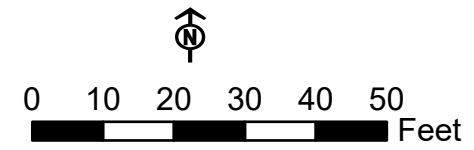
LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT

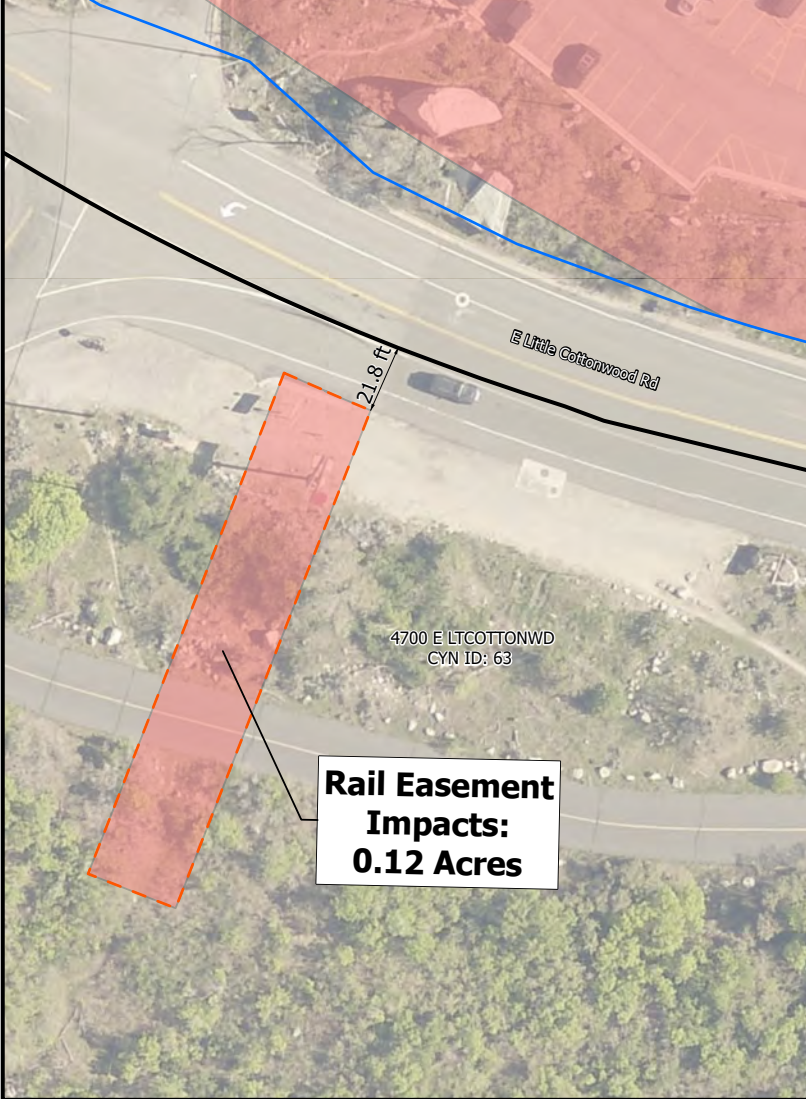
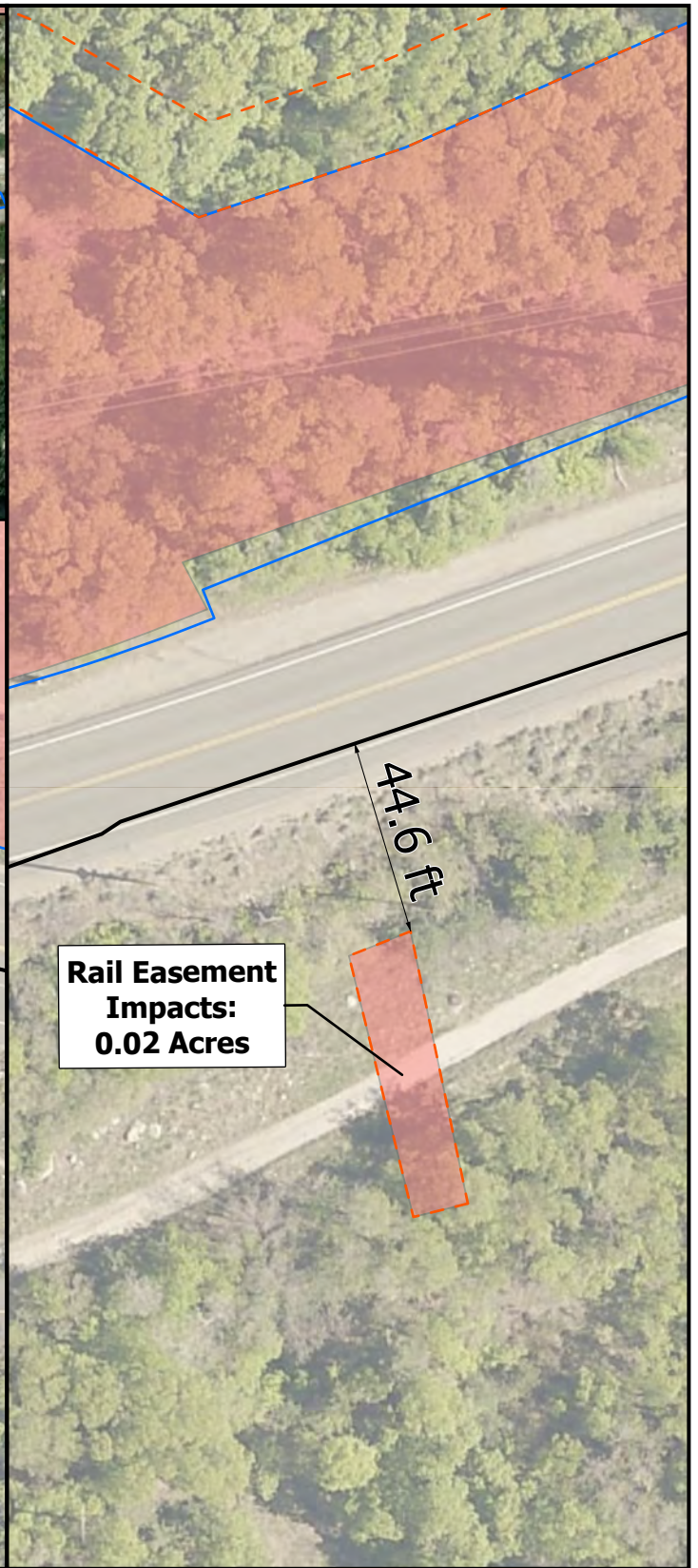
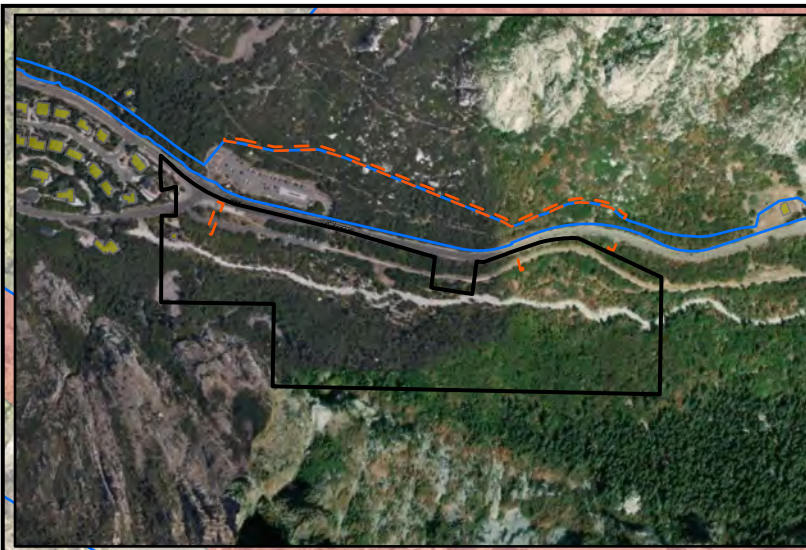








- NRHP-Eligible Historic Building
- Historic Parcels
- Impacted Area
- PPSL New ROW
- PPSL Easement
- PPSL Existing ROW

LITTLE COTTONWOOD CANYON EIS
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DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT





-  Historic Parcels
-  Impacted Area
-  Rail Easement
-  Rail New ROW

LITTLE COTTONWOOD CANYON EIS
PROJECT S-R299(281); PIN 16092
DETERMINATION OF ELIGIBILITY AND
FINDING OF EFFECT



0 20 40 60 80 100
Feet