January 7, 2016

REPORT FROM THE ZONING ADMINISTRATOR TO THE UTAH COUNTY BOARD OF ADJUSTMENT FOR APPEAL NO. 1552

I. APPLICATION:

A. APPLICANT	**-**	**Snowbird Ski & Summer Resort**
B. REQUEST	**-**	**Conditional use for accessory ski lifts and various associated mountain resort facilities**
C. LOCATION	**-**	**Sections 8, 17, 18, 19, 20, 29, T3S R3E, American Fork Canyon area of Utah County**
D. ZONING	**-**	**CE-1, Critical Environment Zone**
E. ACREAGE	**-**	**Approximately 860 acres**

II. ZONING ADMINISTRATOR'S REVIEW:

Parcel Information

The subject property consists of property (parcel 11:058:0039 and patented mining claims) owned by Snowbird Resort LLC and others in the American Fork Canyon area of Utah County. Much of the property is used as accessory ski lifts and other various mountain resort facilities accessory to the Snowbird Ski and Summer Resort located in Salt Lake County. The accessory ski lifts were approved by the Utah County Planning Commission as a conditional use on October 21, 1997. Permits issued associated with this conditional use include the following: #98-186, #98-315, #99-084, #00-210, #01-121, #01-146, #01-190, #01-191, and #05-266.

The mountain resort facilities were approved by the Utah County Board of Adjustment as a conditional use in 2012 and 2013 through Appeal #1522 and Appeal #1525. Zone Compliance Permit #13-006 was issued associated with these conditional uses, which included mountain resort facilities such as horseback riding trails and concessions, snow-cat skiing trails, cross-country skiing trails, hiking and mountain biking trails, skier warming facilities, snowmobiling , ATV riding trails, and pre-cooked food and beverage facilities.

On September 4, 2014, the Board of Adjustment approved a conditional use (Appeal #1540) on the subject property for a man-made uncovered water reservoir with a capacity over ten(10) acre-

feet for water storage for snow-making purposes. Zone Compliance Permit #14-022 was issued associated with this conditional use.

The property lies within the Urban Wildland Interface area of Utah County.

Parcel's Status in Present CE-1 Zone

The property is presently in the Critical Environmental (CE-1) Zone and would appear to be eligible for all permitted and conditional uses in the CE-1 Zone, subject to meeting all applicable requirements for a given use.

Applicant's Request

The applicant would like to install and operate additional accessory ski lifts and associated mountain resort facilities on the subject property. These facilities and uses would be constructed in the Mineral Basin and Mary Ellen Gulch areas in upper American Fork Canyon. The existing lifts are located in Mineral Basin and this application includes a proposed realignment and extension of an existing lift (Mineral Basin Express Lift). The proposal includes the following:

-**Replacement and realignment of the Mineral Basin Express lift**, which would include a downhill extension of the lift. This realignment and extension includes the addition of three(3) new ski runs to access the new downhill location of the bottom terminal of the lift.

-A **proposed ski patrol facility on Hidden Peak** located just below the current Mineral Basin Express top lift terminal. The application indicates this structure will be approximately 2,300 square feet.

-A **proposed "lift equipment facility/lift operator shelter" in Mineral Basin** near the opening of the existing skier tunnel. The application indicates this structure will be used for lift operation and maintenance and storage of associated equipment and supplies. The application indicates this structure will be approximately 4,000 square feet, with the ability to reduce the size to approximately 1,800 square feet if needed.

-**Proposed four(4) "avalanche control devices" in Mineral Basin** near the ridge of Mary Ellen Gulch, with **three(3) more on the Mary Ellen Gulch side**. The application indicates these devices will be similar to those currently located in Little Cottonwood Canyon above State Route 210.

-**Proposed "Mary Ellen Lift" in Mary Ellen Gulch**, with the top lift terminal on Hidden Peak and the bottom lift terminal near the top of the southern ridge of Mary Ellen Gulch. This "gondola-style" lift will have a mid-station lift on the ridge below the American Fork East Twin Peak, above the "bookends". The proposal indicates the mid-station will have load/unload capabilities to serve as a launch tower for zipline(s) that will follow the lift alignment.

-**Proposed "Sunday Saddle" lift** to supplement downhill skiing in Mary Ellen Gulch. The

application indicates the upper operator's room of the lift will include "minimal Ski Patrol space". The addition of this lift will include development of "four to six ski runs".

-**Two(2) proposed warming huts**. The application indicates a "small one" built to accommodate approximately 30 people comfortably (more for emergencies) will be constructed at the bottom of the Mary Ellen lift. A "larger one" built to accommodate approximately 100 people comfortably (more for emergencies) will be constructed at the bottom of the Sunday Saddle lift. The application indicates each warming hut may offer pre-packaged food and beverage services, and each will also include allocated space for Ski Patrol staff and equipment.

The application includes supplemental information detailing the proposal, including:

-A **site plan** consisting of 11 maps depicting information such as existing conditions and infrastructure, proposed infrastructure and uses, vegetation types, soils and hydrology, integration with existing operations, and viewshed impacts.

-An **operations disclosure statement** detailing the following:
- -Scope and purposed of the development
- -Ownership of the property and adjoining properties
- -Provision of utilities and emergency access
- -Management and operations of the proposal

-A **development impact statement** containing information related to the following:
- -Name, date, sponsor, and description of the project
- -Description of the environment
- -Impacts related to surface drainage and water quality, underground drainage, flood hazards, wildlife, vegetation, fire hazards, geologic hazards, slope hazards, soil erosion, socio-economic factors
- -Mitigation measures related to any anticipated adverse environmental effects

-A **fiscal impact report**

-Supporting letters related to the provision of **emergency services**

-**Best management practices** related to erosion and sedimentation control, airborne nuisance management, and resource conservation

-A **transportation analysis** related to the traffic impacts of the proposal

In summary, the applicant is requesting a conditional use for accessory ski lifts and various associated mountain resort facilities in the CE-1 Zone of Utah County.

Applicable Ordinances and Laws

The following are ordinances and laws pertaining to this appeal:

1. **Section 5-5-C-7** of the Utah County Land Use Ordinance lists "accessory ski lifts and associated mountain resort facilities" as a conditional use in the CE-1 Zone, subject to approval by the Board of Adjustment.

2. **Section 3-47** lists the standards and requirements for accessory ski lifts and associated mountain resort facilities (see attached copy for reference).

3. **Section 7-20** contains the rules for hearing and deciding appeals for conditional uses (see attached copy for reference).

III. STAFF FINDINGS:

1. **Section 5-5-C-7** of the Utah County Land Use Ordinance lists accessory ski lifts and associated mountain resort facilities as a permitted conditional use in the CE-1 Zone, subject to approval by the Board of Adjustment as a conditional use according to the provisions of Section 7-20.

2. An application was submitted December 8, 2015 as per **Section 7-20-A**.

3. The application is for a conditional use which the Board is empowered to approve as per **Section 7-20-B**.

4. The application appears to meet the requirements of **Section 7-20-C-1**, which requires the proposed conditional use to not degrade the public health, safety, or welfare. It would not appear to have any obvious negative effects on the public heath, safety, or welfare. Mitigation measures such as management and operation plans, limits of operation, etc., for any inherent concerns can be accomplished through conditions attached to any approval of this application.

5. The application appears to meet the requirements of **Section 7-20-C-2**, which requires the proposed conditional use to meet the general purposes and intent of the ordinance, as specified in Section 1-2. Specifically, it would foster industry (tourism) and create conditions favorable to recreational opportunities as listed in Section 1-2-D and 1-2-J.

6. The application appears to meet the requirements of **Section 7-20-C-3**, which requires the proposed conditional use to be consistent with the "characteristics and purposes" stated for the zoning district involved and the adopted general plan. This conditional use would appear to provide a mountain recreation area that could be developed to help meet the demand for mountain/rural recreation activities (Policy D, Objective 9, Chapter 1, Utah County General Plan, 2014).

7. The application appears to meet the requirements of **Section 7-20-C-4**, which requires the

proposed conditional use be compatible with the public interest and with the characteristics of the surrounding area. Adjacent uses to the property include ski resorts and recreational land, and federal forest land, both of which would appear to be compatible and similar uses. The application also would appear to provide uses that would provide outdoor recreational activities in a managed and supervised manner, which would appear to be beneficial to the public's interest.

8. The application appears to meet the requirements of Section **7-20-C-5**, which requires the proposed conditional use to be shown to not adversely affect local property values. There appears to be no evidence this conditional use would adversely affect local property values due to the general compatibility with the adjacent properties and their uses, as stated above. In addition, the applicant has indicated the ability to build the lift structures with materials and colors that are in compliance with the Forest Service's "Built Environment Image Guide" to help mitigate the visual impacts of the lifts. Also, the application included a viewshed analysis which concludes the visual impact on populated or recreation areas will be minimal. **However, the application did not include any appraisals or other professional statements regarding property values. The Board may want to take this into consideration.**

9. The application appears to meet the requirements of **Section 7-20-C-6**, which requires the proposed conditional use to comply with all of the terms and requirements of the ordinance. Analysis of each applicable section of the ordinance are as follows:

   Section 3-47 lists the standards and conditions required for accessory ski lifts and associated mountain resort facilities**. Each requirement is analyzed as follows**:

   Section 3-47-C lists the permitted facilities allowed under this Section. All of the applicant's proposed uses/facilities are listed as permitted. **The application appears to meet this section.**

   Section 3-47-D requires the applicant to submit a site plan of the proposed accessory ski lifts and mountain resort facilities that shows all existing and proposed structures, roads, runs, restrooms, shelters, etc. In addition, the site plan must indicate topography, vegetation, and soil types. A site plan, as a series of maps, was submitted by the applicant that appears to show the required items. **The application appears to meet this section.**

   Section 3-47-E requires the application to include an operations disclosure statement for the proposal which includes the scope and purpose of the application, ownership information, provisions of essential services, and management and operations procedures. The application included an operations disclosure statement that **appears to meet this requirement**.

   Section 3-47-F requires the application to include a developmental impact report which analyzes the impacts of the proposed use(s), along with proposed mitigation measures to compensate for impacts caused by the proposal. The application included a

Developmental Impact Report that was stated to have been prepared by Cirrus Ecological Solutions, LC, an environmental consulting firm, and A-Trans, a traffic engineering firm, that **appears to meet this requirement**.

Section 3-47-G requires the application include a fiscal impact report detailing the anticipated impacts relative to government services and revenue sources, including impacts during construction, phases, etc. The application included a Fiscal Impact Report that was stated to have been prepared by Cirrus Ecological Solutions, LC that **appears to meet this requirement**. Relative to the impact on government services, the application summarizes that "virtually all services with be provided through integration with the existing resort, made unnecessary through project design, or be provided by Salt Lake County agencies through existing agreements".

Section 3-47-H-1 requires the land on which the facilities lie be located in the CE-1 Zone on a zoning lot which abuts an existing ski resort in an adjoining county, or on zoning lots that do not abut a recorded recreational resort plat or an existing ski resort in an adjoining county, but are connected through an authorized connection between zoning lots abutting the resort plat or ski resort and the outlying zoning lots. The property does lie within the CE-1 Zone and appear to abut the existing Snowbird Resort in Salt Lake County as multiple mining claims. **The application appears to meet this section, subject to the property meeting the definition of a zoning lot or lots. This can be assured through a condition attached to any potential approval of this application.**

Section 3-47-H-2 requires the land on which the facilities are located, along with the land on which the existing ski resort is located, to be in the same ownership. It appears all of the subject property (mining claims and parcel 11:058:0039) in Utah County, and the existing resort in Salt Lake County, are in the name of "Snowbird Resort LLC", with one exception. Parcel 11:058:0038 ("Flora" mining claim) is owned by various members of the Nash family, as indicated by records in the Utah County Recorder's Office. The application indicates Snowbird is currently in process of negotiating the purchase of this property. However, as of the date this report is being prepared (12/30/15), that purchase has not been shown to have been completed. If the property is not obtained by Snowbird, it will need to be removed from this application. **The application appears to meet this section, subject to parcel 11:058:0038 being shown to be in the ownership of Snowbird Resort LLC, or being removed from this application. This can be assured through a condition attached to any potential approval of this application.**

Section 3-47-H-3 requires the Board to find that neither flooding, water quality, nor other aspects of the environment will be unreasonably diminished by approval of the application, and that conditions of approval can be attached which can reasonably be expected to mitigate any environmental impacts. As stated above, the application includes a "Developmental Impact Report" that appears to adequately address the required issues. The submitted Developmental Impact Report includes a number of mitigation measures that are proposed to be implemented in the construction and operation of the project. These mitigation measures can be assured through a condition

attached to any potential approval of this application.

Section 3-47-H-4 requires the Board to find that the costs of providing governmental services generated by the proposal have been considered**. The application appears to meet this requirement, as discussed above.**

Section 3-47-H-5 requires the Board to find the facilities will have a safe design, and the risks associated with avalanches, rock fall, and other natural hazards have been addressed. As stated above, the application includes a "Developmental Impact Report" that appears to adequately address the required issues. In addition, such hazards are currently addressed through the resorts existing operations, which experience and practice will be extended to the proposed area**. The application appears to meet this requirement.**

Section 3-47-H-6 requires the Board to find the facilities will not significantly reduce property values of adjacent parcels of land. **The application appears to meet this requirement, as discussed above.**

Section 3-47-H-7 requires the Board to find the facilities are harmonious with the alpine setting, unobtrusive as reasonably possible, environmentally sensitive, aesthetically acceptable, and adequately integrated into the existing resort. As mentioned above, the application includes a "Development Impact Report" that includes measures to mitigate adverse environmental effects of the project. In addition and also as mentioned above, the applicant has indicated the ability to build the lift structures with materials and colors that are in compliance with the Forest Service's "Built Environment Image Guide" to help mitigate the visual impacts of the lifts. In addition, the application included a viewshed analysis which concludes the visual impact on populated or recreation areas will be minimal. **The application appears to meet this requirement**.

Section 3-47-H-8 requires the Board to find that adequate parking, patron access, and other public facilities exist for the increase in utilization of the existing resort. The application included a transportation analysis prepared by A-Trans Transportation Engineering that concludes the proposal will have a negligible impact on the existing parking and highway demand. The existing Snowbird Resort in Salt Lake County appears to have significant existing parking, transit, and other public facilities to handle the proposed activities. **The application appears to meet this requirement.**

Section 3-47-H-9 requires that all access to the proposed facilities be exclusively through the existing ski resort to which the facilities are appurtenant. The application indicates all access will be through the existing Snowbird base area in Salt Lake County utilizing the existing tram, lifts, road, and trails. An "Operational Integration" map was included that illustrates integration with the existing resort. **The application appears to meet this requirement**.

10. The application appears to meet the requirements of **Section 7-20-C-7**, which requires the proposed conditional use to be shown to **not** result in a situation which is cost ineffective,

administratively infeasible, or unduly difficult for the provision of essential services. Those services appear to be presently available due to the existing resorts and uses in the area.

IV. ZONING ADMINISTRATOR'S POSITION:

That the Utah County Board of Adjustment consider **approval** of the request for a conditional use for **accessory ski lifts and various associated mountain resort facilities** in the CE-1 Zone, subject to the following minimum conditions:

1. That the application meet all the criteria for approving a conditional use as per Section 7-20-C(1) through (7) of the Utah County Land Use Ordinance, to the extent required in Section 7-20-D;

2. That all applicable permits be issued for all structures and uses associated with the proposed accessory mountain resort facilities to be constructed or utilized on the property that meet all applicable building, zoning, health, and fire-safety requirements. Development and construction shall be consistent with all stated conditions and procedures, including "best management practices", as referenced in the submitted application;

3. That all requirements and standards of Section 3-47 for accessory mountain resort facilities be met;

4. That prior to the approval of any building or land use permit associated with this application, the subject property compromised of mining claims be consolidated by deed into a Utah County-assessed parcel. This parcel shall constitute a zoning lot as defined in Section 2-2-A-82-c of the Utah County Land Use Ordinance;

5. That all mitigation measures referenced in the submitted "Development Impact Report" be implemented and met;

6. That the existing cabin located on what appears to be the "Silver Wave" mining claim be removed prior to the approval and issuing of any building or land use permit associated with this application. Alternatively, the property/mining claim the cabin lies upon may be removed from this application to preserve any determined legal non-conforming status of the property and/or structure;

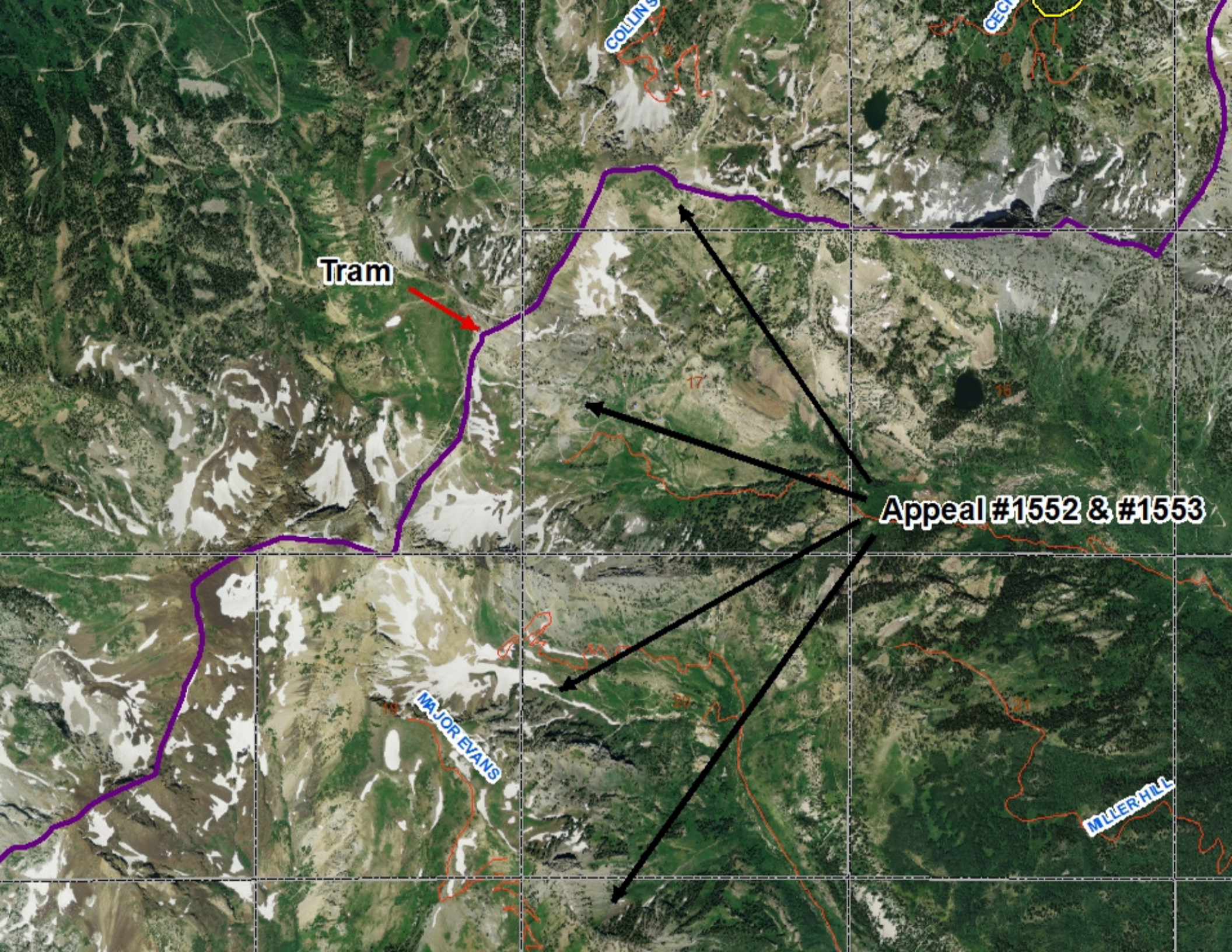
7. That the proposed warming hut located near the bottom terminal of the "Mary Ellen Lift" be limited in size to 900 square feet as measured by the currently adopted building construction codes of Utah County;

8. That the proposed warming hut located near the bottom terminal of the "Sunday Saddle Lift" be limited in size to 2,000 square feet as measured by the currently adopted building construction codes of Utah County;

9. That the proposed lift operator shelter located near the existing skier tunnel be limited in size

to 1,800 square feet as measured by the currently adopted building construction codes of Utah County;

10. That the proposed ski patrol facility on Hidden Peak be limited in size to 2,300 square feet as measured by the currently adopted building construction codes of Utah County.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Appeal #1552 & #1553
COLLINS
MAJOR EVANS
MILLER HILL

Section 7-20:Rules for Hearing And Deciding Appeals for Conditional Uses

When the Board of Adjustment acts under its power to hear and decide requests for conditional uses, the conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the conditional use may be denied. The Board shall grant approval if the following rules and applicable standards have been met:

A. The applicant has filed a properly completed conditional use application form.

B. The land use ordinance specifically identifies the conditional use in question as one which the Board is empowered to approve.

C. The conditional use shall meet the following standards:
   1. It shall not degrade the public health, safety, or welfare.
   2. It shall be consistent with the general purposes and intent of the land use ordinance.
   3. It shall be consistent with the "characteristics and purposes" stated for the zoning district involved and the adopted general plan.
   4. It shall be compatible with the public interest and with the characteristics of the surrounding area.
   5. It shall not adversely affect local property values.
   6. It shall comply with all of the terms and requirements of the land use ordinance, including but not limited to those found in Chapter 3, and Chapter 5, of the land use ordinance.
   7. It shall not result in a situation which is cost ineffective, administratively infeasible, or unduly difficult for the provision of essential services, including but not limited to: roads and access for emergency vehicles and residents: fire protection; police protection; schools and school busing; healthful water, sewer, and storm water facilities; and garbage removal.

D. The applicant has the burden of proving by a preponderance of the evidence that all the conditions for granting a conditional use have been met and must meet that burden based on the facts presented for the record; expressions of support or protest alone shall not constitute the basis of approval or denial.

E. When necessary, the Board may attach conditions which work out an adjustment between the conditional use and the surrounding area and to mitigate any harmful effects; such conditions may include, but are not limited to, the following:
   1. Parking;
   2. Traffic acceleration lanes;
   3. On-site storm water retention facilities;
   4. Special security or fire protection facilities;
   5. Water, sewer, and garbage facilities;
   6. Landscape screening or buffer areas;
   7. Requirements for the management and maintenance of the above facilities;
   8. Limited hours of operation;
   9. Limited use of equipment emanating offensive noise, light, dust, or traffic;
   10. Travel or route restrictions.

F. Conditional Uses run with the land, subject to Section 7.21.E.

Utah County Land Use Ordinance Section 3-47

3-47: ACCESSORY SKI LIFTS AND ASSOCIATED MOUNTAIN RESORT FACILITIES IN THE CE-1 ZONE

A. INTENT

It is the intent of this section to provide standards for the approval of accessory ski lifts and certain closely related mountain resort facilities in the CE-1 Critical Environmental Zone in a way which follows the stated intent of the zone, protects the sensitive environment of the area, and assures that the cost of governmental services will be considered.

B. SCOPE

The Board of Adjustment, in accordance with the provisions of chapter 7, Utah County Land Use Ordinance, may approve a conditional use permit for accessory ski lifts and certain associated ancillary mountain resort facilities in the CE-1 Zone provided that all of the requirements contained in this section are met, in addition to the general standards for issuing a conditional use permit found in chapter 7 of this land use ordinance.

C. PERMITTED FACILITIES

Only the following facilities may be permitted in association with a conditional use permit issued pursuant to this section:

1. Accessory ski lifts (e.g., towbars, chairlifts, gondolas) and lift operator shelters.
2. Ski and snow-boarding runs.
3. Trails for cross-country skiing, snow-cat skiing, hiking, mountain biking, and horseback riding.
4. Avalanche control facilities and structures.
5. Skier and ski patrol warming facilities.
6. Zip lines, alpine slides, and alpine rail slides, which are integrated into the mountain features (not stand alone carnival or amusement park type rides or facilities), provided that such facilities utilize the change in elevation down the mountain slope as the sole energy source.
7. Snowmobile, all terrain vehicle, and horseback riding concessions; provided that all terrain vehicle use shall be restricted to designated roads and designated all terrain vehicle trails.
8. Restrooms and pre-cooked food and beverage facilities for use by patrons of the resort.
9. Service roads and utility lines.

D. SITE PLAN

An applicant for a conditional use permit for the accessory ski lifts and associated mountain resort facilities shall submit a drawn-to-scale site plan of the subject property at a scale 200 feet per inch or larger (except the scale may be 1000 feet per inch or larger for portions of the lot where there will be no runs or other facilities placed) which shall contain:

1. The boundary of the zoning lot of record and the boundary of the project area if not coterminous with the lot boundary.

2. The location of any existing structures, roads, utilities and other uses of land.
3. The location of all proposed ski lifts, ski runs, shelters, restrooms, roads, utility lines and any other proposed facilities.
4. Topography, vegetation, and soil types.
5. Other information which the Board of Adjustment finds it needs to determine whether the use meets the standards of approval or needs to set conditions in accordance with land use ordinance, chapter 7.

E. OPERATIONS DISCLOSURE STATEMENT

In addition to the site plan, an application for a conditional use permit shall be accompanied by a disclosure statement stating:

1. The scope and purpose of the development.
2. The identification of ownership or leasehold interests; the job title, name, address, phone number and hours of service of the individual managing the area.
3. The provisions for trash removal, water, sewer, security, and access by governmental emergency services for the development.
4. The daily management and operations procedures.

F. DEVELOPMENTAL IMPACT REPORT

The applicant shall submit a developmental impact report prepared by an individual or individuals competent in the fields to be addressed in the report, which analyzes the impacts relative to all of the standards for approval as contained in this section, and presents proposed mitigation alternates to compensate for impacts to be caused by the accessory ski lift development.

G. FISCAL IMPACT REPORT

The applicant shall submit a fiscal impact report prepared by an individual or individuals competent in the fields to be addressed in the report. The report shall show:

1. The qualifications of those doing the report.
2. An itemized list of governmental services that will be needed by the proposed development under existing state mandates and governmental practices and the annual cost to the units of government that will provide those services.
3. An itemized list of governmental revenue sources available under existing state laws and governmental practices that is broken out by each source of revenue.
4. An analysis of costs of services and the availability of revenues during the construction phases and, when a development is to go up in phases, the costs and revenues during interim phases before the development is complete.
5. An analysis of the above costs and revenues when the development recommendations for mitigation of costs provides for the applicant to contract for or to provide some of the services traditionally provided by government.
6. An itemized analysis of potential liability and exposure of the County for

governmental services to be handled by parties other than the County.

H. STANDARDS

The accessory ski lift and associated mountain resort facilities must meet all of the following standards:

1. The accessory ski lift and associated mountain resort facilities (the "development") shall be situated on a zoning lot, or zoning lots, located in the CE-1 zone and at least one of which zoning lots shall (i) abut a recorded recreational resort plat in the unincorporated area of Utah County containing an existing ski resort, or (ii) abut an existing ski resort in an adjoining county; provided that if there exist intervening lands between said zoning lots, other than between the required abutting zoning lot and the existing ski resort, then the existing ski resort shall have an authorized connection, which may be in part by a publicly available access, from the existing ski resort to each of the zoning lots.
2. Both the land on which the development will be located, and the land on which the ski resort to which the proposed development is appurtenant is located, must be in the same ownership.
3. The Board of Adjustment must find that neither flooding, water quality, nor other aspects of the environment will be unreasonably diminished by the approval of the development, and that conditions of approval can be attached which can reasonably be expected to mitigate the environmental impacts.
4. The Board of Adjustment must find that the costs of providing governmental services generated by the development have been considered.
5. The Board of Adjustment must find that there is adequate evidence that the facilities will have a safe design, and that the risks associated with avalanches, rock fall and other natural hazards have been addressed.
6. The Board of Adjustment must find that the accessory ski lifts and associated mountain resort facilities will not significantly reduce property values of adjacent parcels of land.
7. The Board of Adjustment must find that the accessory ski lifts and associated mountain resort facilities are designed in a manner to be (i) harmonious with the alpine setting, (ii) as unobtrusive as reasonably possible, (iii) environmentally sensitive, (iv) esthetically acceptable, and (v) adequately integrated into the existing ski resort to which the proposed development is appurtenant.
8. The Board of Adjustment must find that adequate parking (which may include off-site parking with transit access), patron access, and other public facilities exist for the increase in utilization of the ski resort to which the subject accessory ski lift area will be appurtenant.
9. All access to the accessory ski lift and associated mountain resort facilities must be exclusively from and through the ski resort to which the subject accessory ski lift and associated mountain resort facilities will be appurtenant. Direct access to the accessory ski lift and associated

mountain resort facilities shall not be permitted.

Appeal # 1552

UTAH COUNTY
BOARD OF ADJUSTMENT
APPLICATION FOR A CONDITIONAL USE
(Application Fee is Non-refundable)

Section 26-34 Township T3S Range R3E Date Received: 12/8/15

Tax No. _____ Zone: CE-1 Received By: Shauna K

Hearing Date: January 7, 2016 Fee Paid: $400.00 Receipt # 12415

County Address: Snowbird mining claims in Mineral Basin and Mary Ellen Gulch, in upper American Fork Canyon.

Applicant's Name: Snowbird Ski and Summer Resort Phone: Marty Banks [redacted]

Mailing Address: PO Box 92900, Snowbird, Utah 84092-9000 FAX: _____

E-Mail Address: [redacted]

Property Owner's Name (if different from applicant): Snowbird Resort, LLC

As part of the application, the applicant is required to submit:

1. A plot plan which shows the property boundaries and the location of existing and proposed buildings and land uses within those boundaries, and buildings on adjoining lots which are within 200 feet of applicant's property line; a landscape and improvements plan when the application is for a moved building; and additional information.

2. A list of names and addresses of all abutting property owners.

AN INCOMPLETE APPLICATION WILL NOT BE ACCEPTED!

1. a. State the conditional use desired:
Accessory ski lifts and associated mountain resort facilities in the CE-1 zone, including a realignment of an existing lift and two new lifts, and associated runs and facilities.

b. Is the conditional use you are requesting one which the Board of Adjustment is specifically empowered to grant? ✓ Yes _____ No

c. If yes, state the section in the ordinance which allows the Board to approve the conditional use applied for: Utah County Land Use Ordinance, Sections 7-12:C., 5-5:C.7 and 3-47:C.
See attached Supporting Documentation, Section 1.2.

d. State how the land is being used at the present time and what changes are proposed by this appeal: Present: Accessory ski lifts and runs approved by the Board in 1997 and 2001, and other associated facilities and uses approved in 2012 and 2013 (Appeal 1522 & 1525). Proposed: Additional lifts and facilities, including new lift-served skiing in Mary Ellen Gulch. See Supporting Documentation, Sections 1.2, 3.1, 4.5.

2. Will granting this appeal degrade the public health, safety, or welfare? _____ Yes ✓ No. If no, explain how: Avalanche hazards and access for emergency services are identified concerns. Snowbird's experience and qualifications address this avalanche concern. Emergency access is assured through integration into existing operations and in-place agreements with Salt Lake County agencies. See attached Supporting Documentation, Section 3.3 Utilities and Emergency Access, and 3.4 Management and Operations.

3. Does this appeal conform to the "characteristics and purposes stated for the zoning district involved and the adopted county master plan? ✓ Yes _____ No. If yes, explain how: See attached Supporting Documentation, Section 1.3.

4. Is this appeal compatible with the public interest and with the characteristics of the surrounding area? ✓ Yes _____ No. If yes, explain how: See attached Supporting Documentation, Section 1.4.

5. Will granting this appeal adversely affect local property values? _____ Yes ✓ No. Explain why: Adjoining property values will likely increase. See attached Supporting Documentation, Section 3.2 Ownership.

6. Are all the standards stated in Chapter 3 (Supplementary Regulations) and Chapter 5 (Regulations Within Zones) of the Utah County Land Use Ordinance met by this appeal? ✓ Yes _____ No. If yes, state number _____ and explain how standard was met: See attached Supporting Documentation, Section 1.5.

7. Will granting this appeal result in a situation which is cost ineffective, administratively infeasible, or unduly difficult for the provision of any of the following essential services: roads and access for emergency vehicles and residents; fire protection; police protection; schools and school busing; water, sewer, and storm water facilities; and garbage removal? _____ Yes ✓ No. Explain why: The fiscal cost:benefit ratio is strongly in the County's favor. Administrative costs will be negligible. Essential services will be provided by Salt Lake County or not required. See attached Supporting Documentation, Sections 5 Fiscal Impact Report, 3.3 Utilities and Emergency Access, and 3.4 Management and Operations.

8. What mitigation measures or conditions of approval by the Board do you propose to lessen the impacts and work out an adjustment between this conditional use and the surrounding area (such as parking; traffic acceleration lanes; on-site storm water retention facilities; special security or fire protection facilities; water, sewer, and garbage facilities; landscape screen to protect neighboring properties; requirement for the management and maintenance of the facilities; limited hours of operation; limited use of equipment emanating offensive noise, light, dust, or traffic; or other measures)?

See attached Supporting Documentation, Sections 4.7 Mitigation, 3.3 Utilities and Emergency Access, and 4.6.8 Aesthetics and Traffic & Parking. Beyond that, no adverse effects are anticipated, including parking, traffic, stormwater retention, special security or fire protection, water, sewer, garbage, visual impact, facilities maintenance, or noise, light, or dust.

9. State any other details about this appeal which you want the Board to be aware of:

See generally, attached Supporting Documentation.

10. To the best of my knowledge, the above information is accurate and complete.

Marty Banks MB Digitally signed by Marty Banks DN: cn=Marty Banks, o=Stoel Rives LLP, ou, email=marty.banks@stoel.com, c=US Date: 2015.12.04 14:25:06 -07'00'

Signature of Applicant

AN INCOMPLETE APPLICATION WILL NOT BE ACCEPTED!

(ATTACH ADDITIONAL SHEETS IF NECESSARY)

Approved as to Form:

Jeffrey R. Buhman, County Attorney

By: /S/

SNOWBIRD SKI AND SUMMER RESORT
MARY ELLEN GULCH EXPANSION CUP APPLICATION

SUPPORTING DOCUMENTATION:

- **Back-up documentation for application form items 1, 3, 4, and 6**
- **Operations Disclosure Statement**
- **Developmental Impact Report**
- **Fiscal Impact Report**
- **Attachments**

Submitted by:

Snowbird Ski and Summer Resort
P.O. Box 929000
Snowbird, UT 84092-9000

Prepared with the assistance of:

Cirrus Ecological Solutions, LC, Logan, UT

December 7, 2015

Table of Contents

1. INTRODUCTION AND BACKGROUND

This document was prepared as part of Snowbird Ski & Summer Resort's (Snowbird) application to the Utah County Board of Adjustment for a conditional use permit (CUP) authorizing Snowbird to install and operate accessory ski lifts and associated mountain resort facilities in Mineral Basin (MB) and Mary Ellen Gulch (MEG), in upper American Fork Canyon. The *Utah County Land Use Ordinance* (Ordinance) sets forth the specific criteria and standards that must be met to qualify for a CUP (Ordinance, 7-20: C). The Ordinance provides direction on the management and use of unincorporated land in the County. The Ordinance includes specific direction for "Accessory Ski Lifts and Associated Mountain Resort Facilities in the CE-1 [Critical Environmental] Zone" (Ordinance, 3-46) as well as more general requirements for the CE-1 zone and the County at large.

Several items on the CUP application form require responses longer than the space provided allows. Specifically, these include items 1, 3, 4, and 5. Ordinance section 3-46 identifies and describes four documents that should accompany CUP applications for this type of development: a Site Plan, Operations Disclosure Statement, Developmental Impact Report, and Fiscal Impact Report. It goes on to list standards with which such facilities must comply.

This document is a compilation of information supplementing responses on the application form followed by the four documents required by the Ordinance, as noted above. Since the content of these components overlaps to some degree, we felt that compiling them in a single document and cross referencing them as appropriate would facilitate County review.

1.1 Utah County Permitting History

While Snowbird is generally thought of as a Salt Lake County resort, downhill skiing facilities were developed in the adjacent upper American Fork Canyon in Utah County in the late 1990s. The ski area opened in 1971, with all lifts and base infrastructure in Little Cottonwood Canyon, Salt Lake County. On October 21, 1997, Utah County issued a CUP for expansion of the resort into MB in upper American Fork Canyon. The building permit for the Mineral Basin Express lift was issued December 29, 1998, and the lift was installed the following year. The building permit for the Baldy Express lift was issued July 6, 2001, and the lift was installed later that year. These authorizations included the attendant ski runs associated with these lifts.

On November 5, 2012, Utah County issued another CUP (Appeal No. 1522) authorizing the following uses by Snowbird in the "Western Block" of its private holdings in upper American Fork Canyon, which includes MB and MEG:

- Hiking
- Mountain biking
- Horseback riding
- Guided skiing
- Cross-country skiing
- Snowcat skiing
- Snowmobiling
- All-terrain vehicles
- Trails for the above uses
- Skier warming facilities (MEG only)
- Concessions
- Pre-packaged food and beverage services

On February 22, 2013, the County issued another similar CUP (also Appeal No. 1522) extending authorization for these same uses to the "Eastern Block," which includes the Miller Hill area. On June 21, 2013, the County issued another related CUP (Appeal No. 1525) voiding the previous CUPs' requirement that all permitted accessory mountain resort facilities be consolidated into a single zoning lot.

On April 5, 2013, and August 26, 2013, respectively, the County issued zoning compliance permits associated with these CUPs (Appeals 1522 and 1525).

Based on these past permits, Snowbird is already authorized by the County to complete ski runs in MB and to undertake the uses listed above in MB, MEG, and Miller Hill (i.e., the Western and Eastern Blocks identified in the CUPs resulting from Appeal Nos. 1522 and 1525).

To date, Snowbird has installed the two authorized lifts and some ski runs in MB, and has undertaken hiking, mountain biking, horseback riding, guided skiing, cross-country skiing, snowcat skiing, snowmobiling, ATV tours, and associated trail development in MB, MEG, and Miller Hill.

1.2 Desired Use and Authority to Approve

At this time, Snowbird is requesting a CUP to install accessory ski lifts and associated mountain resort facilities in MB and MEG and to initiate downhill skiing use in MEG, in conjunction with the previously approved uses in both the Western and Eastern blocks referenced above. This plan will be referred to hereafter as the "2016 Project." It includes the following specific elements:

- Two new ski lifts in MEG (one with incorporated ziplines) and realignment of an existing MB lift, with associated ski runs.
- A new Ski Patrol facility on Hidden Peak
- A new lift equipment facility in MB.
- Two new skier warming huts in MEG.
- Seven avalanche control devices in MB and MEG.

The following Site Plan (section 2) and Operations Disclosure Statement (section 3) identify and describe the 2016 Project Area, proposed lifts, and proposed facilities.

The Board of Adjustment is empowered to grant this approval. The Ordinance specifically identifies the proposed conditional uses as uses which the Board is empowered to grant. Section 7-12:C. identifies the Board as the designated "Land Use Authority to hear and decide requests for conditional uses which are specifically authorized in this ordinance." Section 5-5:C.7. identifies as expressly permitted conditional uses "[a]ccessory ski lifts and associated mountain resort facilities which the Board of Adjustment has approved as a conditional use according to the provisions of chapters 3 and 7 of this land use ordinance." Section 3-46, the accessory ski lifts and associated mountain resort facilities section, lists the following permitted uses and facilities, which include all of the facilities and uses included in the 2016 Project:

1. Accessory ski lifts (e.g., towbars, chairlifts, gondolas) and lift operator shelters.
2. Ski and snow-boarding runs.
3. Trails for cross-country skiing, snow-cat skiing, hiking, mountain biking, and horseback riding.
4. Avalanche control facilities and structures.

5. Skier and ski patrol warming facilities.
6. Ziplines, alpine slides, and alpine rail slides, which are integrated into the mountain features (not stand alone carnival or amusement park type rides or facilities), provided that such facilities utilize the change in elevation down the mountain slope as the sole energy source.
7. Snowmobile, all-terrain vehicle, and horseback riding concessions; provided that all-terrain vehicle use shall be restricted to designated roads and designated all-terrain vehicle trails.
8. Restrooms and pre-cooked food and beverage facilities for use by patrons of the resort.
9. Service roads and utility lines.

The 2016 Project Area is presently being used for various accessory ski lift and mountain resort facilities and activities previously approved by the Board of Adjustment as conditional uses pursuant to the provisions of Chapters 3 and 7 of the Ordinance (see Appeal Nos. 1522 and 1525), including hiking, mountain biking, horseback riding, guided skiing, cross-country skiing, snow-cat skiing, snowmobiling, ATV use, and trails for the above uses.

1.3 Characteristics and Purposes

The proposed uses are consistent with and conform to the "characteristics and purposes" stated for the zoning district involved and the adopted County master plan. More specifically, the proposed lifts, facilities, and other uses are consistent with and conform to the "purposes and intent" of the CE-1 Critical Environmental Zone and the adopted Utah County Master Plan (2014).

The purposes and intent of the CE-1 Zone are set forth in Chapter 5-5A(1-6) of the Ordinance and are listed below, each followed by a discussion addressing how the 2016 Project is consistent:

1. *To take advantage of the powers and more fully implement the basic purposes for planning and zoning as set forth in the Utah Code Annotated 1953, as amended.*

   Title 17, Chapter 27a, of the Utah Code empowers counties to enact and implement ordinances for the use and development of land to, among other things, promote prosperity, protect the tax base, foster the state's industries, provide fundamental fairness in land use regulation, protect property values, etc. The proposed uses implement these and many other of the specified purposes set forth in the Utah Code.

2. *To protect and conserve water recharge areas, vegetation, soils, wildlife, and other natural resources.*

   As discussed in detail in section 4 below (Developmental Impact Report), no notable adverse effects on the noted resources are anticipated to result from the 2016 Project, and some elements of 2016 Project will protect and conserve these resources.

3. *To limit the danger of flood, fire, and other natural hazards.*

   As discussed in detail in section 4 below (Developmental Impact Report), the 2016 Project is not anticipated to affect flood or fire danger. In terms of other natural hazards, the project area is subject to avalanche hazard but Snowbird's history of successfully managing similar hazard in the existing ski area, coupled with ongoing avalanche hazard

assessments and snow safety planning in MEG, indicate that the 2016 Project will effectively mitigate this hazard.

4. *To preserve the aesthetic appearance and prevent the degradation of the mountain environment.*

   As discussed in detail in sections 3 and 4 below (Operations Disclosure Statement and Developmental Impact Report, respectively), the 2016 Project elements have been located and designed so as to preserve aesthetics and prevent degradation. Section 4.6.8 specifically addresses aesthetic effects, concluding that most facilities will be visible only from the immediate area, most of which is already a developed ski area, and that the most widely visible element, the Mary Ellen lift, will be screened by topography or distance from most areas of frequent human use.

5. *To ensure development of private land consistent with the environment within this zone.*

   As discussed in detail above in section 1.2, one of the permitted uses in the CE-1 zone is accessory ski lifts and associated mountain resort facilities. The 2016 Project is consistent with that permitted use and will have minimal impact on the environment within this zone (see section 4, Developmental Impact Report).

6. *To ensure the development of adequate public facilities to match private development.*

   As discussed in detail in sections 3.3 and 4.6.8 below (Operations Disclosure Statement and Developmental Impact Report, respectively), the 2016 Project will require Utah County to provide no public facilities. All access will be from the existing resort in Salt Lake County, where adequate public facilities are in place.

The relevant purposes and intent of the Utah County General Plan (2014) are set forth below, each followed by a discussion addressing how the 2016 Project is consistent:

1. *"Goal" of "protecting the quality of life...and respecting the rights of private property owners." (General Plan, p. 1.)*

   The 2016 Project will help achieve this goal by providing world class outdoor recreational facilities for the public to enjoy, and at the same time respecting the right of Snowbird as a private property owner to use its property in Utah County as part of its established resort in a manner consistent with the existing conditionally permitted uses.

2. *"Objective" to "Establish recreational areas for the general public which encourage a sense of community and are pleasant and relaxing." (P. 1.)*

   The 2016 Project will help achieve this objective as it will encourage recreational activities that can be enjoyed by a broad spectrum of the community, in a unique alpine setting that is extraordinarily pleasant and relaxing. One of the express policies under this particular objective is that "Additional mountain recreation areas should be considered with increased public demand..." (p. 1). As the public demand for additional skiing and other mountain resort activities has increased in recent years, the proposed use will provide needed recreational facilities.

3. *"Environmental Element - Water" section: "The ability to capture and utilize water" for "irrigation and recreation" and other uses is very important. (Ch. 4, p. 19.)*

The 2015 will not involve any consumptive us of water or otherwise affect water availability for irrigation or recreation.

4. *"Environmental Element - Natural Hazards" section: "Rock fall," "avalanches," "floods" and "wildland fire." (Ch. 4, pp. 20-21.)*

   The hazard of "rocks rolling down the slope of the mountainside can be damaging and dangerous to those living near the base of the mountains" is not material here in that nobody will be living in the project area. As to avalanche, flood, and wildland fire hazards, see item 3 under the CE-1 Zone discussion above.

1.4 Compatibility with Public Interest and Characteristics of Surrounding Area

The 2016 Project is compatible with the public interest and with the characteristics of the surrounding area. It will help achieve the appropriate balance between protecting mountain landscapes from excessive commercial development and providing opportunities for recreational enthusiasts and private property owners. In addition, and as addressed in more detail above (section 1.3 Characteristics and Purposes), the 2016 Project will: help provide the public with adequate mountain recreational areas; foster the County's tourism industry and its general economic strength; protect mountain water recharge areas, vegetation, soils, wildlife, and other natural resources, and preserve the area's aesthetics; and will not present significant flood, fire, avalanche, or other natural hazards.

In terms of compatibility with the characteristics of the surrounding area, the 2016 Project Area is in and surrounded by high alpine mountains. Snowbird already operates in MB and MEG. Under its existing CUPs, Snowbird operates multiple accessory ski lifts that support seasonal recreational activities in MB and provides numerous other permitted winter and summer activities in both MB and MEG (see section 1.1 Utah County Permitting History). The 2016 Project will further enhance the public's ability to pursue and enjoy alpine skiing, other winter pursuits, and summer activities in MB and MEG. The 2016 Project will be entirely consistent with the permitted uses of the surrounding area as a mountain resort.

The 2016 Project Area adjoins Snowbird's long-established resort operations in Salt Lake County. In addition to Snowbird, there are other similar mountain resorts in the surrounding area, including the nearby Sundance Resort in Utah County, Alta Ski Area, Solitude Mountain Resort, and Brighton Resort in the adjacent Cottonwood Canyons, and the Canyons Ski Resort and Park City Mountain Resort in nearby Park City. In addition to these lift-served recreation opportunities in the surrounding area, the 2016 Project is also compatible with other recreation allowed in the surrounding American Fork Canyon area, including hiking and riding ATVs, motorcycles, and snowmobiles.

1.5 Compliance with Standards

This CUP application complies with all of the applicable standards, terms, and requirements stipulated in Ordinance, including chapters 3 and 5, as detailed below.

Compliance with Chapter 3 of the Ordinance (specifically with the standards regarding accessory ski lifts and associated mountain resort facilities in the CE-1 zone, Ordinance section 3-46) is demonstrated at locations throughout this document. To facilitate review, the following list indicates where each Standard is specifically addressed.

1. Zoning for accessory and associated resort facilities (3-46:H.1). Compliance with this Standard is documented in section 3.1 Scope and Purpose of Development.

2. Single ownership for accessory and existing resort (3-46:H.2). Compliance with this Standard is documented in section 3.2 Ownership.

3. Environmental impacts – flooding, water quality, and other aspects (3-46:H.3). Compliance with this Standard is documented in section 4.6.1 Surface Drainage and Water Quality, section 4.6.3 Flood Hazards, section 4.6.4 Wildlife, section 4.6.5 Vegetation, and section 4.6.7 Geologic Hazard.

4. Cost of providing governmental services to development (3-46:H.4). Compliance with this Standard is documented in section 4.6.8 Socio-Economic Factors (including Cost-Benefit to Local Government, Utilities, Waste Disposal, Emergency Services and Infrastructure) and section 5. Fiscal Impact Report.

5. Safety – avalanche, rock fall, and other natural hazards (3-46:H.5). Compliance with this Standard is documented in sections 4.6.7 Geologic Hazards (including Landslides/Rockfalls/Snow Avalanche), 4.6.3 Flood Hazards, and 4.6.6 Fire Hazards.

6. Impacts on adjacent property values (3-46:H.6). Compliance with this Standard is documented in section 3.2 Ownership.

7. Harmonious, unobtrusive, environmentally sensitive, esthetically acceptable, and integrated into the existing resort (3-46:H.7). Compliance with this Standard is documented in sections 1.4 Compatibility with Public Interest and Characteristics of Surrounding Area, in Maps 2, 9, 10 and 11, and generally in section 4, specifically sections 4.6.1 Water Quality, 4.6.4 Wildlife, 4.6.5 Vegetation, and 4.6.8 Socio-Economic Factors (Aesthetics).

8. Parking, access, and public facilities to satisfy increased use (3-46:H.8). Compliance with this Standard is documented in section 4.6.8 Socio-Economic Factors (Parking and Traffic, Adequacy of Existing Facilities).

9. Access via the existing resort to proposed developments (3-46:H.9). Compliance with this Standard is documented in Map 9 and section 3.1 Scope and Purpose of Development.

Compliance with the Chapter 5 of the Ordinance (CE-1 Critical Environmental Zone) is demonstrated as follows:

1. Section 5-5: A. (Legislative Intent). Compliance with this Standard is documented in section 1.3 Characteristics and Purpose, above.

2. Section 5-5:B. (Permitted Uses). Not applicable.

3. Section 5-5:C. (Permitted Conditional Uses). The 2016 Project qualifies as permitted conditional use under Section 5-5:C.7. (Accessory ski lifts and associated mountain resort facilities which the Board of Adjustments has approved as a conditional use according to the provisions of chapters 3 and 7 of the Ordinance). The proposed lifts, runs, facilities, and all other aspects of the 2016 Project are all allowed under section 3-46.

4. Section 5-5:D. (Area Requirements). Not applicable.

5. Section 5-5:E. (Width Requirements). Not applicable.

6. Section 5-5:F. (Location Requirements). To the extent applicable, the proposed buildings and structures will be located and designed to comply with the prescribed setback requirements, as will be reflected in the plans and drawings submitted in connection with the subsequent building permit applications.

7. Section 5-5:G. (Height Requirements). To the extent applicable, the proposed buildings will be designed to be less than 40 ft. high. As to the proposed lifts (including lift towers), to the extent that they may be more than 40 ft. high, a separate but associated CUP application will be submitted requesting approval for the proposed lifts to exceed this limit.

8. Section 5-5:H. (Dwellings Size and Pattern). Not applicable.

9. Section 5-5:I. (Special Requirements). The involved buildings and structures' slopes and grades will comply with the prescribed requirements, as will be reflected in the plans and drawings submitted in connection with the subsequent building permit applications. As to potential fire hazards, compliance with this standard is documented in section 4.6.6 Fire Hazards, below.

All other applicable standards, terms, and requirements in the Ordinance will also be met.

2. SITE PLAN

The Site Plan includes all maps of the 2016 Project Area that are required by Utah County Land Use Ordinance 3-46:D.1–5. The Site Plan also includes all maps referenced in the Operations and Disclosure Statement and the Developmental Impact Report. A total of 11 maps are included:

- Map 1 – Vicinity map showing general location of Snowbird
- Map 2 – Existing conditions showing existing infrastructure and 2016 Project Area.
- Map 3 – Upgrade plan showing all proposed infrastructure and graded ski runs.
- Map 4 – Detail map #1 showing the bottom terminal of the Mary Ellen lift.
- Map 5 – Detail map #2 showing Ski Patrol facility and other infrastructure around Hidden Peak.
- Map 6 – Detail map #3 showing the bottom of the Sunday Saddle lift.
- Map 7 – Vegetation types showing all proposed infrastructure and graded ski runs over vegetation community types.
- Map 8 – Soils and hydrology showing all proposed infrastructure and graded ski runs over soil types and perennial streams.
- Map 9 – Operational integration showing new and existing infrastructure and graded ski runs and linkages between the existing portions of the ski area and MEG. This map demonstrates integration with the existing resort per Standard 7(v) (3-46.H Item 7[v]).
- Map 10 – Sunday Saddle lift viewshed showing areas from which the Sunday Saddle lift would be visible.
- Map 11 – Mary Ellen lift viewshed showing areas from which the Mary Ellen lift would be visible.

These maps are included as Attachment 1.

3. OPERATIONS DISCLOSURE STATEMENT

This Operations Disclosure Statement describes resort operations as required by Ordinance 3-46:E. Access, utilities, and safety are key aspects of this statement.

3.1 Scope and Purpose of Development

This section addresses, among other requirements, the scope and purpose of the 2016 Project and compliance with Standard 1 (Ordinance 3-46:H.1) and Standard 9 (Ordinance 3-46:H.9). Compliance with other standards for this type of development is discussed elsewhere in this document

The 2016 Project Area includes the patented mining claims owned by Snowbird in Mineral Basin (MB) and Mary Ellen Gulch (MEG) that were collectively referred to as the "Western Block" in the November 5, 2012, action by Board of Adjustment. The "Western Block" was legally described in Exhibit A to that action document and depicted on the map incorporated into the record during the Board's November 2, 2012, meeting (map is attached to this document as Attachment 2). That Western Block, plus the Flora claim that Snowbird is negotiating to purchase, constitutes the 2016 Project Area, shown in Site Plan Map 2 (Attachment 1). Note that some claims in the Western Block extend across the line into Salt Lake County, but none of the activities or facilities included in this application will involve lands outside of Utah County. See Introduction and Background (section 1) above for a summary of past County actions involving this property.

The scope of the projects in MB, and the purpose for them, include (see Site Plan Maps 3 and 5 above):

1. Replacement and realignment of the Mineral Basin Express (MBX) lift. The MBX lift is a 1,500 person per hour (pph) detachable quad chairlift providing access to most MB terrain. On sunny mornings with new snow, it typically has the longest lift lines at Snowbird, and additional skier traffic from MEG will worsen this bottleneck. Beyond that, the lift's current alignment limits access to the prime, north-facing slopes on the MB/MEG ridge, as skiers must traverse left before reaching the bottom of these slopes to get back to the lower terminal. Replacing the lift with a 2,800 pph six-pack chairlift will alleviate congestion and long lift lines. Extending the lift on the proposed alignment will allow full use of the north-facing terrain with ready access to the relocated bottom terminal. Three ski runs will be developed to access the new bottom terminal.

2. Ski patrol facility on Hidden Peak. The new facility currently being completed on Hidden Peak will house some Ski Patrol operations, but maintaining an effective response capability winter and summer requires additional space. A new 2,300-sq.-ft. Ski Patrol facility just below the current MBX top terminal will effectively separate patrol and service functions and provide ready patrol access to all four drainages that comprise the ski area – Peruvian Gulch, Gad Valley, MB, and MEG.

3. Lift equipment facility. Lift operation and maintenance and other mountain operations activities require a substantial quantity of readily available equipment and supplies, which are currently stored in the base area and transported to MB as needed via the Tram and snowcats. On-mountain storage in a new, 4,000-sq.-ft. building near the mouth of the

skier tunnel in MB will increase the efficiency and safety of mountain operations in MB and MEG significantly.

4. Avalanche control devices. Four devices, likely some type of remotely controlled natural gas operated avalanche release systems similar to those installed over State Route 210 in Little Cottonwood Canyon and at mountain resort around the world, will be installed to protect the realigned MBX lift. They will be located near the top of the MB/MEG ridge.

The projects in MEG, and the purpose for them, include (see Site Plan Maps 3, 4, and 6 above):

1. Mary Ellen Lift. Downhill skiing in MEG requires some type of accessory lift to deliver skiers to a high point that provides reasonable access to all or most of the down-slope terrain in MEG. The proposed Mary Ellen lift's top terminal (based on elevation) will be on Hidden Peak, with the bottom terminal near the top of the southern ridge of MEG. A mid-station will be built on the ridge below American Fork East Twin Peak, above the bookends. Need for intermediate towers will be determined through final design.

   It will likely be a gondola-style lift, with a capacity of about 450–500 pph. The mid-station will have load/unload capabilities because it will serve as the launch tower for a zipline or ziplines, either following the lift alignment to the top and/or bottom terminals, depending on final grade, or landing at alternative sites in MB or MEG.

2. Sunday Saddle lift. The second requirement for downhill skiing in MEG is a lift out of the MEG. The Sunday Saddle lift will be a detachable quad chairlift with a capacity of 1,500 pph. The existing MBX lift will likely be re-installed in this alignment. The lift will be a top-drive with electricity trenched in along Path to Paradise skiway from Hidden Peak. The upper operator's room will include minimal Ski Patrol space. Four to six ski runs will be developed in association with the lift.

3. Warming huts. Two skier warming huts will be built in conjunction with these lifts, a small one at the bottom terminal of the Mary Ellen lift, and a larger one at the bottom terminal of the Sunday Saddle lift. The Mary Ellen hut will accommodate approximately 30 people comfortably, more under emergency conditions. The Sunday Saddle hut will accommodate about 100 comfortably and roughly twice that if need be. Both may offer pre-packaged food and beverage services, and each will include a small space allocation for Ski Patrol staff and equipment, including emergency food and water.

4. Avalanche control devices. Three devices, as described above (MB item 4) will be installed to protect the new Sunday Saddle lift. Two will be located near the top of the MB/MEG ridge, the third on the end of the ridge bisecting upper MEG.

While this project will increase Snowbird's comfortable carrying capacity (CCC) by an estimated 1,090 skiers, its primary purpose is to attract destination visitors who stay at the resort longer and fill in off-peak periods, when the resort is underutilized. Achieving this purpose does not demand additional capacity, it requires that Snowbird offer the broad skier market something new and different so they choose Utah, and choose Snowbird, for extended destination visits.

Standard 1 requires that lifts and associated facilities are located in the CE-1 zone and abut an existing ski resort. As established in past County actions, the Western Block, and thus the 2016 Project Area, comprises zoning lots in the CE-1 zone. As indicated above in Site Plan Map 2, the 2016 Project Area abuts Snowbird. MB is within the current ski area boundary, and MEG abuts MB.

Standard 9 requires that all access to lifts and associated facilities be from and through the adjacent ski resort. All access to the 2016 Project Area for purposes of construction and operation of the proposed accessory ski lifts and associated mountain resort facilities will be from the existing resort, via the existing system of roads, cat tracks, and skiways. Helicopters operating from Snowbird may be involved in construction, avalanche mitigation, and search and rescue. See Site Plan Map 9 for a more detailed view of how the 2016 Project is integrated into the existing resort.

3.2 OWNERSHIP

This section addresses Standard 2 (3-46:H Item 2) and Standard 6 (3-46:H Item 6). Standard 2 requires that both the land on which the proposed accessory lifts and associated facilities will be located, and the land on which the existing ski resort is located, must be in the same ownership. Standard 6 requires that the accessory lifts and associated facilities will not significantly reduce property values of adjacent parcels of land.

Snowbird is owned by Snowbird Resort LLC. Contact information for the person responsible for management of the property is:

Bob Bonar, President
Snowbird Ski & Summer Resort
P.O. Box 929000
Snowbird, UT 84092-9000
Telephone: (801) 933-2006

Office hours: 8 a.m. – 5 p.m., Monday – Friday.

In terms of same ownership, both the land on which the proposed accessory lifts and associated facilities will be located (the 2016 Project Area), and the land on which the existing ski resort is located, are owned by Snowbird Resort LLC.

In terms of potential effects on adjoining property values, the U.S. Forest Service manages most lands adjacent to the 2016 Project Area. National Forest System lands are not taxed and are typically not sold or otherwise transferred. If a sale or exchange were undertaken, the existence of adjacent accessory ski lifts and associated mountain resort facilities would undoubtedly increase the value assessed for the property.

The 2016 Project Area also adjoins a few other privately owned patented mining claims. These include claims on the ridge between MEG and Major Evans Gulch to the south, and one claim, the Flora, which is surrounded by Snowbird Resort LLC land in MB, within the project area. Snowbird has had an easement to use the surface of the 20.66-acre Flora claim for ski area activities including skiing and construction of lifts for nearly 20 years, and the MBX realignment will cross the claim.

Snowbird is currently attempting to negotiate the purchase of the Flora claim. Since the purchase has not yet been completed, this application seeks approval of the realignment subject to the completion of the purchase. In the event that the purchase is not completed, Snowbird will instead upgrade MBX to a six-pack lift in its current alignment. This change would fall within the bounds of the procedural, environmental, and fiscal assessment documented in this application.

These claims are generally undeveloped and are assessed for tax purposes at the State-assessed flat rate for undeveloped land in unincorporated areas of the County. One adjoining patented

claim includes a summer cabin. As in the case of National Forest System land, the existence of accessory ski lifts and associated mountain resort facilities will undoubtedly increase the value assessed for these adjoining properties.

The contact for the U.S. Forest Service is:

Dave Whittekiend, Forest Supervisor
Uinta-Wasatch-Cache National Forest
857 West South Jordan Parkway
South Jordan, UT 84095

The adjoining private land owners are:

Ted Kimball
1747 Laird Ave.
Salt Lake City, UT 84108

The Nash Family (Alta A. Nash, Sandra M. Nash, Michael E. Nash, Bradley Forrest Nash, Andrew Blaine Nash, Deanna Nash Nielsen, Nola Nash Christenson, Natalie Nash Wanner)
327 S. 750 E.
Layton, UT 84041-4358

3.3 Utilities and Emergency Access

The proposed lifts and facilities will generate no demand on County or other outside utilities. Trash generation will be minimal, from warming huts and mountain operations activities, and trash collected in receptacles will be transported by snowcat back to the Snowbird base area for disposal through established procedures.

There will be no requirement for culinary water or sewer service. Bottled water will be available at warming huts for sale and emergency use. Toilets at the warming huts will be waterless, with waste hauled out by a contractor as necessary. Additional restrooms in the new Hidden Peak facility will preclude any deficit in the 2016 Project Area.

Security of the proposed lifts and facilities is a potential concern given the distance from the base area. However, Snowbird's experience managing MB for over a decade has resulted in established and effective security protocols. In the winter, security is straightforward. In the interest of safety, the area will be closed to the public, entailing public outreach, signage, rope lines, and routine patrols. Snowbird personnel will be present from dawn dusk and often through the night during winter operations.

In the summer, increased public recreational use and decreased presence of Snowbird personnel could complicate security arrangements somewhat. Snowbird anticipates maintaining public recreational access to the area, with provisions to ensure public safety, security, and natural resource protection. Motorized access will be restricted to established, defined routes, and Snowbird facilities not otherwise open to the public will be posted and roped off. Snowbird personnel will be present in sufficient numbers to monitor activity most of the time. Otherwise, security patrols will be initiated.

Emergency access is a key consideration given the nature of the land use and distance of the project area from Snowbird's base facilities. In accordance with in-place agreements and procedures established for Snowbird in general and for the previous MB expansion, emergency

services are provided by Salt Lake County-based agencies. Attachment 3 includes statements to this effect from Sheriff James M. Winder, Salt Lake County Unified Police Department, and Fire Chief Michael Jensen, Salt Lake County Unified Fire Authority. Emergency access for these agencies in winter will generally be from Snowbird, via the lift system or over-the-snow vehicles on cat tracks and ski ways from the existing ski area. In summer, lifts or service roads from the existing resort will provide access. Helicopters may be used in some emergency situations at any time of year.

Emergency procedures are described in more detail below under Management and Operations (section 3.4).

3.4 Management and Operations

Ordinance 3-46.E Item 4 requires a description of daily management and operations procedures.

Snowbird has been in operation since 1971 and is recognized as one of the world's premier ski resorts. In developing and maintaining this reputation, Snowbird has demonstrated the ability to manage and operate the resort in a manner that meets the highest standards of quality and safety. These attributes will carry over to the 2016 Project.

Snowbird's operating procedures are outlined in detail in three documents:

- Snowbird Ski Patrol/Snow Safety Winter Operations Plan – Details procedures for Ski Patrol and snow safety operations including avalanche mitigation, first aid and medical care, search and rescue, and emergency evacuation.
- Tram & Lifts Manual/Ski Lifts Operations Plan – Contains direction on all aspects of lift maintenance and operation.
- Hill Maintenance Operations Plan – Outlines winter and summer grooming and snowmaking protocols.

These three volumes are far too detailed to summarize in a meaningful way here but are available for review by the County upon request. Snowbird's history is the best evidence of their effectiveness. The focus of the following discussion is how the specifics of operating in MB and, more importantly MEG, will be reflected in Snowbird's management and operating procedures.

MEG lies outside Snowbird's current ski area boundary, and there is no base location for operations there. The weather patterns in MEG are somewhat different than the historic weather patterns within the existing ski area. A southwest-flow weather pattern, with potentially stronger and more frequent winds, often increases snow depth and snow density in the MEG area. This results in a different set of avalanche and snow safety dynamics. Its remoteness and unique snow-loading and stability characteristics will require some fine-tuning of Snowbird's standard operating and safety procedures.

In terms of snow safety, Snowbird has studied avalanche dynamics and developed snow safety plans in the 2016 Project Area since 1979, when Snowbird was contracted to complete this work by investors considering re-opening mines in the area. In MB, snow safety has been effectively managed since operations began there in 1999. In MEG, Snowbird has conducted backcountry operations for a number or years and coordinated with Powderbird heli-skiing in stability testing efforts. Since 2013, Snowbird has studied snow loading, hazard evaluation, and mitigation options on private and adjoining National Forest System land in MEG under a Forest Service permit for these specific purposes.

Based on this experience, Snowbird has developed effective means of snow safety management, involving effective mitigation procedures for the safety of both ski area personnel and the visiting public. These procedures include developing accurate hazard forecasts, evaluating conditions through snow stability testing, releasing avalanche hazard by artificial release and, when necessary, restricting travel into and/or evacuating people from high-risk areas. Before any explosive controls are initiated, potential runout zones are thoroughly inspected for any visual or audible evidence to ensure that no unauthorized people are present.

In terms of infrastructure, five new facilities will boost the personnel and equipment available to manage the safety of personnel and guests in MB and MEG. The new Ski Patrol facility on Hidden Peak will be near the apex of the two drainages with ready access to both. The lift equipment facility near the tunnel mouth in MB will ensure that essential supplies and equipment are close at hand. Patrol facilities in the two warming huts (at bottom terminals of the Mary Ellen and Sunday Saddle lifts) and in the operator's room at the top of the Sunday Saddle lift will allow for coverage throughout the project area, including morning mountain set up, avalanche mitigation work, medical emergency response, end-of-day sweeps, and evacuations.

In regard to operating procedures, once the area is cleared by Ski Patrol, Mountain Dispatch will notify mountain operations employees. They will follow a designated route into MEG via the Path-to-Paradise and Sunday Saddle cat tracks and exit from the top of Sunday Saddle lift via Mineral Basin. Hill maintenance (snowcat operators) will access MEG terrain through Path-to-Paradise and Sunday Saddle cat tracks after an afternoon briefing on weather and avalanche conditions.

Once cleared by Ski Patrol, MB and MEG will be opened to the public. Because of its distance from the base area, MEG will likely open later than the rest of the resort's terrain and close earlier, probably operating from 9:30 AM to 2:45 PM, conditions allowing. MEG will only open during periods of stable weather.

Another operational and safety consideration is dealing with lift breakdowns, particularly in MEG where the Sunday Saddle lift will provide the only lift egress. The lift will have a main electric drive, a diesel back-up drive, and a tertiary back-up using snowcat power. This assures power to the lift under almost all circumstances, but other components of the lift can break down, including the gearbox, sheave trains, and other elements not related to the power supply. In this unlikely event, the general procedure will be to get skiers to shelter in the warming huts (provided with emergency food, water, and toilets) then shuttle them back to Hidden Peak using snowcats. Specific operational steps are as follows:

1. Notify Mountain Dispatch/Mountain Operations.
2. Close and sweep terrain, staging skiers and patrollers at base of ski lift.
3. Attempt to clear line (using auxiliary power unit or tertiary drive).
4. Evacuate the ski lift.
5. If necessary, contact Salt Lake County Sheriff's search and rescue, Alta Central Marshall's office, Alta Ski lifts, Salt Lake County Unified Police Department for support.
6. Notify Hill Maintenance for snowcat and snowmobile support.
7. Notify Powderbird for helicopter support.
8. Notify Snowbird Public Safety.

Based on these considerations, Snowbird will expand the existing operations and safety plans identified above to include a MEG avalanche atlas, hill maintenance/grooming plan, and avalanche mitigation plan (e.g., avalauncher targets, hand charge routes, and heli-control routes). With these planning and procedural details incorporated into standard operating and safety plans, Snowbird will manage the 2016 Project area as effectively as they have the existing resort for the past 44 years.

In the broader view, managing remote terrain and facilities in a safe and effective way is not new. Many mountain resorts include areas distant from their central base facilities, and most have succeeded in integrating such operations into the overall resort.

4. DEVELOPMENTAL IMPACT REPORT

The Developmental Impact Report (DIR) analyzes impacts of the 2016 Project relative to all of the standards for approval contained in Ordinance 3-46. The DIR also identifies mitigation measures to compensate for any identified adverse impacts.

This DIR was prepared by Cirrus Ecological Solutions, LC, a Logan, UT, based environmental consulting firm which assisted the Forest Service and Snowbird with a number of environmental impact assessments over the past 15 years. A-Trans, a Salt Lake City-based traffic engineering firm, was engaged by Cirrus to assess effects on traffic and parking.

This DIR reflects the County-provided format with one exception. Water-related issues are addressed first in the Narrative section (section 4.6) because water quality concerns associated with the 2016 Project Area's mining history are the first-order concern.

As noted in the introduction this document (section 1), this submittal is a compilation of the four documents required by the Ordinance. Since the requirements for each overlap to some degree, we felt that compiling them and cross referencing them as appropriate would facilitate County review. As a result, several DIR sections direct the reader to more detailed discussions of a given topic under another heading in this compilation.

4.1 Name of Project

In this document, the project is referred to as Snowbird's "2016 Project."

4.2 Date

Snowbird anticipates starting this project during the 2016 construction season.

4.3 Sponsor

The owner of the project is Snowbird Resort LLC. See Ownership, section 3.2 above, for more details and contact information.

4.4 Description of the Project

The project includes construction of accessory ski lifts and associated mountain resort facilities at Snowbird, on private land in Mineral Basin (MB), which is inside the current ski area boundary, and in Mary Ellen Gulch (MEG), which adjoins MB to the south. Both are in Utah County's CE-1 Critical Environment Zone. Snowbird will also initiate downhill skiing use in MEG, in conjunction with the previously approved uses in both areas. See Scope and Purpose for

Development, section 3.1 above, and Site Plan Maps 3-6 (section 2) for a detailed description of the 2015 Project.

4.5 Description of the Environment

The 2016 Project Area is located within Utah County (Site Plan Map 2; while some claims included in the project area extend across the County line in Salt Lake County, the proposed activities and facilities do not involve lands outside Utah County). The area is a straight-line distance of approximately 20 miles from Provo to the south, 17 miles from Salt Lake City to the northwest, and 12 miles from Heber City to the east.

The project area is about 860 acres, defined on the northwest border by a watershed divide that separates Little Cottonwood Canyon and American Fork Canyon. The southwest border is defined by a ridge that runs south from the American Fork East Twin Peak. The eastern border is roughly a line connecting Sugarloaf Mountain to Sinners Pass and thence proceeding south to the bottom of MEG.

The project area spans MB and MEG, both tributary drainages to the upper American Fork River. Elevations range from 8,850 ft. in the bottom of MEG to 10,992 ft. on Hidden Peak. The topography is typical of the central Wasatch Range, with some fairly gentle slopes in drainage bottoms and on benches, merging into steepening slopes above. Higher slopes in these drainages approach vertical. Site Plan Map 2 shows the project area and topography. Site Plan Map 8 shows streams in the area.

The U.S. Geological Survey has calculated mean annual precipitation and regional streamflow regression equations that can be used to characterize the hydrology of Utah watersheds. Mean annual precipitation for the project area is approximately 54 inches. All drainages in the project area receive surface runoff and groundwater flow contributions from a combination of private and public land. The MB drainage includes the headwaters of the North Fork American Fork River. The project area includes 0.7 sq. mi. of upper MB that contribute flow to a small portion of first-order perennial stream channel. Estimated discharge from the stream channel segment in the project area is 2.7 cfs.

The MEG drainage includes three first-order perennial stream channels that combine on public land, shortly after crossing the private property boundary. A small drainage (0.2 square miles) located south of and adjacent to MEG incorporates a small intermittent stream. Estimated mean annual discharge from MEG in the project area is 2.9 cfs and mean annual discharge from the small drainage located south of and adjacent to MEG is estimated at 0.9 cfs.

Ski area infrastructure has been developed at Snowbird since 1971, expanding in 1999 into MB. Alta ski area, in operation since 1939, adjoins the project area to the northeast. Aside from these resorts, the project area and its surroundings are largely undeveloped. Most adjoining property is National Forest System land. Some mines on adjacent private property are occasionally worked but none are commercially producing. One adjoining patented claim includes a summer cabin. Some summer recreational use occurs, particularly ATV use. Distance and limited access seriously constrain winter use, but the advent of more powerful machines has led to significant increases in snowmobile use. Much of the surrounding National Forest System land is within Powderbird's heli-ski permit area.

4.6 NARRATIVE

This section includes an analysis of negative and positive consequences of the 2016 Project for each of the resources noted below. Mitigation measures are generally described in each section and reference Section 4.7 where they are described in detail. These measures eliminate or minimize impacts on each resource. Applicable standards included in Ordinance 3-46:H are also cited in each section.

Note that some resources included below have no apparent issues resulting from the project and no further discussion is needed.

4.6.1 Surface Drainage and Water Quality

The 2016 Project Area incorporates a portion of two primary surface drainages located in upper American Fork Canyon, specifically MB and MEG. Both drainages were heavily impacted by mining activity spanning the turn of the last century. Commercial mining has not occurred in the area since the 1970s, and large-scale mining has not occurred since the 1940s. Several abandoned mines are located in these drainages and other portions of American Fork Canyon and Little Cottonwood Canyon mining districts[1].

Mining development left behind open, collapsed, and closed portals as well as waste rock dumps and some milled tailings piles in the project area. Some abandoned mines in MB and MEG discharge water which flows into the North Fork of the American Fork River[2]. Runoff from mine dumps and mill tailings is another potential water quality concern.

Identified as a water quality concern in the late 1980s, the upper American Fork watershed was identified as a CERCLIS site (UTD988074951) due to metal contamination associated with historic mining and ore processing. Subsequent remediation efforts involving the Mary Ellen Mines, Lower Bog Mine, Scotchman Mine, Pacific Mine, and Dutchman Mine resulted in the site being removed from the National Priorities List.[3]

Of these, only the Mary Ellen Mines site is within the 2016 Project Area. A federal review of the site in MEG determined it did not constitute a great enough hazard to warrant further inspection or action. The site was assigned No Further Remedial Action Planned (NFRAP) status by EPA in 1997, and this status currently remains in effect[4].

At this point, water bodies in the project area are not considered impaired by the State based on the most recent Integrated Water Quality Report[5]. This study includes updates from previous reports and a comprehensive review of water quality monitoring data collected from Utah surface waters 2009–2010. Sample measurements collected from the Mary Ellen stream channel about 1,000 feet downstream of Yankee mine inflow meet all state standards for metals concentrations[6].

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[1] Phase I Environmental Site Assessment: Snowbird Ski and Summer Resort Associated Properties. Cirrus Ecological Solutions LC. 2014

[2] American Fork Hydrology and Water Quality Study. Lidstone & Anderson, Inc. 1993.

[3] Phase I Environmental Site Assessment: Snowbird Ski and Summer Resort Associated Properties. Cirrus Ecological Solutions LC. 2014

[4] Phase I Environmental Site Assessment: Mary Ellen Gulch Property American Fork Canyon, Utah. Cirrus Ecological Solutions, LC. 2000.

[5] Utah 2014 Integrated Report. Utah Division of Water Quality. 2014.

[6] Methods and Basic Data from Mass-Loading Studies in American Fork, October 1999, and Mary Ellen Gulch, Utah, September 2000. USGS. 2009.

Despite the fact that water quality standards are currently being met, the Mary Ellen Mines area has remained a concern. These mines, which include the Live Yankee Mine, left a number of mine dumps and processed tailings on the subject property. A network of roads provides vehicle access to the site. The steep, bare slopes of the piles show evidence of erosion and runoff from precipitation events, a particular concern given their proximity to Mary Ellen Creek. The mine adits and tailings are the primary source of trace metals in Mary Ellen Creek. A synoptic survey completed in 2000 on Mary Ellen Creek showed the mines are contributing the majority of heavy metals to the system with up to 0.5 kg/day of zinc[7]. Test results of soil samples showed arsenic, cadmium, lead, mercury, and zinc in several piles exceeding industrial screening levels. Concentrations of arsenic in one tailings pile exceed the industrial screening level by 200 times.

Snowbird, with Trout Unlimited support, implemented a strategy suggested by Utah Division of Environmental Quality and other entities in 1997. They diverted portal discharge (est. 1–2 cfs) from Live Yankee Mine, likely adit No. 1, so that it no longer flowed through the spoil pile before joining Mary Ellen Creek. One other Live Yankee portal yielded a small, intermittent flow, but that had already been channeled away from the spoil pile. Test results showed that discharge from Adit No. 1 was relatively low in metal content but significantly higher when it left the spoil pile. The gain was surprising given that the discharge was not very acidic. The adit had been sealed, but water flowed over the top of the concrete seal.

This project built a French-type drain in front of the adit to capture the flow and reduce the likelihood of sedimentation, installed a plastic pipe at the bottom of the drain, running down to discharge directly into the creek, and covered the drain over with topsoil. The project significantly reduced metals contamination at the point where the portal discharge flowed into Mary Ellen Creek.

In 2013, the piped flow had diminished, indicating the need to clean out the French drain and restart the system. Snowbird completed repairs in 2014. However, the adit discharge issue remains uncertain, and the mill tailings are still very accessible for recreational contact. Based on these considerations, the Mary Ellen Mines remain an environmental concern.

With this background established, the question is how the 2016 Project will affect the Mary Ellen Mines and this environmental concern. In terms of the portal discharge issue, the project will improve access to the site, making it easier to monitor and maintain the drain system, keeping the discharge away from the mill tailings and maintaining the water quality improvement in the discharge.

In terms of runoff from the mill tailings into the creek, the disturbance footprints of the projects proposed in the vicinity (i.e., the Sunday Saddle lift bottom terminal and towers, ski runs, and the warming hut) do not include the mill tailings. To ensure that the tailings are not disturbed, Snowbird will not grade or excavate in any way that would directly or indirectly affect them.

In terms of potential inhalation of contaminated dust from the tailings, a higher level of management and presence in the area will allow Snowbird to restrict recreational use of the tailings during the summer, when dust is an issue. Signage, rope lines or more substantial barriers, and public outreach have been effective in keeping people off the Dutchman and Pacific Mine sites in MB, and similar measures will be implemented for these mill tailings.

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[7] Ibid.

Based on these considerations, the existing water quality and other mining-related issues in the 2016 Project Area will remain, but the project will alleviate rather than exacerbate them.

4.6.2 Underground Drainage

No apparent issues currently exist in the project area in regard to underground drainage, and this project will not affect existing conditions.

4.6.3 Flood Hazards

Floodplains in the project area are narrow and confined by topography, with steep slopes that quickly move water downhill and restrict lateral movement away from the stream channel. With the exception of the skier bridge in MB (accessing the bottom terminal of the realigned MBX lift), grading and other disturbance associated with proposed ski lifts, ski runs, and facilities will occur outside of existing stream channels and floodplains in the project area. The skier bridge will be designed and constructed to not impede flood flows in the MB creek, either as an open-bottomed culvert or a free span. No additional risks of flooding will occur in the project area or downstream as a result of the 2016 Project.

4.6.4 Wildlife

Several categories of wildlife relevant to this analysis are discussed below. The Endangered Species Act (ESA) of 1973, as amended, is administered by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). Species listed as threatened or endangered under this act are given protection against harassment, injury, or death (collectively referred to as "take") of individuals, and the ESA provides the legal grounds for action against the individuals or entities responsible for take. In order for take to occur as a result of an action, either the ESA listed species or FWS/NMFS designated Critical Habitat must occur within the area directly or indirectly impacted by the action.

In regard to wildlife, there are no ESA listed species or Critical Habitat directly impacted by this action; however, according to the FWS *Information for Planning and Conservation* website (www.ecos.fws.gov/ipac/) the June sucker (*Chasmistes liorus*) could be indirectly impacted since it is present in Utah Lake, which is downstream from the project area. Given the design criteria and mitigation measures that will be put in place (see section 4.6.7, Soil Erosion, and section 4.7) the project will not detrimentally impact water quality locally or in Utah Lake. This will preclude any adverse effect on June sucker.

The Bald and Golden Eagle Protection Act (BGEPA) of 1963, as amended, is administered by the FWS. Similar to the ESA, the BGEPA provides the legal grounds for action against individuals or entities responsible for "take" of bald or golden eagles (*Haliaeetus leucocephalus* and *Aquila chrysaetos*, respectively). Take is defined similarly in the BGEPA as it is under the ESA.

During the planning stages, it was determined that this project has some potential to impact golden eagle nesting habitat. Therefore, surveys were conducted on October 1, 2015, to determine if any of the potential habitat in the project area is occupied. These surveys determined that there are no existing bald or golden eagle nests in the area and found no sign of previous nesting use that could indicate that eagles may return in the future.

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, is administered by the FWS. The MBTA provides protection for bird species that migrate between the U.S. and the other signatory nations, including Russia, Mexico, Canada, and Japan. The restrictions of the MBTA are not as stringent as those of the ESA or BGEPA and, in essence, restrict the killing of migratory birds or the possession and sale of migratory bird parts. There are many migratory birds that could occupy

the project area during various times of the year. The most critical time with regard to the implementation of this project and its impacts on migratory birds is the nesting period, roughly May 15 through July 15. Construction activities during this period will be limited to those that do not involve the cutting of trees that could be used as nesting habitat for birds protected under the MBTA (see section 4.7). By limiting construction activities in this manner, the project will have only minimal, if any, impact on migratory birds.

A variety of other species could potentially be impacted by the project. Chief among these are big game species, particularly mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus canadensis*), and Rocky Mountain goats (*Oreamnos americanus*). Mule deer and elk may be impacted by the clearing of vegetation for ski runs and, to a lesser degree, by the overall increased human presence in MEG. Human presence in MB will not increase since the area is already developed. The clearing of vegetation will result in a relatively small reduction in the amount of concealment cover in the lower portion of MEG. Tree clearing may also result in an increase in preferred browse vegetation for mule deer and grasses and forbs for elk, providing a benefit to these species in the area.

Overall, neither of these impacts are likely to be substantial, and they will somewhat offset each other. Human presence in the area may be slightly increased during late spring and summer, but is likely to be reduced during hunting season in the fall in MEG. The current level of trespass hunting in MEG is likely to drop off due to increased policing of land within the ski area boundaries.

Rocky Mountain goats (or mountain goats) are likely to be impacted by the proposed Mary Ellen lift. The steep, rocky ridgeline where the middle lift tower will be placed provides good escape terrain habitat for mountain goats. The general vicinity around the middle Mary Ellen lift tower contains low-growing krumholtz subalpine fir that provides sheltered rest locations for mountain goats in the area. During surveys conducted for this project, several such rest locations were observed, and mountain goat scat of varying age indicated long-term use of the site. Some of the sites in the vicinity will be impacted during construction due to the presence of humans in the area.

Mountain goats do not winter in this area, so ski-related operation of the lift has no potential to impact the species. If the lift were operated at times when goats were present, there would likely be a habituation period during which individual goats may be startled by the presence of the Mary Ellen lift. However, over time the goats would learn to ignore the new lift, much as they do the existing lifts.

4.6.5 Vegetation

According to the SWReGAP GIS database, the project area contains 10 vegetation types (Site Plan Map 7). The dominant types, and those which occur most often in areas proposed for development, are Rocky Mountain Subalpine Mesic Meadow, Rocky Mountain Aspen Forest and Woodland, and Rocky Mountain Alpine Bedrock and Scree.

A field investigation found that the modeled GIS data correctly identifies most of the vegetation types; however, some discrepancies were noted. For example, the small pockets of Rocky Mountain Alpine-Montane Wet Meadow identified as occurring along the Sunday Saddle lift alignment in the central portion of MEG were found to be non-wetland. However, any impacts on wetland areas will be mitigated through the U.S. Army Corps of Engineers Section 404 permitting process.

The ESA also provides protection to plant species and any designated critical habitat. There are three ESA plant species listed in Utah County: Deseret milk-vetch (*Astragalus desereticus*), clay phacelia (*Phacelia argillacea*), and Ute ladies'-tresses (*Spiranthes diluvialis*). Deseret milkvetch is narrowly endemic and only occurs on hillslopes between 5,400 and 5,600 feet in elevation with sandy/gravelly soils and supporting pinyon pine, Utah juniper, sagebrush, scrub oak, or grass species. Known occurrences are limited to an area near the town of Birdseye, Utah. The project area does not contain any suitable Deseret milkvetch habitat. No critical habitat has been designated for this species.

Clay phacelia inhabits steep hillslopes in the understory of pinyon pine/Utah juniper and mountain brush communities on the Green River Formation in the southeast corner of Utah County at elevations between 6,000 and 7,000 feet. The project area is outside of the known distribution of clay phacelia, above the elevation band, and does not contain suitable habitat. No critical habitat has been designated for this species.

Ute ladies'-tresses habitat includes wet meadows, stream banks, abandoned oxbow meanders, marshes, and raised bogs at elevations most commonly ranging in Utah from 4,200 to 5,900 feet, though occurrences have been observed at elevations as high as 7,000 feet. The project area is above the elevation range constraints for this species, and suitable habitat is not present.

Since the project area does not contain suitable habitat for the three federally listed species known to occur in Utah County, no impact on these species will occur, and there is no foreseeable need for mitigation measures or Section 7 Consultation with the FWS.

4.6.6 Fire Hazards

Potential fire hazards could exist in portions of warming huts, patrol shacks, and storage sheds that were constructed from wood and other flammable materials. The areas surrounding these and other potentially flammable structures will be kept free of flammable material which may constitute a fire hazard. Other fire hazards could exist in small volumes of compressed gas or flammable liquids used to heat buildings or maintain vehicles. The Salt Lake County Unified Fire Authority (UFA) has provided emergency services to Snowbird since the resort was founded. The UFA is aware of Snowbird's plans to access land in Utah County from the base area in Salt Lake County. The UFA anticipates this relationship will remain unchanged in the future. They will continue to provide emergency service to these areas based on the policy of closest provider responding to incidents regardless of political jurisdiction (see section 3.3, Utilities and Emergency Access and Attachment 3).

Changes in vegetation cover in the project area will include minor tree removal as needed to develop ski runs. Additional discussion of impacts on vegetation are included in section 4.6.5 above. Any graded areas will be revegetated with a mixture of native and other species of grass and forbs that have been successfully used by Snowbird in the past decades to stabilize disturbed areas. Such changes in vegetation structure resulting from the proposed developments will have a minimal impact on potential wildfire hazard.

4.6.7 Geologic Hazard

Faults

Quaternary faults represent sources of large earthquakes (magnitude 6.5 or greater) during the past 2.5 million years. Subsequently, these geologic structures are a likely source of large earthquakes in the future. One of the largest fault zones in Utah is the Wasatch Fault, which extends south from the Idaho border, through the Salt Lake valley, and along the east side of Utah Lake, eventually ending near Gunnison, Utah. According to the Utah Geological Survey, no

quaternary faults extend from the Wasatch Fault zone into American Fork Canyon and the project area. Minor faults, both visible and subsurface, have been mapped throughout the Wasatch Mountain including some parts of the project area. These faults are not considered to be a geologic hazard.

Landslides/Rockfalls/Snow Avalanche

Soil cover at high elevations in the central Wasatch is generally thin, and landslides are not common. However, given the steep topography and abundant, exposed rock outcrops and cliffs, rockfall is a consideration, particularly as it might affect ski lifts crossing steep slopes and cliff bands. Doppelmayr has built most lifts at Snowbird. They have reviewed the proposed alignments and agreed that they are comfortable with them (see Doppelmayr letter in Attachment 3).

When asked about lift construction on potentially unstable alignments, the Doppelmayr representative responded, "We have built on them in the past and used any number of methods to mitigate, reduce or accept movements. Things we have done include pinning to bedrock, adjustable foundations, curtain walls or accepting movements and implementing monitoring programs. In all cases we have a geotech engineer go on site and identify any hazards and then work with them to mitigate."

Doppelmayr has been building lifts for 100 years, installing more than 14,000 lifts in 82 countries. Their assurance that geological conditions on these proposed alignments pose no problem is therefore adequate to allay concerns.

Snow avalanche is a more pressing concern in the project area, as it poses a potential threat to visitors, Snowbird personnel, and facilities. The Management and Operations discussion above (section 3.4) addresses the area's avalanche hazard and Snowbird's qualifications, experience, and procedures for effectively mitigating this hazard. Summarizing that more detailed discussion, Snowbird has dealt with severe avalanche conditions since the resort opened in 1971. Specific to the 2016 Project Area, they have operated in MB since 1999 and have been conducting snow safety studies – hazard forecasting, stability testing, and mitigation options – in MEG for three years. By the time operations begin in MEG, the Snowbird Ski Patrol/Snow Safety Winter Operations Plan, which details procedures for Ski Patrol and snow safety operations including avalanche mitigation, first aid and medical care, search and rescue, and emergency evacuation, will include avalanche mitigation in the 2016 Project Area.

Liquefaction

No apparent issues currently exist in the project area in regard to liquefaction, and this project will not affect existing conditions.

Shallow Groundwater

No apparent issues currently exist in the project area with shallow groundwater in regard to amount and quality of groundwater. This project will not affect existing conditions.

Soil Erosion

Soil map units in the project area are shown in Site Plan Map 8. The project area includes outcrops of unweathered and weathered bedrock as well as soil textures that include sand, silt, and clay loams mixed with varying amounts of cobble and gravel. The erosion hazard of these soils ranges from low to high, and the proposed lifts traverse this entire range. Construction near streams is the greatest concern, and the erosion hazard of soils at the lower MBX lift terminal and the lower Sunday Saddle terminal and warming hut is moderate.

In regard to surface slope, valley bottoms and bench areas range from 0 to 35 percent, midslope areas are 35 to 55 percent, and upper slopes (below ridges and cliff areas) are 55 to percent to vertical. The proposed lifts span this range of slopes.

Proposed developments will disturb soil surfaces as part of grading to develop ski trails and excavation for foundations of buildings, lift towers, and terminals. Disturbance associated with each element is described in the following table.

Snowbird will comply with Utah County regulations regarding erosion control and stormwater management. Disturbance will be minimized to the extent possible, and disturbed areas will be stabilized using Snowbird's standard best management practices (BMPs) to minimize soil erosion and transport during and following the construction period.

Soil disturbance from development in the project area.

Project	Disturbed area (ac)	Intensity of Disturbance
MEG ski runs (includes Sunday Saddle lift terminals).	34.9	Grading, minor excavation
MB ski runs (includes MBX bottom terminal).	9.9	Grading, minor excavation
Bottom terminal of Mary Ellen lift (includes warming hut).	0.9	Grading, minor excavation
Lift equipment facility in MB.	0.5	Excavation
Hidden Peak terminals and patrol facility.	0.4	Excavation
Sunday Saddle warming hut.	0.4	Excavation
MBX towers.	0.1	Excavation
Sunday Saddle lift towers.	0.1	Excavation
Mary Ellen lift mid-station.	0.1	Excavation
Total	**47.3**	-

Snowbird's BMPs have evolved through interaction with Forest Service hydrologists and soils specialists since the resort opened in 1971. Since much of Snowbird's resort area is in Salt Lake County's municipal watershed, the effectiveness of these BMPs has been closely monitored and adjusted as new technologies become available.

Though it will not be required on private land, Snowbird will prepare a project-specific erosion control plan for this project, incorporating appropriate BMPs from the compilation provided in Appendix C of the 1999 EIS (see Attachment 4) and those listed below in section 4.6.7, Mitigation, Surface Drainage and Water Quality.

Expansive Soil

No apparent issues currently exist in the project area in regard to expansive soil, and this project will not affect existing conditions.

Subsidence

No apparent issues currently exist in the project area in regard to subsidence, and this project will not affect existing conditions.

4.6.8 Socio-Economic Factors

Aesthetics

The proposed lifts and structures will be built with similar materials and colors as the rest of the resort in order to promote the same look and feel across the resort, in compliance with the Forest Service's Built Environment Image Guide developed to reduce the resort's visual impact. There is also potential for offsite aesthetic impacts. These impacts will occur primarily in MEG, as MB is already substantially developed, so the changes occurring there will not meaningfully alter the aesthetic character of that area. For this reason, the analysis below focuses on offsite aesthetic impacts caused by the developments in MEG.

A viewshed analysis was conducted to determine the aesthetic impact of the proposed lifts. A viewshed analysis is a Geographic Information Systems (GIS) modeling effort based on the location and size of a theoretical structure and the surrounding topography. The analysis determines, based on these attributes, where the proposed structure could be seen from. For the limited purposes of this aesthetics analysis, the Mary Ellen lift is assumed to be a tram-type lift since this would be visible from the greatest distance due to the size of the carrier. For any other type of lift in this alignment this analysis would likely be conservative.

The resulting modeling takes into account only line-of-sight and not the limitations of the human eye and the way people "see." In order to account for non-topographic factors, this analysis considers several viewer characteristics and limitations of the human eye. The human eye is limited in its ability to discern details of a landscape from a distance; furthermore, seeing is an active process that depends on viewer engagement, experience, and motion.[8] These viewer characteristics are discussed below.

Arguably the most influential of these viewer characteristics in determining whether an individual will notice an object is the distance from the object. If an object is close enough to fill a large enough portion of the field-of-view of the viewer, it is likely to be noticed regardless of viewer engagement, experience, or motion. In order to determine a suitable distance for the viewshed analysis, we observed similar sized and placed objects in a similar environment. We found that at a distance of 10 miles objects of similar size to lift towers and tram cars were difficult to discern with the naked eye. This distance can vary depending on the color of the object or the materials it is constructed out of or if the object is lit and the viewer is observing the object at night[9]. In this case, the lifts will be constructed with non-reflective materials and colors will be selected that blend with the landscape. Lights will be required for safe operation and maintenance during non-use hours, and all lights will be shielded to limit visibility from off-site areas. No night skiing is anticipated in the areas served by these lifts.

Viewer engagement is the next important viewer characteristic in determining if an object will be noticed. If viewers are consciously and actively scanning the landscape, they are far more likely to notice objects in the landscape than those who are engaged in other activities[10]. In the distance

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[8] Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands. USDI-Bureau of Land Management. 2013.
[9] Ibid.
[10] Ibid.

analysis described above, our observers were actively scanning for the target object, and therefore the 10 miles they reported represents a good maximum viewing distance.

Viewer experience can be summed up as a viewer "knowing what they are looking for." Viewers who have seen an object before develop a "search image" that allows them to see similar objects more readily than observers who have not[11]. Ski lifts are a common sight to many people in Utah, so many of the public viewers are likely to have developed this search image.

Motion of the viewer or motion of the object can both influence its visibility. In the case of viewer motion, objects can move relative to the background from the viewer's perspective, changing contrast with the background[12]. This occurs most noticeably when the object is much closer to the viewer relative to the background (e.g., city buildings with mountains in the background). In this case, the object (i.e., lift tower or tram car) is very close to the background (i.e., mountains) so this effect will be minimal.

Motion of the object impacts the noticeability of an object similarly to motion of the viewer, in that the changes in contrast can highlight the object. Motion of the object also draws attention due to the evolutionary tendency of human brains to key in on motion[13]. In this case, the motion of the lift chairs is not relevant for most viewers since they are too small to be seen from any significant distance. The motion of the tram car, however, may be more relevant considering its size.

Site Plan Maps 10 and 11 are the results of the viewshed analysis, assuming a static, engaged, and experienced viewer with good eyesight. Site Plan Map 10 shows the areas from which the proposed Sunday Saddle lift will be visible and Site Plan Map 11 shows the areas from which the proposed Mary Ellen lift towers and the tram car will be visible. In Site Plan Map 11, the tram car has been modeled as it moves along its cable. In areas shaded green in this map a viewer will be able to see a small amount of the tram-car-path, and in areas shaded red a viewer will be able to see the entire path. In both maps the 10-mile radius shown depicts the maximum viewing distance for a static, engaged, and experienced viewer, as discussed above. At this distance the lifts will be discernable but by no means obtrusive. As the viewer moves closer, the lifts will become more discernable and, to some observers, more obtrusive.

These figures indicate that the aesthetic impact of the proposed lifts will be small. Most of the areas from which these features can be observed are unpopulated, and the areas that are populated are on the margins of the 10-mile radius. There is only one established campsite from which either lift can be seen, the Summit Campground off SR 92, at a distance of approximately 8 miles. Neither of the lifts will be visible from popular American Fork Canyon recreation sites such as Tibble Fork or Silver Lake Flat reservoirs, or Silver Lake. In most of the areas from which the new lifts can be seen, an observer can also see the existing lifts and tram in MB and on Hidden Peak. As previously discussed, lighting on these facilities may increase the distance from which they can be seen at night but mitigative measures will be taken to reduce the visual impact of the lights.

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[11] Ibid.
[12] Ibid.
[13] Ibid.

Population

The only notable effect of the 2016 Project on population will be through increased employment at Snowbird to staff the expanded operation. Projected new positions are as follows:

Ski Patrol/Snow Safety	16
Lift Operations	12
Grooming	6
Lift Maintenance	4
Retail Sales	3
Total	41

These will be generally skilled positions, but the skills are commonly in demand and available in northern Utah. As a result, these positions will likely be filled from the Wasatch Front population. Even if all were filled by people coming in from the outside, it would be a negligible impact on the Wasatch Front's 2.1 million population. Given the relative distance to Snowbird, a smaller part of this new workforce will likely reside in Utah County than in Salt Lake County.

Economic Structure

The 2016 Project is anticipated to have little effect on economic structure of the local area, either Utah or Salt Lake county, or the state. It will result in an incremental increase in ski resort-based economic activity in an economy where such activity is an important but not essential component. No detectable change in the economic structure will result from the project.

Parking and Traffic

Snowbird and Alta skiers know that on peak days, parking is hard to find at the resorts, and traffic on State Route 210 is slow when the lifts close and the parking lots empty. This has been the case for many years. Regulations prohibit development of additional parking in the canyon, and most of what can feasibly be done to increase the capacity of SR 210 has been done. At present, alternative transportation systems are widely viewed as the solution, leading to efforts such as Mountain Accord to identify and implement alternative transportation systems. That is the setting in which the impact of the 2016 Project on traffic and parking is assessed. The question is whether the project will significantly worsen the current situation.

A-Trans, a Salt Lake City based transportation engineering firm, completed a review of the traffic and parking effects of the 2016 Project. Their report is included as Attachment 5, and the findings are summarized as follows.

In 1999 a complete traffic and parking analysis was completed as part of the EIS prepared by the Forest Service to address Snowbird's master development plan. That analysis concluded that both parking and level of service on State Route 210 up Little Cottonwood Canyon were sufficient to support a comfortable carrying capacity (CCC) of 6,817 resort visitors. CCC reflects a "design day" rather than a peak day, since facilities are generally not designed to comfortably accommodate peak numbers. In the EIS, the design day was determined to be the 11th busiest day. Based on the 1999 EIS, the Forest Service established 6,817 as the authorized capacity of Snowbird's special use permit area (i.e., the resort's public land). The "design day" and CCC concepts are carried through in this analysis. Using these concepts allows us to use the 1999 analysis, as their values do not change.

The resort's CCC is currently 6,040, and the 2016 Project is projected to add 1,090 to that, for a total of 7,130, or 313 visitors over the 6,817 supported by the 1999 EIS transportation analysis. As noted above under Population, 41 new Snowbird employees would also be added. The question is whether that increment can be accommodated by current parking facilities at Snowbird and by SR 210.

In regard to parking, Snowbird has initiated a number of steps to reduce parking demand since 1999. They have contracted 16 Ride Share vans for employees and provided preferential parking spaces to employees who carpool. On the public front, they have funded UTA to provide sufficient bus service to meet demand, with the number of buses increasing on weekends and holidays. Two additional UTA busses have been contracted for the 2015/16 season, paid for by Snowbird. In developing base-area facilities such as the Creekside Lodge, Snowbird has incorporated features such as transit drop-off and pick-up areas adjacent to alternative skier services including ticket windows, restrooms, food service, and equipment rentals.

Another trend affecting parking demand since 1999 is increased occupancy in Snowbird's hotels and condominiums. While peak-day occupancy rates have increased more than design-day rates, both have trended up. Since destination guests tend to arrive by transit rather than driving, this reduces parking demand.

Snowbird has a total of 2,722 parking spaces of all types. Baseline parking counts indicated that there were 928 vacant spaces on the design day. At the approved CCC (6,817), the 1999 analysis projected skier demand for an additional 296 spaces and employee demand for another 40 spaces, bringing the total available for additional growth or peak days down to 592 spaces.

Analysis of the 2016 Project indicates 313 design-day skiers beyond the previous projection. These 313 skiers will arrive at the resort in a variety of ways – termed the "modal split." Based on the modal split determined in the 1999 analysis, 44 of these skiers will use transit, 100 will stay in overnight accommodations, and 169 will drive personal vehicles. At 2.4 skiers per car, the 169 skiers arriving in personal vehicles equates to 70 parking spaces.

The Population section above indicates that demand for parking 41 new employees should be anticipated. Like skiers, these employees will arrive in a variety of ways. According to 1999 modal split, 15 employees will use transit, 4 will reside in base area accommodations, and 22 will drive personal vehicles. At the rate of 1.9 employees per vehicle, as determined by the 1999 analysis, 22 employees equates to 12 parking spaces.

All in all, this review suggests that this project would reduce the number of vacant parking spaces on the design day from 592 to 510. This is a conservative figure, reflecting 1999 levels of transit use, base area accommodation use, and carpooling by skiers and employees. Since 1999, transit use by both of these groups has likely grown due to increased availability of transit for skiers and incentives offered by Snowbird for employee use of transit. Likewise, carpooling by employees has likely grown due to employee incentives. While this analysis indicates sufficient parking capacity to accommodate the 2016 Project, the increased demand would increase the parking congestion incrementally on peak days.

In terms of level of service on SR 210, the 1999 analysis indicated that during winter morning and afternoon peak hours, SR 210 was basically operating at capacity. As a result, vehicles exiting the parking lot were forced to wait longer to exit the parking lots, and the period of congestion grew longer. Since that time, improvements to the Snowbird's parking lot exits improve the safety and efficiency of merging with the traffic stream, but the situation has not

changed in terms of the highway's level of service. Limited highway capacity makes the system self-limiting.

Using the same projections of vehicles made above for parking, the 2016 Project would result in an additional 70 skier vehicles and 12 employee vehicles on the highway on a design day – again, a conservative projection that assumes 1999 levels of transit and carpooling, both of which have likely increased since 1999. An additional 82 vehicles would extend the duration of peak-period congestion on SR 210 for several minutes but would not affect the level of service on the highway. Again, the roadway's capacity makes level of service self-limiting.

Note also that the increased occupancy rates for base-area accommodations (discussed above under parking) affect traffic in that guests who do drive personal vehicles generally do not drive up or down SR 210 during peak traffic hours and therefore do not contribute substantially to the congestion on SR 210.

Level of service on SR 210 in the summer months was not a problem identified in the 1999 analysis. While summer traffic can be as high as winter traffic on a daily basis, the same congestion issues do not occur because summer traffic is spread throughout the day rather than concentrated into morning and evening peak hours as in winter. The 2016 Project could increase summer traffic due to increased summer recreationists drawn to the zip-line or other summer activities associated with this project; however, this increase would likely be spread throughout the day.

In summary, the 2016 Project would add a small increment of parking demand and highway traffic at worst. Increased transit use, base area accommodation use, and carpooling by guests and employees, relative to the levels analyzed in 1999, might well offset the increase caused by the 2016 Project entirely. That said, parking and the capacity of SR 210 will remain a constraint on peak days. This project will do little or nothing to exacerbate that constraint.

Utilities (water, electricity, telephone, gas)

As discussed above under Utilities and Emergency Access (section 3.3), there will be no demand for utilities from Utah County. To summarize, there will be no requirement for culinary water. Potable water will be available at warming huts for sale and emergency use. Electricity necessary to run the lifts will be delivered through cables built into the lifts, and solar power will meet the needs of the warming huts. The resort's radio network will meet communication needs, and bottled gas for heating will be hauled in on snowcats.

Liquid and Solid Waste Disposal

Also as discussed above under Utilities and Emergency Access (section 3.3), there will be no demand on Utah County for liquid or solid waste disposal. Toilets at the warming huts will utilize composting or other waterless technologies, with residual waste hauled out and disposed of at Snowbird through established procedures. Trash generation will be minimal, from warming huts and mountain operations activities, and trash collected in receptacles will be transported by snowcat back to the Snowbird base area for disposal through established procedures.

Emergency Services and Infrastructure

This aspect is addressed above under Utilities and Emergency Access (section 3.3) and Management and Operations (section 3.4). To summarize, Snowbird is well equipped to handle most emergency situations using Ski Patrol, snow safety personnel, and in-place and proposed facilities (e.g., Ski Patrol facilities on Hidden Peak, at the top terminal of the Sunday Saddle lift and in warming huts at the bottom terminals of the Sunday Saddle and Mary Ellen lifts; snowcats

and snow machines; and cat tracks and skiways for access). Emergency procedures are well documented (e.g., in the Snowbird Ski Patrol/Snow Safety Winter Operations Plan), and personnel are trained in these procedures on an ongoing basis.

When outside assistance of any kind is needed, agreements and procedural arrangements are in place to smoothly and quickly integrate the resources of Salt Lake County Unified Police Department, Salt Lake County Unified Fire Authority, Wasatch Backcountry Rescue, AirMed and Life Flight, Powderbird, and the Town of Alta and Alta Ski Lifts.

Between these in-house and outside qualifications, experience, and infrastructure, Snowbird is well equipped to deal with the emergencies inherent in winter resort operations.

Adequacy of Existing Facilities

As discussed in preceding sections, few facilities will be required for the 2016 Project. There will be no need for streets, sewer lines, sewage treatment, or water supply. In terms the overall resort and integration of this project into it, the 1999 EIS completed by the Forest Service included a capacity analysis that included all on- and off-mountain facilities – lifts and terrain, food service seating, restrooms, parking, and highway access – and concluded that all were adequate to support the CCC of 6,817 visitors subsequently approved by the Forest Service for the existing ski area.

As noted previously, the 2016 Project will add 1,090 skiers, resulting in 313 visitors more than the Forest Service approved figure on the theoretical "design day." However, improvements completed at Snowbird since that time (e.g., the new facility on Hidden Peak, past and proposed expansions of Creekside Lodge, and increased car-pooling and transit provided for employees) have relieved capacity constraints, so no significant bottlenecks are anticipated. See the Traffic and Parking discussion above for a more detailed discussion of those aspects of capacity.

On-site Improvement Funding

The project owner, Snowbird Resort LLC (see Ownership, section 3.2), will provide all funding for the on-site improvements comprised by the 2016 Project.

Off-site Improvement Funding

The 2016 Project includes no off-site improvements, so no funding is required.

Cost-Benefit to Local Government

The Fiscal Impact Report below (section 5) addresses this matter in detail. To summarize, the 2016 Project will result in negligible cost to Utah County while generating substantial property tax revenues. The cost:benefit ratio for Utah County will be extremely positive.

4.7 MITIGATION

The preceding sections of the DIR discuss various mitigation measures that will be implemented to offset any adverse environmental effects of the 2016 Project. Those measures are compiled below.

Surface Drainage and Water Quality

1. In construction MEG facilities, do not grade or excavate in any way that would directly or indirectly affect the mill tailings on the Quartzite claim.

2. Carefully plan and coordinate design and construction to keep disturbed areas as small as possible.
3. Assess potential hydrologic impacts to adjacent wetlands, riparian zones, and other sensitive aquatic environments.
4. Clearly identify clearing limits, trees to be protected, and centerline of proposed trail clearing.
5. Process branches and other slash suitable for chipping on-site. Use chips for erosion control, particularly on roads, or remove these materials from the site. Minimize the amount of grading to limit soil loss, maintain acceptable site productivity, and for visual mitigation.
6. Minimize soil compaction to prevent increased runoff.
7. Selectively remove topsoil in areas to be graded or recontoured whenever practical. Store topsoil away from water courses. After grading activities are completed, re-spread salvaged topsoil. Import topsoil from adjacent topsoil surplus areas to ensure adequate topsoil depths for revegetation if necessary.
8. Redistribute topsoil over the site to be revegetated by spreading it across the slope, then tracking the topsoil to leave imprints perpendicular to the slope.
9. In areas where topsoil is not available, save the top cover material (if present) and spread it over the surface after contouring is complete.
10. Perform all grading activities during periods with low runoff (i.e., late spring to late fall, to avoid the spring runoff).
11. After final contouring, install water bars to catch and direct surface water into undisturbed vegetation buffer strips before entering natural drainage ways.
12. On cut-and-fill slopes to be revegetated, lay back slope gradients to 1.5:1 or flatter whenever possible.
13. Determine if the regraded areas are overly compacted or too loose to provide an optimum plant growth condition. If the soil is determined to be too loose, compact it by walking dozers on the fill or by some other means. If the soil is determined to be excessively compacted, loosen it with a spike tooth harrow, ripper, or similar implement.
14. Implement construction activities in stages, based on the capabilities to complete required site stabilization and revegetation prior to October 15 in any construction season. Annual operating plans will include descriptions, locations, and timing of each ground-disturbing project expected to be implemented that season. Projects will be completed in one general area before starting on another.
15. Restrict the area of soils exposed at any one time to the area necessary for timely and efficient project construction.
16. Minimize the length and gradient of disturbed areas.
17. Implement control measures for surface runoff and temporary erosion on all disturbed areas prior to or immediately following initial disturbance.
18. Construct water bars approximately every 75 feet on slopes greater than 35 percent, every 100 feet on slopes between 25 percent and 35 percent, and every 250 feet on slopes less than 25 percent. These are minimum requirements. Spacing may be closer based on site factors such as soil erosivity, expected runoff, and others. Rock lined drains will be

substituted for waterbars where high volumes and velocities of runoff, or any runoff that is sustained past the snowmelt periods, is expected. Changes to these requirements can be made during construction if approved by Utah County.

19. Extensively utilize trenches and/or silt fences along the lower portion of all disturbed areas. Properly install silt fences according to manufacturer's specifications.

20. Implement revegetation treatments as soon as possible, usually within 10 days after soil preparation, in all disturbed areas that have been regraded and re-topsoiled. All disturbed areas should be revegetated no later than October 15 of each year.

21. Design revegetation efforts adjacent to wetlands to maximize the establishment of vegetation species capable of filtering runoff or otherwise buffering wetlands from the effects of disturbance.

22. Protect all regraded, re-topsoiled, and reseeded areas from erosion by effective revegetation methods and through application of mulch, erosion-control netting or blankets, or chemical tackifiers. Use mulch on slopes less than 30 percent, and netting or blankets on slopes greater than 30 percent. Use only weed-free mulch sources. Apply mulch at a rate of at least 2 tons/acre. Crimp the mulch into the soil with a snowcat, bulldozer, or other effective mechanical device. If mechanical crimping is impractical, use stapled netting and/or chemical tackifiers to bind the loose mulch to the soil surface to minimize removal by wind or by surface runoff.

Wildlife

23. Construction activities during the nesting period for migratory birds (roughly May 15 through July 15) will be limited to those that do not involve the cutting of trees that could be used as nesting habitat for birds protected under the Migratory Bird Treaty Act.

Aesthetics

24. Ski lifts (including chairs, towers, and terminals) will be constructed with non-reflective materials and colors that blend with the landscape.

25. Lights that are required for safe lift operation and maintenance during periods of non-use will be downcast and shielded to limit visibility from off-site areas.

Emergency Services and Infrastructure

26. Revise the Snowbird Ski Patrol/Snow Safety Winter Operations Plan to reflect conditions and responsive procedures for dealing with Ski Patrol and snow safety operations including avalanche mitigation, first aid and medical care, search and rescue, and emergency evacuation in MEG.

Safety

27. Prohibit summer recreational use of the mill tailings on the Quartzite claim using signage, barriers, patrols, and public outreach.

5. FISCAL IMPACT REPORT

This report was prepared by Cirrus Ecological Solutions, LC, a Logan, UT, based environmental consulting firm which assisted the Forest Service and Snowbird with a number of environmental impact assessments over the past 15 years, including socio-economic analysis. Cirrus has also completed numerous socio-economic impact analyses for other ski resort development projects as well as for oil and gas pipelines, mining, and grazing. Mr. Tom Jones, Snowbird's Senior Vice President and Chief Financial Officer, and Mr. Nile Eatmon, a Stoel-Rives attorney specializing in real estate matters, provided assistance in this analysis.

In terms of the County services required by the 2016 Project, the preceding sections of this document demonstrate that they would be minimal (see 3.3 Utilities and Infrastructure, 4.6.6 Fire Hazards, and 4.6.8 Socio-Economic Factors, Population, Utilities, Liquid and Solid Waste, Emergency Services and Infrastructure, and Adequacy of Existing Facilities). Virtually all services will be provided through integration with the existing resort, made unnecessary through project design, or be provided by Salt Lake County agencies through existing agreements.

The only identified exceptions will be issuance of building permits by the Utah County Building Division and food handlers permits (for the packaged food and beverages sold at the warming huts) by the Utah County Health Department. The associated permit fees, including construction monitoring and inspection, are intended to offset the cost to the County, so there will be no notable net cost.

In regard to revenue sources, property taxes will be the primary source. All sales, with the exception of negligible packaged food and beverage sales at the warming huts, will occur in Salt Lake County, so no sales tax revenues will accrue to Utah County.

Projecting property tax receipts precisely is impossible given the effects of unforeseeable factors, but a good estimate is possible. The following table reflects our analysis, including the assumptions used to make projections for 2016, when the MBX replacement is scheduled to occur, 2017, when no projects are planned, and 2018, when the Sunday Saddle Mary Ellen lifts are slated. Beyond those years, personal property taxes would decrease in accordance with the County's depreciation schedule.

Utah County Real and Personal Property Tax Paid by Snowbird (2000-2014 Actual; 2015-2018 Projected)

	Real Property	Personal Property	Total
2000	7,639.83	0.00	7,639.83
2001	9,245.07	19,555.15	28,800.22
2002	12,790.43	37,191.49	49,981.92
2003	12,394.95	34,481.64	46,876.59
2004	13,393.12	34,180.98	47,574.10
2005	13,346.68	31,889.52	45,236.20
2006	10,259.12	29,040.80	39,299.92

	Real Property	Personal Property	Total
2007	12,355.16	25,012.31	37,367.47
2008	16,539.79	22,399.38	38,939.17
2009	19,531.82	19,345.73	38,877.55
2010	21,436.62	17,469.37	38,905.99
2011	22,009.67	14,805.83	36,815.50
2012	40,639.47	12,832.61	53,472.08
2013	45,457.78	12,366.27	57,824.05
2014	43,647.04	11,172.29	54,819.33
2015[1]	42,072.51	9,492.66	51,565.17
2016[2]	42,072.51	73,637.70	115,710.21
2017[3]	42,072.51	66,273.90	108,346.44
2018[4,5]	42,072.51	348,671.50	390,744.01

[1]Based on preliminary 2015 valuations and proposed budgets.

[2]Assumes a constant real property tax; removes 1/2 the value of personal property for the removal of the existing MBX lift; adds the personal property tax for the estimated $6 million value of the new MBX lift at a mill levy of 1.1561%; and depreciates the personal property tax for the Baldy lift by 10%.

[3]Assumes a constant real property tax and depreciates the personal property tax for the Baldy and MBX lifts by 10%.

[4]Assumes a constant real property tax; adds the personal property tax for the estimated $20 million value of the Mary Ellen lift and $5 million for the Sunday Saddle lift at a mill levy of 1.1561%; and depreciates the personal property tax for the Baldy and MBX lifts by 10%.

[5]Proposed structures will add to real property tax base, but projected value not available at this point in planning process.

As noted, building permit fees are intended to cover the costs of construction monitoring and inspection, but Snowbird is willing to contract inspectors as possible (e.g., Stormwater Pollution Prevention Plan inspectors) to offset any minor cost to government.

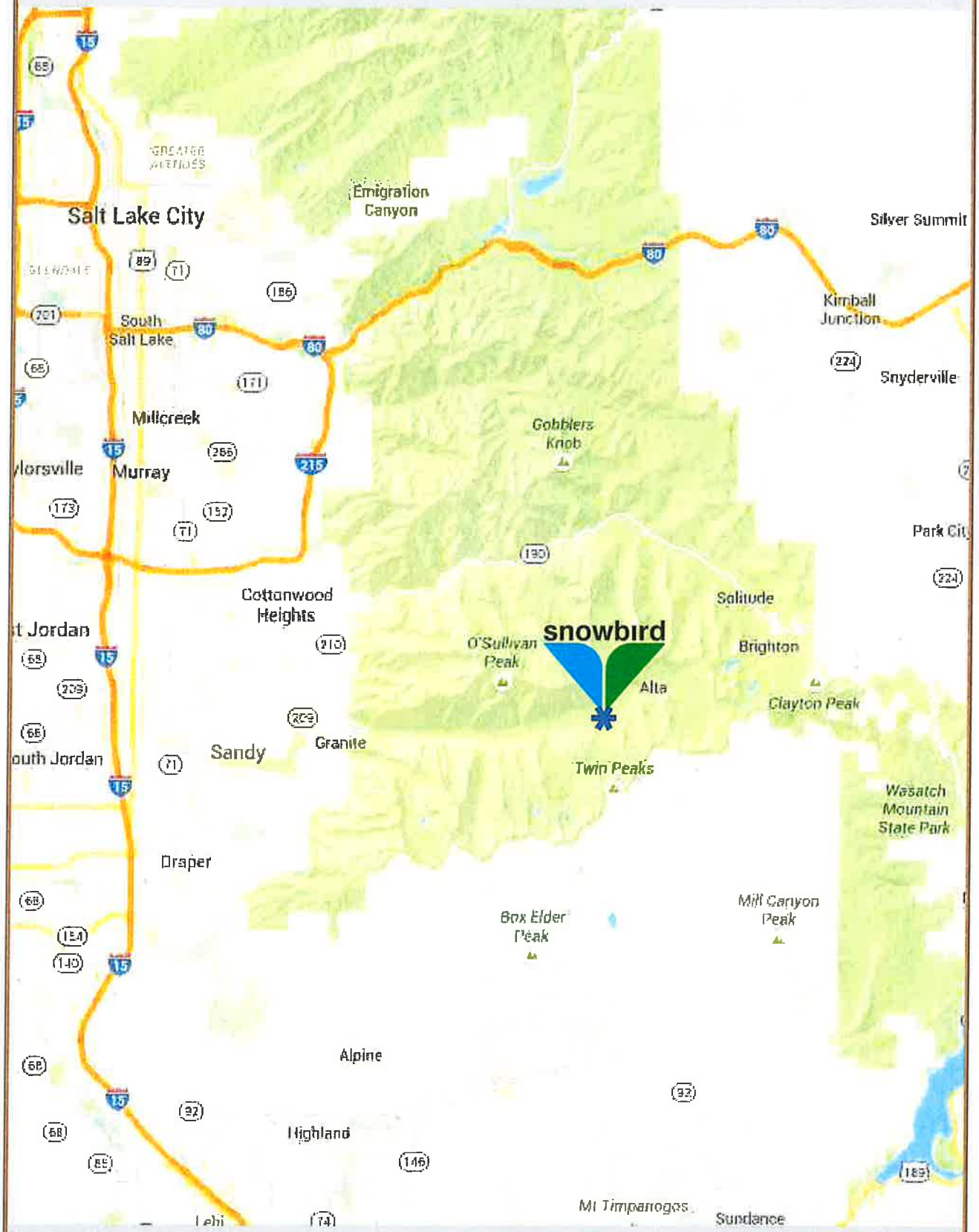
Under the in-place agreements with emergency service providers (see Attachment 3), the County should accrue no liability or exposure for these services.

Based on these considerations, Utah County stands to generate significant tax revenues from the 2016 Project while expending virtually nothing for services and generating no liability or exposure. The fiscal cost:benefit ratio will be strongly in the County's favor.

ATTACHMENT 1:

SITE PLAN MAPS

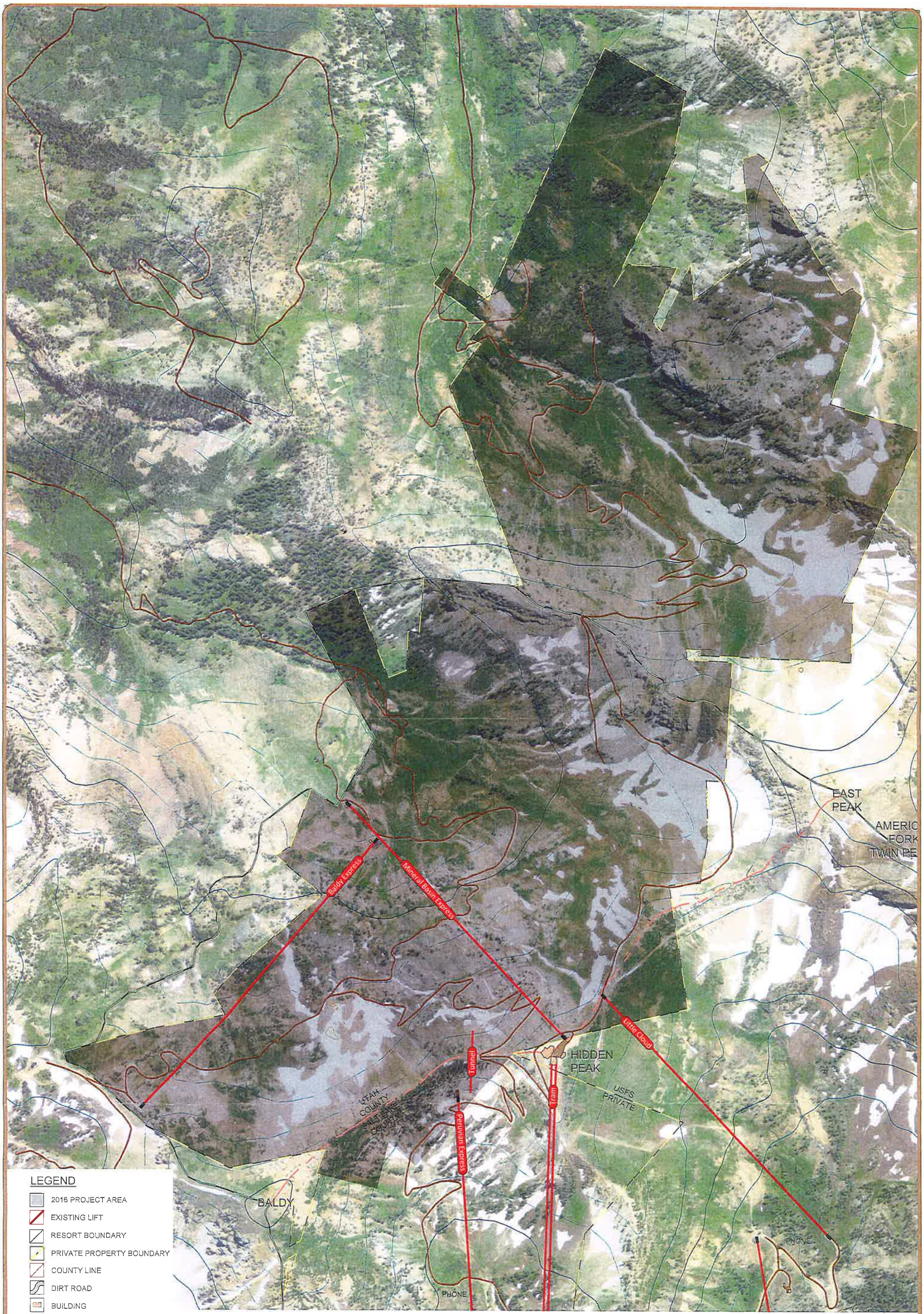
- Map 1 – Vicinity map showing general location of Snowbird
- Map 2 – Existing conditions showing existing infrastructure and 2016 Project Area.
- Map 3 – Upgrade plan showing all proposed infrastructure and graded ski runs.
- Map 4 – Detail map #1 showing the bottom terminal of the Mary Ellen lift.
- Map 5 – Detail map #2 showing Ski Patrol facility and other infrastructure around Hidden Peak.
- Map 6 – Detail map #3 showing the bottom of the Sunday Saddle lift.
- Map 7 – Vegetation types showing all proposed infrastructure and graded ski runs over vegetation community types.
- Map 8 – Soils and hydrology showing all proposed infrastructure and graded ski runs over soil types and perennial streams.
- Map 9 – Operational integration showing new and existing infrastructure and graded ski runs and linkages between the existing portions of the ski area and MEG. This map demonstrates integration with the existing resort per Standard 7(v) (3-46.H Item 7[v]).
- Map 10 – Sunday Saddle lift viewshed showing areas from which the Sunday Saddle lift would be visible.
- Map 11 – Mary Ellen lift viewshed showing areas from which the Mary Ellen lift would be visible.



snowbird

2016 Project Area Vicinity Map

SE GROUP



snowbird

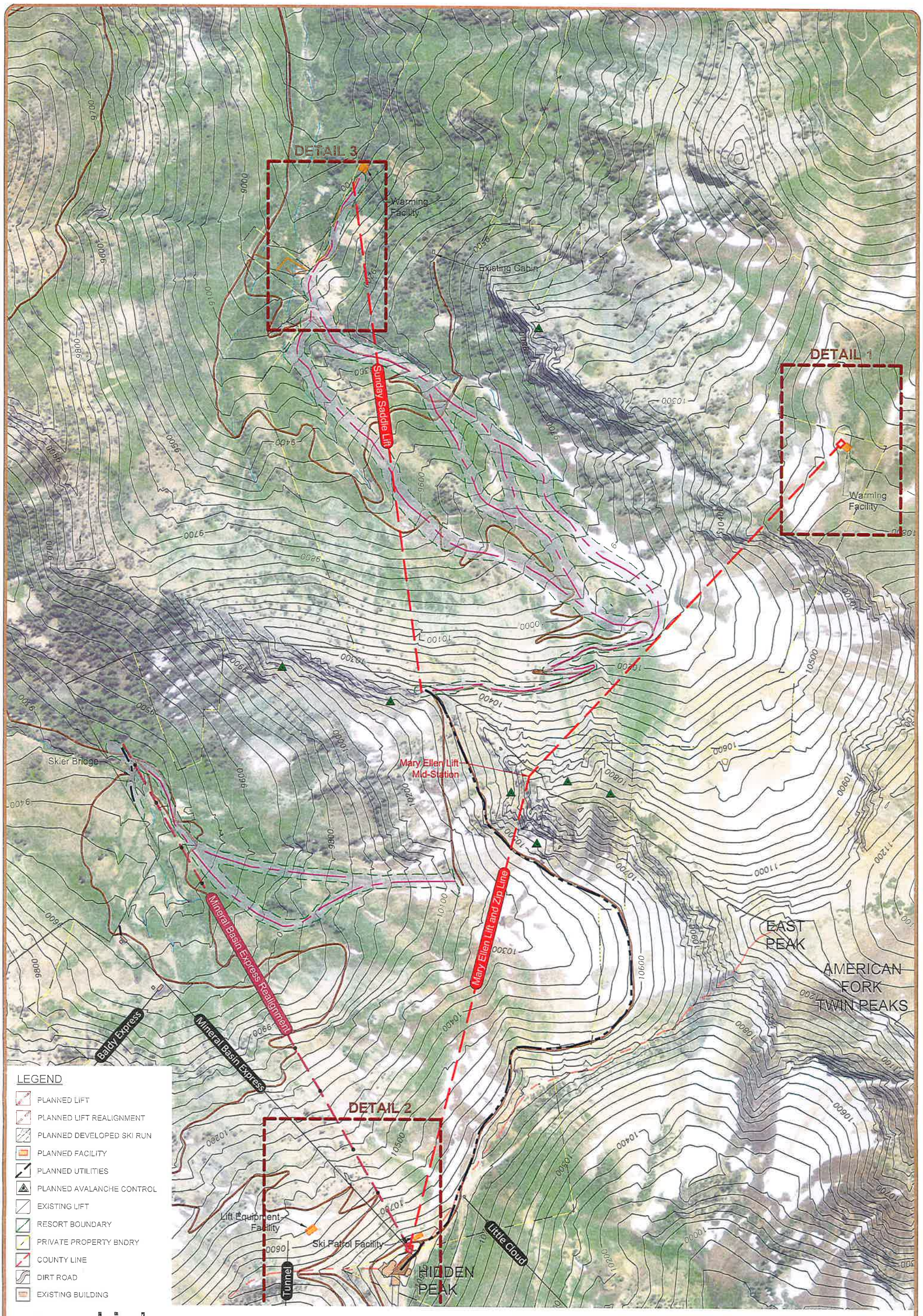
2016 Project Area
Existing Conditions

CONTOUR INTERVAL 200'

0 200 400 800 ft.

DATE: December 2015

SE GROUP



snowbird

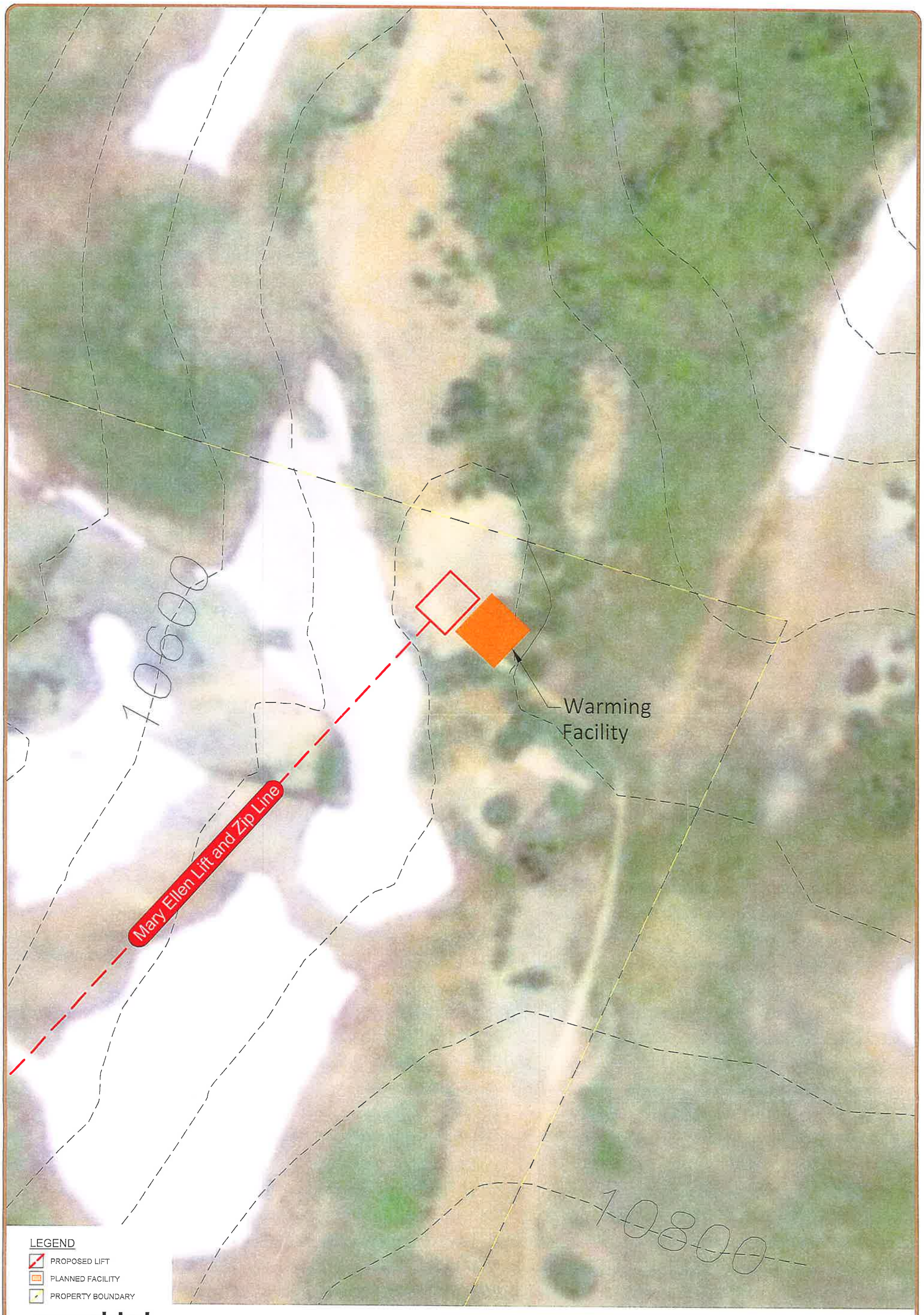
2016 Project Area Upgrade Site Plan

CONTOUR INTERVAL 50'

0 150 300 600 ft

DATE: December 2015

SE GROUP



snowbird

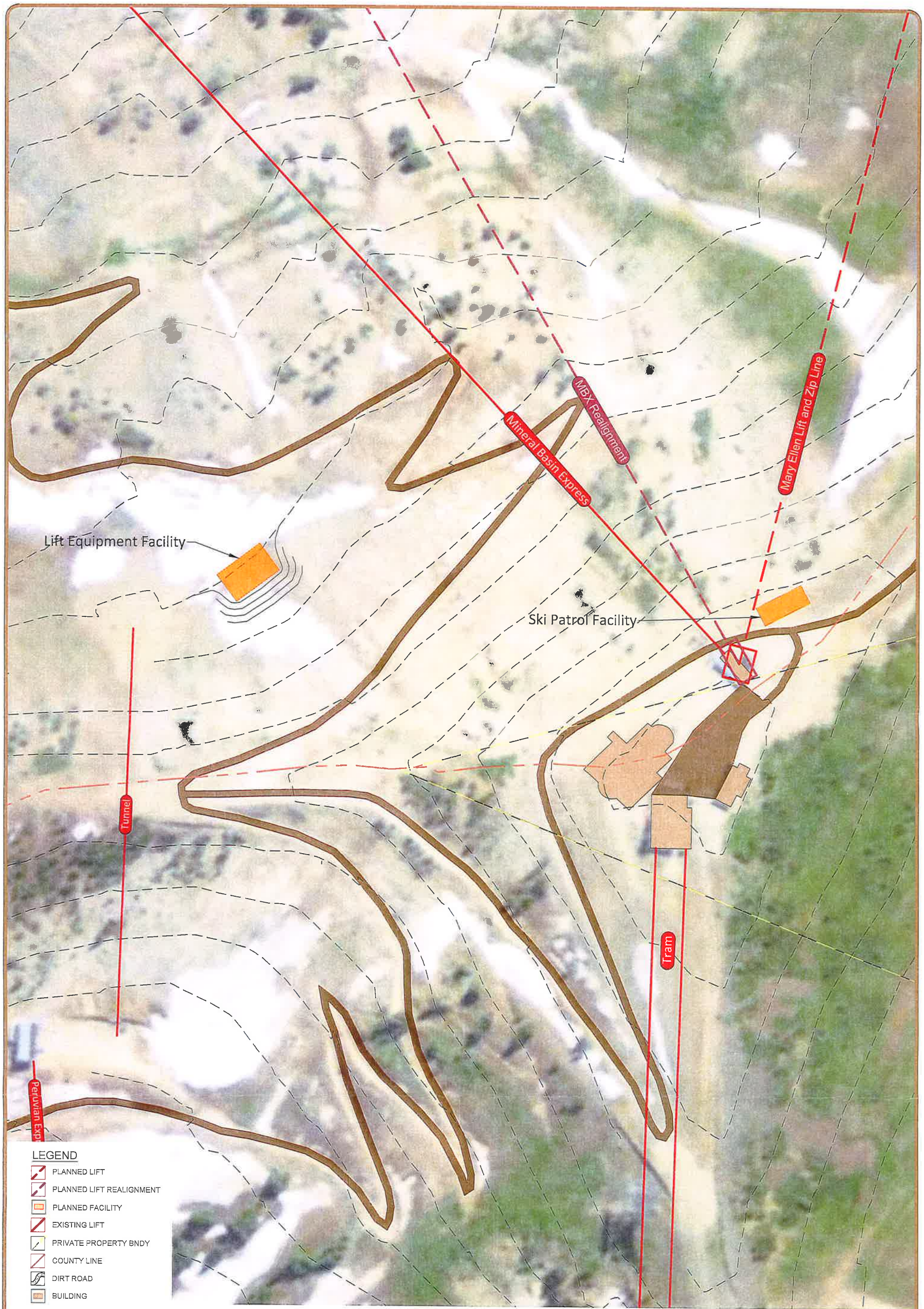
2016 Project Area
Bottom Terminal Mary Ellen Lift
Detail 1

CONTOUR INTERVAL 50'

0 20 40 80 ft.

DATE: December 2015

SE GROUP



snowbird

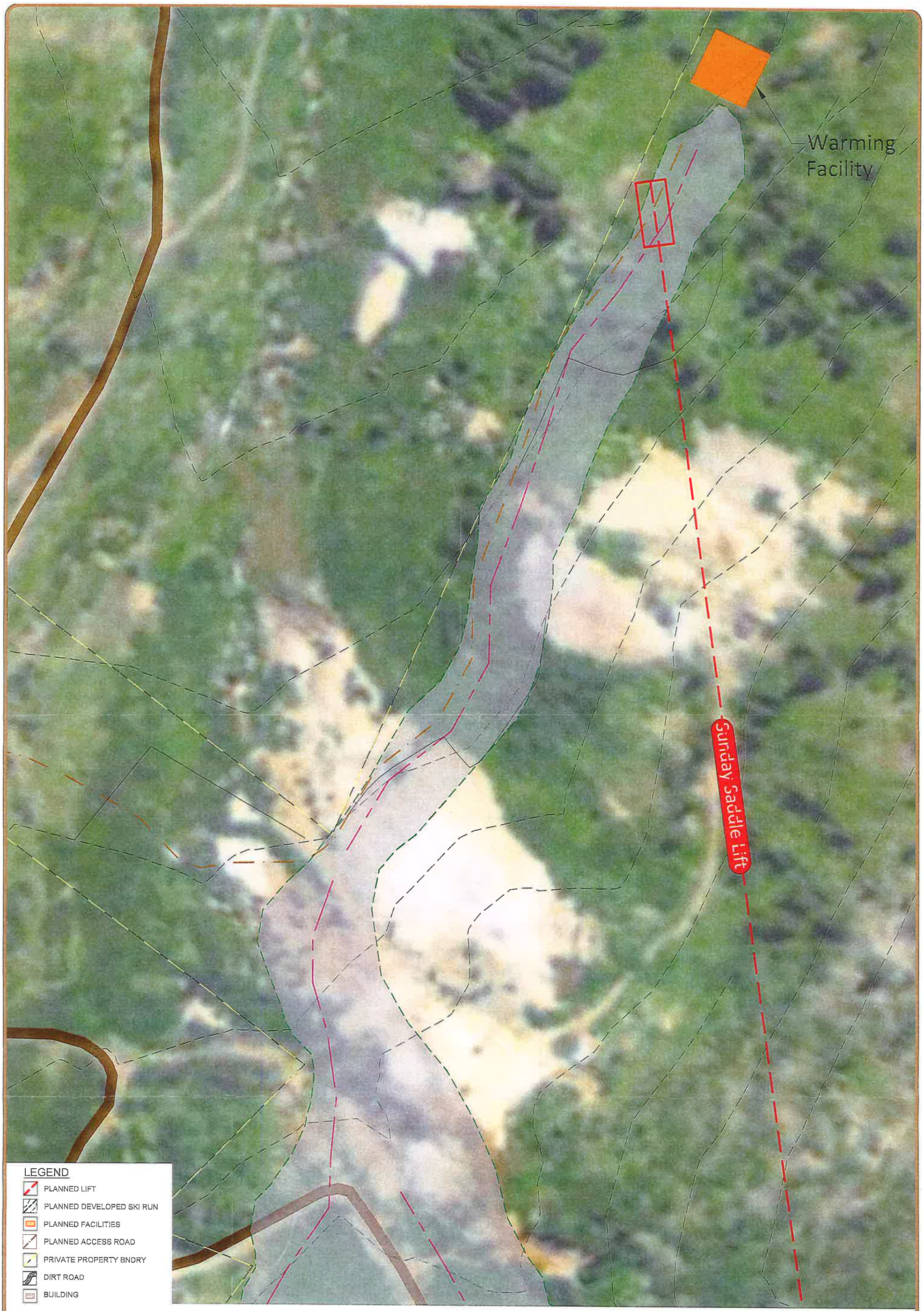
2016 Project Area
Hidden Peak
Detail 2

CONTOUR INTERVAL 50'

0 30 60 120 ft.

DATE: December 2015

SE GROUP



snowbird

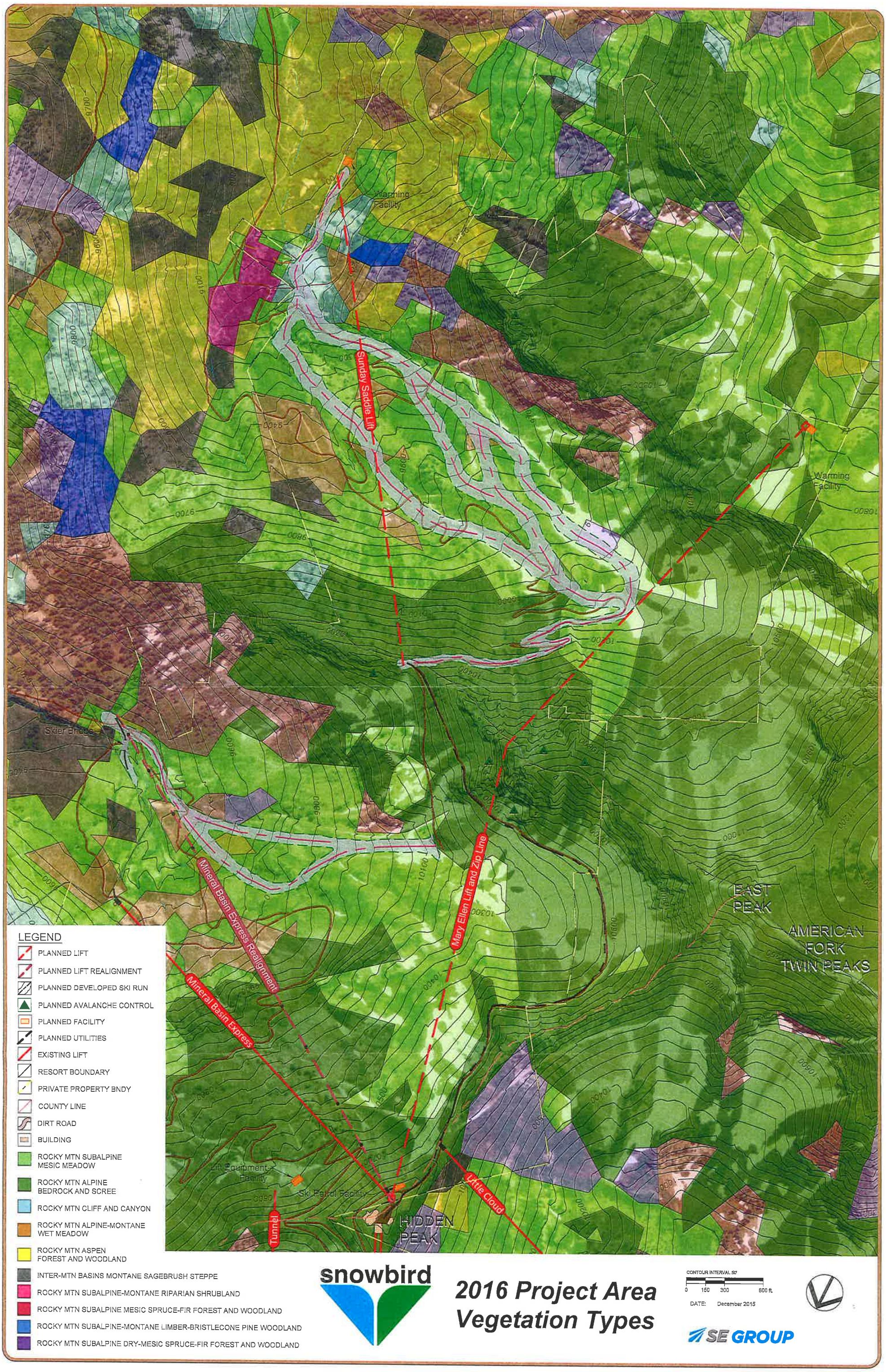
2016 Project Area
Bottom Terminal Sunday Saddle Lift
Detail 3

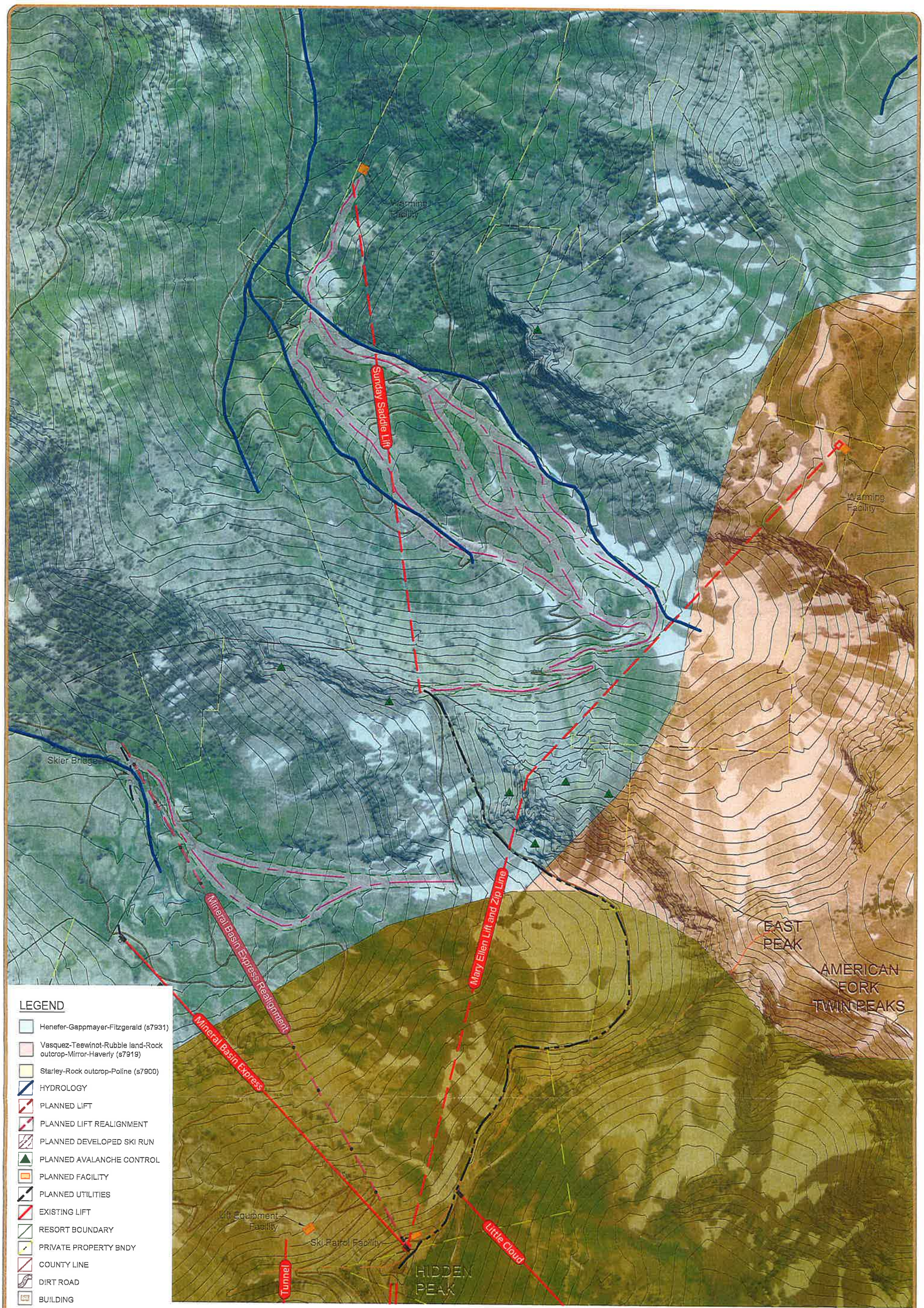
CONTOUR INTERVAL 50'

0 20 40 80 ft.

DATE: December 2015

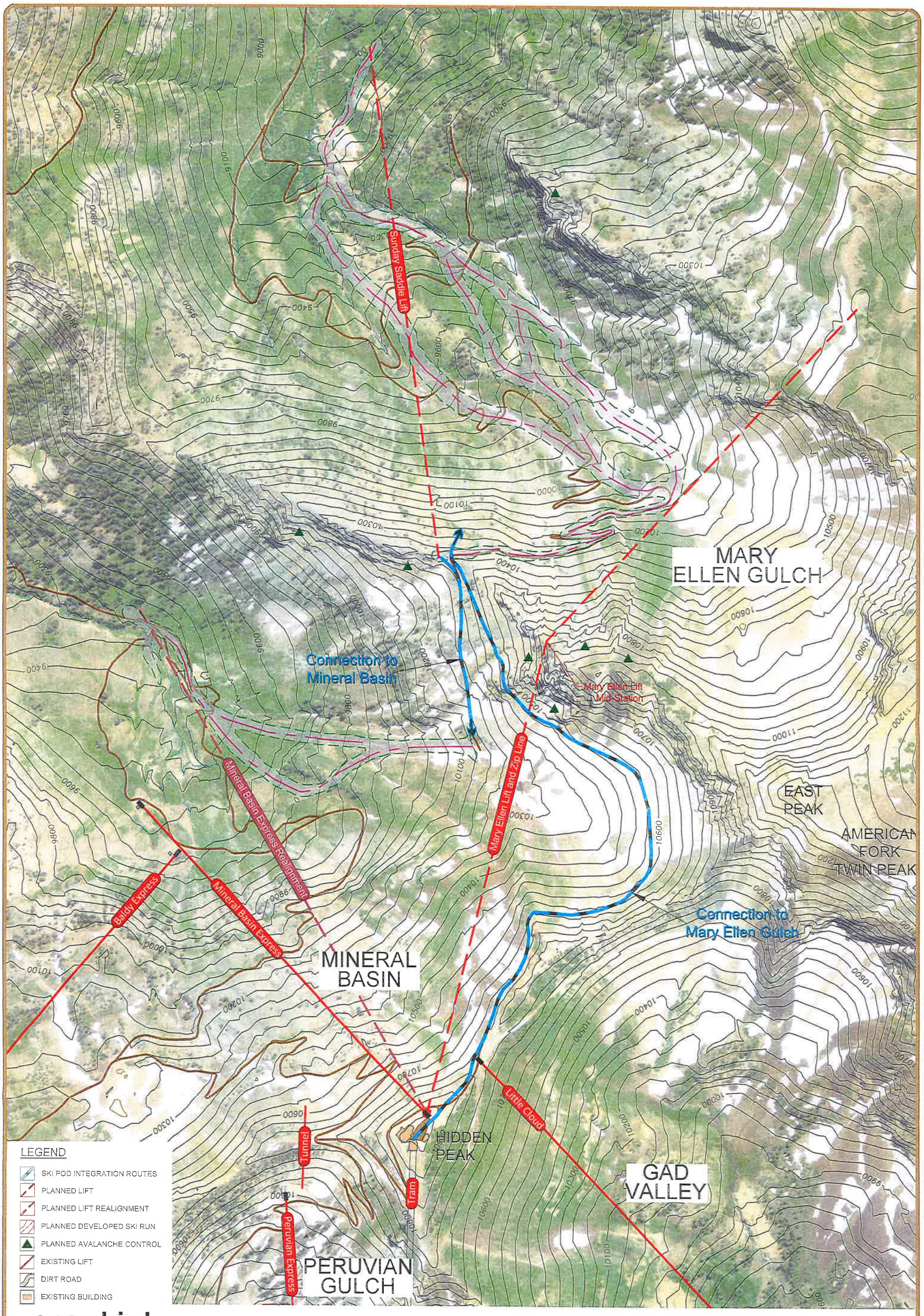
SE GROUP


Sunday Saddle Lift
Warming Facility
Warming Facility
Skier Bridge
Mineral Basin Express Realignment
Mary Ellen Lift and Zip Line
Mineral Basin Express
Little Cloud
Tunnel
Lift Equipment Facility
Ski Patrol Facility
HIDDEN PEAK
EAST PEAK
AMERICAN FORK TWIN PEAKS
LEGEND
PLANNED LIFT
PLANNED LIFT REALIGNMENT
PLANNED DEVELOPED SKI RUN
PLANNED AVALANCHE CONTROL
PLANNED FACILITY
PLANNED UTILITIES
EXISTING LIFT
RESORT BOUNDARY
PRIVATE PROPERTY BNDY
COUNTY LINE
DIRT ROAD
BUILDING
ROCKY MTN SUBALPINE MESIC MEADOW
ROCKY MTN ALPINE BEDROCK AND SCREE
ROCKY MTN CLIFF AND CANYON
ROCKY MTN ALPINE-MONTANE WET MEADOW
ROCKY MTN ASPEN FOREST AND WOODLAND
INTER-MTN BASINS MONTANE SAGEBRUSH STEPPE
ROCKY MTN SUBALPINE-MONTANE RIPARIAN SHRUBLAND
ROCKY MTN SUBALPINE MESIC SPRUCE-FIR FOREST AND WOODLAND
ROCKY MTN SUBALPINE-MONTANE LIMBER-BRISTLECONE PINE WOODLAND
ROCKY MTN SUBALPINE DRY-MESIC SPRUCE-FIR FOREST AND WOODLAND
snowbird
2016 Project Area Vegetation Types
CONTOUR INTERVAL 50'
0 150 300 600 ft.
DATE: December 2015
SE GROUP



snowbird

2016 Project Area Soils and Hydrology



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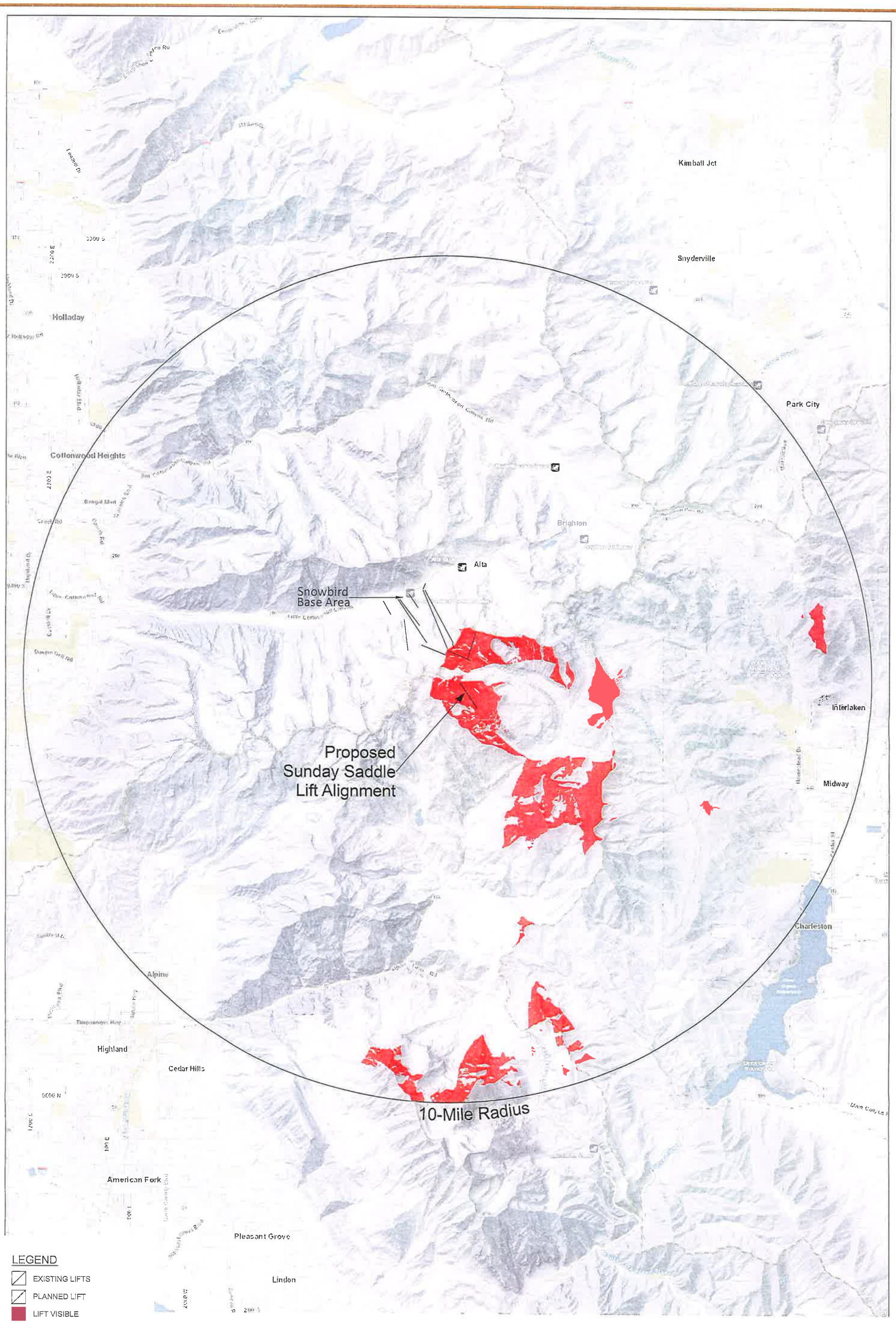
2016 Project Area Operational Integration

SE GROUP



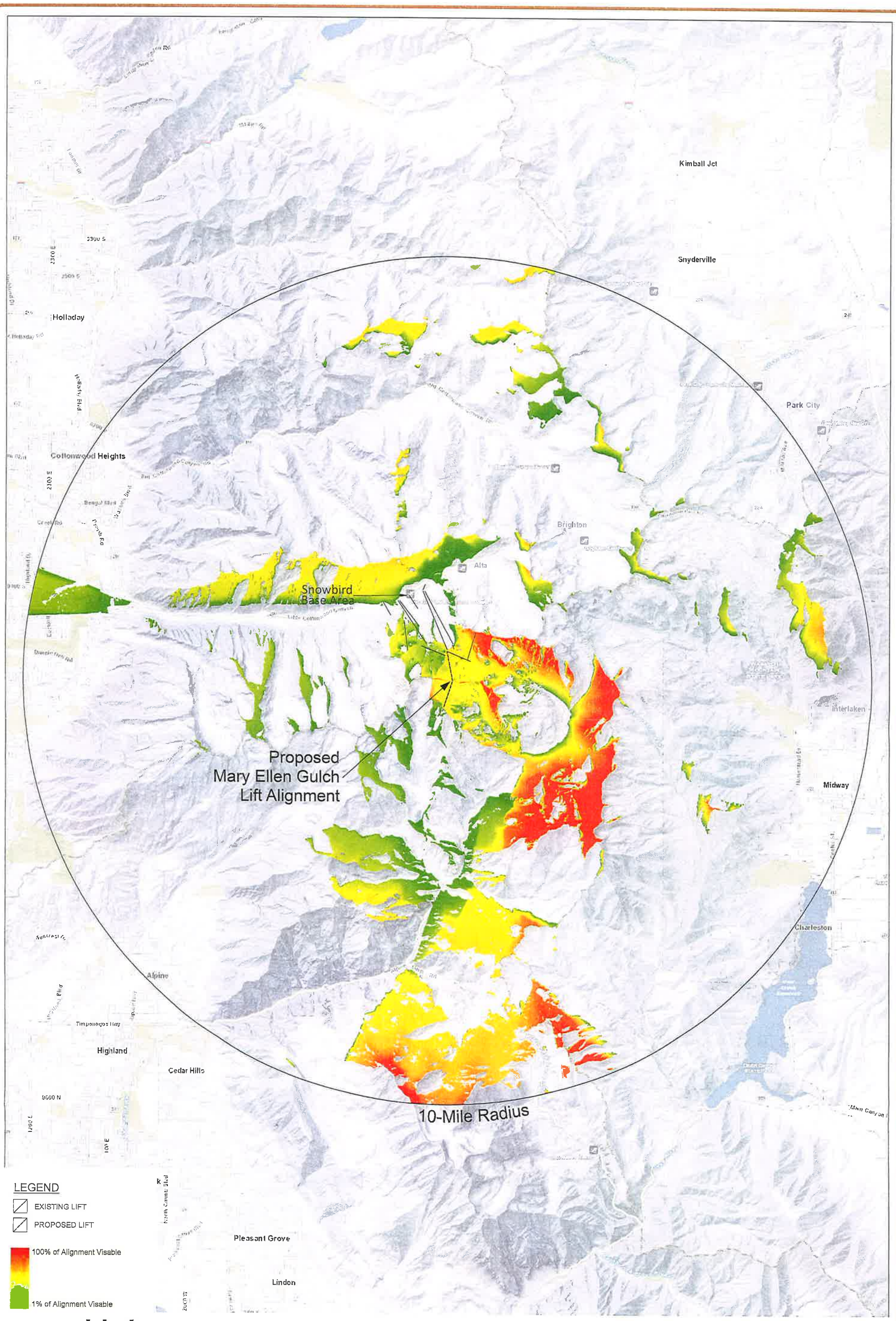
snowbird

2016 Project Area
Sunday Saddle Lift Viewshed

0 2,500 5,000 10,000 ft.

DATE: December 2015

SE GROUP



snowbird

2016 Project Area
Mary Ellen Lift Viewshed

0 2,500 5,000 10,000 ft.

DATE: December 2015

SE GROUP

ATTACHMENT 3:

SUPPORTING LETTERS

James M. Winder
Sheriff

Scott Carver
Undersheriff

UNIFIED POLICE
GREATER SALT LAKE

Shane Hudson
Deputy Chief

★ 3365 South 900 West ★ Salt Lake City, Utah 84119 ★ 385-468-9901

The Unified Police Department (UPD) has provided services to areas served by the Snowbird ski lifts since its creation. The UPD is aware of Snowbird's plan to, at some future time, expand lift and associated lift facilities in the Utah County area. As Utah county emergency response providers cannot easily reach those areas due to lack of direct access, the UPD will continue to provide emergency response to the areas served by the new lifts. This is consistent with its historical practice and consistent with the generally recognized policy of the closest provider responding to the incidents regardless of political jurisdiction.

In summary, the UPD, including our Search and Rescue Team will continue to work closely with Wasatch Backcountry Rescue and Snowbird Resort in providing initial emergency response on the Utah County side of the resort as necessary.

James M. Winder

Sheriff James M. Winder
Unified Police Department

UNIFIED FIRE AUTHORITY

October 6, 2015

Bob Bonar
PO Box 929000
Snowbird, UT 84092-9000

Bob,

The Unified Fire Authority (the "UFA") has provided services to areas served by the Snowbid ski lifts since its creation. The UFA is aware of your plan to expand lift facilities that affect the Utah and Wasatch County portions of the ski area. As Utah County and Wasatch County emergency response providers cannot easily reach those areas due to lack of direct access (access would entail helicopter access or travel to the Snowbird ski lifts), the UFA anticipates that it will continue to provide emergency response to the areas served by the new lifts. This is consistent with its historical practice and consistent with the generally recognized policy of the closest provider responding to incidents regardless of political jurisdiction.

In summary, the UFA anticipates that its response relationship in the areas accessed through the Snowbird ski lifts and secondarily served by the new lifts will remain status quo. If access to the areas served by the new lifts improves for Utah and Wasatch County emergency responders changes, the UFA will evaluate changes in response protocols at that time.

Sincerely,

Michael Jensen
Fire Chief

3380 South 900 West Salt Lake City, UT 84119-4102 P (801) 743-7200 www.unifiedfire.org

Doppelmayr USA, Inc.
3160 West 500 South
Salt Lake City, UT 84104
T: 801-973-7977
F: 801-973-9580

info@doppelmayrusa.com

October 20, 2015

Bob Bonar
President Snowbird Ski and Summer Resort
PO Box 929000
Snowbird, UT 84092

Dear Mr. Bonar

Thank you for sharing your vision for your potential lift placements with me at Snowbird. You do have some of the most spectacular scenery and mountain aspects in the Wasatch! To share this view with the public would truly be a memorable experience. That is where we come in! We can install lifts at every alignment that we have discussed. We have several options in regards to lift models which can negotiate your angle possibilities. We are presently building an 8-MGD gondola at Park City Resort which has an angle station that changes direction over 40 degrees. This is achieved by using three small diameter bullwheels to make the turn. Our parent company has turned angles on trams, 3-S, pulse, gondolas and chairs. We would solicit their worldwide expertise if needed, depending upon the product that was selected.

As you know, the Doppelmayr/Garaventa Group has been designing, engineering, installing, and maintaining ropeways for over 100 years. We have installed over 14,000 ropeways in 82 countries. We presently have 60% of the World's market share and hover around 900 million usd annually in revenue. We are a family owned business with our Chairman (Michael Doppelmayr) being a fourth generation leader. I look forward to discussing your ropeway needs for the coming years and want to reinforce the capabilities that our company has.

Respectfully

F. Scott Pierpont
SVP Doppelmayr USA

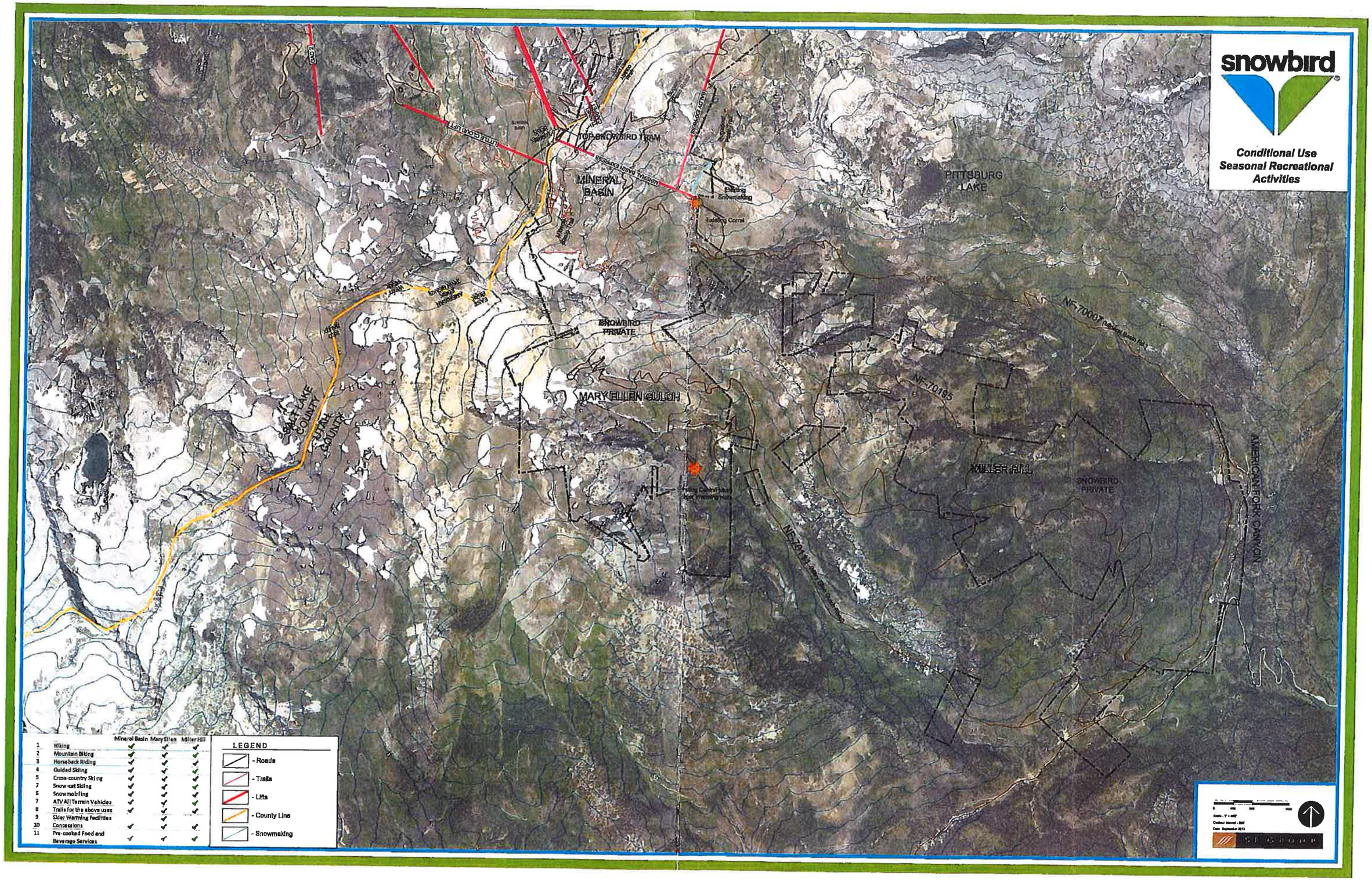
FSP/fsp

ATTACHMENT 4:

BEST MANAGEMENT PRACTICES FOR SKI AREA EROSION AND SEDIMENT CONTROL, AIRBORNE NUISANCE MANAGEMENT, AND RESOURCE CONSERVATION

ATTACHMENT 2:

PREVIOUS CUP MAP



		Mineral Basin	Mary Ellen	Miller Hill
1	Hiking	✓	✓	✓
2	Mountain Biking	✓	✓	✓
3	Horseback Riding	✓	✓	✓
4	Guided Skiing	✓	✓	✓
5	Cross-country Skiing	✓	✓	✓
7	Snow-cat Skiing	✓	✓	✓
6	Snowmobiling	✓	✓	✓
7	ATV All Terrain Vehicles	✓	✓	✓
8	Trails for the above uses	✓	✓	✓
9	Slider Warming Facilities		✓	
10	Concessions	✓		✓
11	Pre-cooked Food and Beverage Services	✓	✓	✓

APPENDIX C

BEST MANAGEMENT PRACTICES FOR SKI AREA EROSION AND SEDIMENTATION CONTROL, AIRBORNE NUISANCE MANAGEMENT, AND RESOURCE CONSERVATION

INTRODUCTION

The measures provided below serve as guidelines for control of runoff, erosion, sedimentation, dust, and noise associated with construction activities at ski areas. The objectives of these measures are to minimize disturbances and to return disturbed areas to conditions that are stable from a soil erosion standpoint, productive in terms of vegetation, useful to wildlife, and aesthetically pleasing. Guidelines are also provided for resource conservation measures which could be implemented during the construction phase. These latter measures are designed to promote sustainable use of renewable resources.

During the construction planning process, the ski area will submit an erosion control plan. This plan will propose the specific use of applicable BMPs. The plan must be approved by the Forest Service prior to authorization of construction.

This appendix is divided into the following sections:

- Performance objectives
- Vegetation removal
- Earthwork
- Temporary erosion and sedimentation control
- Permanent erosion and sedimentation control
- Management of Airborne Nuisances
- Resource Conservation
- Monitoring and maintenance

PERFORMANCE OBJECTIVES

- The following are recommended performance objectives for construction, erosion control, and revegetation.

- Minimize soil and vegetation disturbance through planning, design, and site protection.

- Limit site disturbance so that post-development site productivity, on a project site basis, is not degraded. Acceptable site productivity is determined when soil loss is less than one ton/acre/year after revegetation is complete based on soil loss calculations.

- Protect existing vegetation through effective construction-site management procedures.

- Restore revegetation potential, to the extent practical, through careful topsoil management.

- Stabilize and protect disturbed areas as soon as practicable through mulching, erosion control, and stabilization practices, usually within two days after construction is completed. Follow up with revegetation work within 10 days. Complete revegetation work before October 15.

- Establish a vigorous stand of desirable plant species that will preclude invasion of noxious or undesirable plants, slow velocity of runoff, and limit erosion potential.

- Establish vegetation that will allow natural plant community succession on all disturbed areas.

- Revegetate the disturbed areas with plant species useful to wildlife.

- Properly handle and store fuel and other hazardous or toxic materials at construction sites and permanent structures so that any spill would be contained.

VEGETATION REMOVAL

- The following procedures are designed to protect vegetation and natural features (wetlands, streams, airsheds, etc.) when vegetation removal is necessary.

- Carefully plan and coordinate design and construction to keep disturbed areas as small as possible.

- Minimize direct and indirect impacts to wetlands, streams, lakes, riparian zones, and other unique habitats through planning and construction site management. Prohibit vehicles in areas not to be disturbed.

- Assess potential hydrologic impacts to adjacent wetlands, riparian zones, and other sensitive aquatic environments.

- Minimize and avoid, where possible, heavy equipment and vehicles from entering wetlands, riparian zones, and other sensitive areas.

- Clearly identify access roads and do not allow alternative routes. Designate all routes in construction zones and identify the areas where equipment may operate ahead of time.

- Evaluate the possibility of windthrow where clearing occurs in dense forest stands.

- Use windfirm trees as windbreaks and visual screens for lifts, trails and facilities.

- Feather-cut unit edges to reduce the strong contrast between the ski trails and undisturbed surrounding areas.

- Clearly identify clearing limits, trees to be protected, and centerline of proposed trail clearing.

- Fell trees directionally away from wetlands, riparian zones, and other sensitive areas.

- Cut gladed areas and buck trees selectively so that all remnants are in contact with the ground.

- Process branches and other slash suitable for chipping on-site. Use chips for erosion control, particularly on roads, or remove these materials from the site.

- Consider burning as a method of tree, stump, or slash disposal only when no other methods of removal are practical. (See Management of Airborne Nuisances below.)

- If burning is not appropriate, implement other on-site disposal. Stumps should be buried on mostly level, previously disturbed sites at least 100 feet from streams and wetlands where feasible.

EARTHWORK

Topsoil Management

- Minimize the amount of grading to limit soil loss, maintain acceptable site productivity, and for visual mitigation.

- Minimize soil compaction to prevent increased runoff.

- Minimize disturbance and provide maximum revegetation potential through planning and design of regrading and contouring.

- Consider a site-specific soils stability investigation where roads, lift terminals and towers, and graded trails cross or are sited on areas with potential stability problems (i.e., moderate to high stability hazard).

- Selectively remove topsoil in areas to be graded or recontoured whenever practical. Store it away from water courses. After grading activities are completed, respread salvaged topsoil. Import topsoil from adjacent topsoil surplus areas to ensure adequate topsoil depths for revegetation if necessary.

- Redistribute topsoil over the site to be revegetated by spreading it across the slope, then tracking the topsoil to leave imprints perpendicular to the slope.

- In areas where topsoil is not available, save the top cover material (if present) and spread it over the surface after contouring is complete.

Backfilling, Regrading and Recontouring

- Perform all grading activities during periods with low runoff (i.e., late spring to late fall, to avoid the spring runoff).

- Minimize disruption of natural swales and runoff channels through careful planning of regrading and recontouring. Where grading cannot be avoided in these areas, maintain hydrologic continuity across the ski trail or road.

- On soils with moderate or high stability hazard, avoid deep cuts and fills and avoid complete vegetation removal on extensive areas.

- Consider special engineering if unstable slope conditions exist.

- Perform spot or strip dozing to remove stumps or to smooth out breakovers and transitions as necessary.

- Address any subsurface water problems encountered prior to final contouring.

- After final contouring, install water bars to catch and direct surface water into undisturbed vegetation buffer strips before entering natural drainage ways.

- On cut-and-fill slopes to be revegetated, lay back slope gradients to 1.5:1 or flatter whenever possible.

- In grading areas of shallow soils over impermeable bedrock, spread some subsoil over the bedrock prior to respreading topsoil, whenever practical.

- Determine if the regraded areas are overly compacted or too loose to provide an optimum plant growth condition. If the soil is determined to be too loose, compact it by walking dozers on the fill or by some other means. If the soil is determined to be excessively compacted, loosen it with a spike tooth harrow, ripper, or similar implement.

- Place clay dikes or tranch-breakers in pipeline and utility trenches wherever trenches cross or closely parallel drainage ways and/or wetlands. Allow adequate spacing to prevent the dewatering of wetlands and riparian areas. Spacing will be a function of ground slope. The steeper the slope, the closer the spacing.

- Avoid the concentration of surface and subsurface water within or onto proposed ski trails, hiking trails, pipeline and electric cable corridors, or potentially unstable land forms.

Blasting

- Supervise all blasting with an experienced blaster.

- Use the following measures to control blasting and minimize the discharge of blasting residues:
  - 2.5-inch diameter minimum hole shall be used to set the charge.
  - Detonators shall be non electric with steel sleeve (no lead).
  - Penalite TNT booster will be used as a primer charge.
  - No wet hole will be loaded with pourable ammonium nitrate fuel oil (ANFO) mixture.

- Load wet holes with a packaged blasting agent designed for shooting in wet holes with total consumption of the charge.

Construction in Wetlands and Stream Channels

- Minimize the time motorized equipment is in riparian and wetland areas where construction activity is approved and prohibit vehicles in areas not to be disturbed. Equipment is to be well maintained. No refueling or changing of motor oil will occur in wetland or surface water channels, and all efforts will be made to avoid hydrocarbon spills of any kind.

- The Forest Service will determine final location of the snowmaking and utility corridors. The corridors will be laid out in a way to avoid wetland and riparian areas as much as possible.

- Prior to construction affecting surface waters, divert the stream around the construction site and dewater the site in order to minimize sediment loading.

- Return water back into the channel only after all construction is completed.

- Reseed all banks exposed during construction and install erosion mats after construction and prior to snowfall.

- Avoid, to the extent practicable, watercourses and wetlands in hiking trail alignment and design. Where water or wetland crossings cannot be avoided, install bridges or elevated walkways to minimize water quality and wetland impacts.

- Leave a buffer strip, at least 100 feet wide where feasible, of natural vegetation adjacent to wetland and stream features.

TEMPORARY EROSION AND SEDIMENTATION CONTROL

- Implement construction activities in stages, based on the capabilities to complete required site stabilization and revegetation prior to October 15 in any construction season. Annual operating plans will include descriptions, locations, and timing of each ground-disturbing project expected to be implemented that season. Projects will be completed in one general area before starting on another.

- In areas where soils tend to be saturated by runoff and surface waters, excavate snowmaking and utility trenches later in the summer when soils are drier.

- Ensure that newly constructed road or trail sections have adequate drainage and sediment control measures.

- Restrict the area of soils exposed at any one time to the area necessary for timely and efficient project construction.

- Minimize the length and gradient of disturbed areas.

- Do not disturb sensitive areas or areas of high erosion potential.

- Implement control measures for surface runoff and temporary erosion on all disturbed areas prior to or immediately following initial disturbance.

- Use interceptor ditches or other structures to prevent runoff from entering disturbed areas.

- Use temporary culverts or other structures to convey water through, around, or under disturbed areas. Return water to the channel only after all construction is completed.

- Direct all water collected on roads (use water bars, water berms, etc.) onto an energy dissipator (i.e., rip rap) and subsequently into undisturbed vegetation to filter out sediments before allowing the runoff to enter natural drainage ways.

- In disturbed areas or areas with snowmaking, construct water bars perpendicular to the hillslope topography. Construct water bars by digging or dozing a small trench and casting the soil material to the downhill side to form a row or bank. Design all water bars to initiate in undisturbed vegetation up slope, traverse the disturbed area at a gradient between 1 and 10 percent (depending on the hillslope), and discharge water into undisturbed vegetation or straw check dams on the lower side of the disturbed area.

- Construct water bars approximately every 75 feet on slopes greater than 35 percent, every 100 feet on slopes between 25 percent and 35 percent, and every 250 feet on slopes less than 25 percent. These are minimum requirements. Spacing may be closer based on site factors such as soil erosiveness, expected runoff, and others. Rock lined drains will be substituted for waterbars where high volumes and velocities of runoff, or any runoff that is sustained past the snowmelt periods, is expected. Changes to these requirements can be made during construction if approved by the Forest Soil Scientist.

- Extensively utilize trenches and/or silt fences along the lower portion of all disturbed areas. Properly install silt fences according to manufacturer's specifications.

- Install small sediment traps using secured silt fence and/or certified weed-free straw bale dikes along the downhill side of disturbed areas and at the terminus of each water bar to filter water prior to concentrating it into drainage ways. Maintain sediment traps until revegetation is complete. Place small, temporary (3-5 year duration) rock sediment traps downstream of disturbed areas that have potential to deliver sediment to Little Cottonwood Creek.

- Install screens or other appropriate devices on detention basins to capture oil and other pollutants before they enter stream systems.

- Use flexible pipes or sluice boxes to avoid stream erosion when transferring water down embankments or fill slopes. Intercept the transferred water with a culvert inlet.

- Do not wash cement trucks on National Forest System lands, unless an approved disposal site is located and approved by the Forest Service.

PERMANENT EROSION AND SEDIMENTATION CONTROL

- Design culverts to carry 20-year flood with no headwater and 50-year flood with maximum allowable headwater.

- Implement revegetation treatments as soon as possible, usually within 10 days after soil preparation, in all disturbed areas that have been regraded and re-topsoiled. All disturbed areas should be revegetated no later than October 15 of each year.

- Install and stabilize permanent drainage diversions. Stabilize these areas through revegetation, rip rap, grade control devices, etc.

- Install sediment basins where appropriate, such as at road runoff discharge locations.

- Design revegetation efforts adjacent to wetlands to maximize the establishment of vegetation species capable of filtering runoff or otherwise buffering wetlands from the effects of disturbance.

- Revegetate cleared forest stands with sparse ground cover to restore adequate ground cover.

- Use Forest Service approved seed mixes for reseeding. Seed mixes will include grasses and forbs, have a minimum of 90 percent native seed, and be certified noxious weed free. A custom seed mix for the following three community types will be approved: (1) tall forb, (2) short forb, and (3) wetland. In order to provide for faster succession of native plant species in revegetated areas, seeds will be collected from existing native species and used in addition to the required revegetation seed mixes.

- On highly erodable sites, a rapidly growing sterile annual or perennial species may be included in the seed mix. The sterile species provide for immediate soil stabilization and act as "nurse plants" for the slower growing native species. Because they produce no seed, the sterile species will eventually drop out of the mix and natives will persist as the dominant species on revegetated areas.

- Complete a soil chemical analysis before revegetation is commenced. If the analysis shows a deficiency of soil nutrients, apply a slow-release granular inorganic fertilizer with appropriate nutrients.

- Prior to reseeding, prepare disturbed areas by loosening and roughening the surface.

- Apply seed mix(es) at optimum rates as specified by the seed distributor.

- Protect all regraded, re-topsoiled, and reseeded areas from erosion by effective revegetation methods and through application of mulch, erosion-control netting or blankets, or chemical tackifiers. Use mulch on slopes less than 30 percent, and netting or blankets on slopes greater than 30 percent. Use only weed-free mulch sources. Apply mulch at a rate of at least 2 tons/acre. Crimp the mulch into the soil with a snowcat, bulldozer, or other effective mechanical device. If mechanical crimping is impractical, use stapled netting and/or chemical tacifiers to bind the loose mulch to the soil surface to minimize removal by wind or by surface runoff.

- On slopes too steep to use heavy equipment, use hydromulch, netting, blankets or tackifiers in place of straw or hay mulch.

- On areas with excess rock and little or no topsoil, apply Biosol (an organic pellet fertilizer) at a rate of no less than 750 lbs/acre after seeding. (Note: the cost:benefit ratio of Biosol use has been questioned and is being investigated.)

- In areas that will be subject to further disturbance, permanent revegetation may not be appropriate. In such cases, implement temporary erosion control and/or revegetation measures either by mulching in the absence of seeding or fertilization, or by seeding with a quick-germinating and fast-growing annual or sterile perennial grass. Consider using both techniques in highly erosive sites to obtain the desired degree of erosion control.

MANAGEMENT OF AIRBORNE NUISANCES

- To the extent feasible, plan site improvements to reduce the potential for fugitive dust emissions. Keep the area disturbed by clearing, earth moving, or excavation activities to a minimum, carrying out improvements in sections.

- Water all major grading areas, including roadways, building and lift terminal construction areas, to prevent excessive amounts of dust. Under dry conditions, water of these areas at least twice daily with complete coverage, preferably in the late morning and after work is completed for the day.

- Limited on-site vehicle speeds 15 mph to reduce dust. Any dust nuisances will be mitigated by acceptable dust control procedures.

- Maintain construction and permanent on-site equipment engines in good operating condition.

- Limit construction activities to daylight periods unless otherwise approved by the Forest Service.

- Maintain adequate muffler systems on all construction equipment.

- Chip and scatter slash from trees removal on site where ever feasible.

- Open burning is allowed but limited to five tons per year if slash cannot be chipped and scattered due to steep and/or inaccessible terrain. The Utah Air Quality Board has approved an open ended burning variance for each of the ski resorts in Salt Lake County. This open burning variance has eight conditions that must be met before any burning is allowed. This variance is outlined in two letters from the State of Utah Division of Air Quality, dated September 13 and October 11, 1991.

- Prior to burning, prepare and submit a burn plan to the Forest Service for review and authorization. The burn plan will contain requirements that specify emergency actions in case of fire escape.

- Construct slash piles for burning by hand. Slash piles should not exceed 10 feet in height or 15 feet in diameter. Piles will be periodically inspected by a Forest Service official for placement and size.

RESOURCE CONSERVATION

- Install water conserving fixtures such as low-flow toilets and faucets during construction.

- Install energy conserving fixtures such as compact flourescent light bulbs, and high efficiency fixtures, timers, and other apparatuses during construction.

- Techniques to smooth electrical loads, automatically limit demand, and minimize energy consumption are encouraged.

- Use state-of-the-art snowmaking equipment to minimize energy consumption.

- As much as possible, conduct snowmaking operations at night or during other off-peak electrical demand periods.

- Expand and upgrade the recycling program as feasible to reduce demands on solid waste disposal.

MONITORING AND MAINTENANCE

The objectives listed above in the performance objectives section are rarely met when construction is completed. Therefore, the following measures should be considered.

- Periodically monitor project during construction to ensure that specified measures (water bars, culverts, etc.) are implemented and functioning properly.

- Periodically monitor after construction is complete to ensure that specified measures are functionally intact and address objectives.

- The Forest Service will survey all revegetated areas on a yearly basis to assess rehabilitation efforts. If at the end of 5 years a site has not been revegetated to the satisfaction of the Forest Service, the area will be re-evaluated and new revegetation methods applied.

- Develop effective reporting and response procedures to be employed when problems are encountered.

ATTACHMENT 5:

TRANSPORTATION ANALYSIS

November 11, 2015

TRANSPORTATION ENGINEERING

RE: Snowbird Transportation Analysis

Snowbird is proposing a ski terrain expansion. Expanding terrain is tied to an enhanced experience but also can lead to a more attractive draw to the skiers which then leads to increased skier visits. The EIS Transportation Analysis of 1999 was provided by A-Trans Engineering and identified how the transportation system was operating and the ability to accommodate the proposed comfortable carrying capacity (CCC) of 6,817 daily skiers which was approved by the Forest Service as the capacity of the current ski area. This has been based on the typical 85th percentile (11th highest skier day) which tended to be on the first Saturday in February. Some of the highest traffic is experienced over President's weekend, the 3rd weekend in February where the skier days are typically at the 99th percentile. Snowbird's most current CCC is 6,040 indicating that the approved capacity of 6,817 has not yet been developed.

1. Skier days

Representative traffic days can vary greatly in traffic engineering depending on the type of road, the variations in traffic, and the seasonal nature of the traffic. The *maximum day* is not used because it is often infeasible and wasteful to design for the absolute highest traffic day of the study period. The Highway Capacity Manual (HCM) identifies that the 30th highest hour is commonly applied as the design hour when evaluating a roadway or intersection.

The relationship between skier days (the number of skiers visiting a ski area during the day) and traffic is important because it indicates mode-of-travel choice and travel behavior of skier patrons. Skier-day information for Snowbird was provided for the ski seasons of 1992/93 through 1997/98 in the original 1999 EIS Transportation Evaluation.

Typical traffic design days are based on 30th highest traffic hour or 11th highest traffic day of the analysis period. A survey of LCC was performed on Saturday February 1, 1997. When the February 1st traffic data is evaluated from the permanent counter, it was found that February 1st represents the 12th highest winter day. The highest hour on February 1st was the 28th highest hour of the year. Because of the collected survey information and the date meeting the requirements of a representative traffic design day as set-forth by the HCM, Saturday, February 1, 1997 was selected as the traffic design day

The latest skier analysis for the proposed expansion indicated that the projected increase of about 1,090 skiers over current CCC of 6,040. However, the point of comparison is the approved CCC of 6,817 resulting from the 1999 EIS and therefore, the proposed action would increase CCC by 313 skiers resort wide over the approved 6,817 skiers. Note that that new projected CCC is mostly due to extension of the MBX lift in Mineral Basin (up 590 from current configuration) plus 500 for the two new lifts proposed for Mary Ellen Gulch.

These additional 313 skiers would be a combination of skier day trips using both private vehicles and transit, and overnight guests. The overnight guests do not add traffic during the peak periods and a high percentage use transit, reducing parking demand. The skier day trips are a combination of transit and private vehicles.

P.O. Box 521651 Salt Lake City, UT 84152
(801) 949-0348 fax (801) 582-6252
atrans@comcast.net

The purpose of this memo is a sensitivity analysis to indicate if the additional 313 skiers on the analysis day have been mitigated by other transit and rider share programs that Snowbird has implemented over the years, therefore offsetting the need for additional parking.

2. **Traffic**

The capacity of a road varies based on directional split, number of heavy vehicles, lane width, shoulder width, peak hour factor, available passing zones and design speed. The two-way capacity (C) of SR 210 is estimated at 1,403 vehicles per hour for 15 percent traveling uphill and 85 percent downhill. Table 1 indicates the traffic measured for the first Saturday in February and Present's Weekend for several years. **The information indicates that traffic on this critical design day and peak weekend is changing little indicating that either through traffic mitigation of self-limitation, the traffic is not significantly changing on these peak days. The additional 313 skiers from the design day approved by the Forest Service will have little impact on the roadway. The actual impact is described in the modal split section of this memo.**

Table 1:SR 210 Traffic by Peak and Daily for Various Years

	2001		2006		2009		2012		2013		2014	
First Saturday in February												
	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily
Saturday	1,037	9,150	1,326	12,049	1,236	11,109	1,336	10,937	1,313	12,669	1,326	11,584
President Weekend												
	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily	Peak	Daily
Saturday	1,187	11,141	1,042	9,522	1,139	9,538	910	9,664	1,047	10,794	1,118	11,255
Sunday	979	10,133	1,091	9,515	1,326	12,368	1,112	8,502	852	9,080	948	9,706
Monday	1,050	9,303	1,244	11,783	1,160	9,591	1,176	11,093	942	9,935	1,295	11,664
MAXIMUM	1,187	11,141	1,244	11,783	1,326	12,368	1,176	11,093	1,047	10,794	1,295	11,664

P.O. Box 521651 Salt Lake City, UT 84152
(801) 949-0348 fax (801) 582-6252
atrans@comcast.net

3. Overnight Guests

A portion of the patrons of the resort stay at the hotel facilities. Table 2 summarizes the recent years' guest occupants at the hotel and the occupancy rate for the hotel.

Table 2: Occupancy by Year for First Saturday in February and President's Weekend

Weekend	Day of the Week	Occupancy	% of Rooms Occupied	Occupancy	% of Rooms Occupied	Occupancy	% of Rooms Occupied	Occupancy	% of Rooms Occupied
		2012		2013		2014		2015	
1st Weekend in February	Saturday	1,266	82.1%	1,525	96.6%	1,540	96.3%	1,382	91.2%
President Day Weekend	Saturday	1,317	85.4%	1,595	87.5%	1,634	86.5%	1,839	97.1%
	Sunday	1,422	88.9%	1,557	86.9%	1,605	85.8%	1,831	95.9%
	Monday	1,472	90.2%	1,363	92.4%	1,492	96.6%	1,422	77.3%
		4,211	88.2%	4,515	88.9%	4,731	89.6%	5,092	90.1%

The trend has been that more overnight skiers have been being captured during the Presidents Day peak weekend than during the design day of the first weekend in February. Approximately 200-300 more overnight guests each year have been staying at the resort over the past 4 years on the President's Weekend. Along with this trend the overall occupancy for the past 4 years has increased for both weekends.

4. Transit

From 1999 EIS

On the traffic design day from the 1999 EIS, 843 people rode UTA to Snowbird, including skiers and employees. According to UTA, 71 bus trips were made to Snowbird and Alta on the traffic design day. Between Snowbird and Alta ridership, Snowbird represents between 55 to 60 percent of the ridership. Assuming the same proportional split remains, then 55 to 60 percent of the capacity on UTA is available for future growth of Snowbird riders. The 71 bus trips represent a capacity of 4,260 riders in each direction (71*60). At 55 percent, this represents a capacity of 2,343 for Snowbird transit use. However, this is distributed throughout the day and is not the capacity available during the AM peak. Based on the number of arriving buses in the AM period (approximately 30) with a standing capacity of 60 passengers and the 55 percent capacity available to Snowbird, the estimated AM transit capacity for Snowbird riders is 990 on UTA. Based on the 990 UTA estimated Snowbird capacity and the 843 design day ridership, 147 additional capacity is available.

In addition to UTA, private busses transport skiers to and from the Snowbird area. The number of busses varies by day from 1 or 2 up to 13 busses on busy Saturdays. These private transit busses are typically prearranged services where Snowbird is forewarned. On the traffic design day, five private busses were counted during the survey. At 40 passengers a bus, an estimated 200 skiers are transported by private transit.

Recent Transit Information

Current Transit data was provided by UTA for the resort. The historic transit usage is 13.0% of the total skiers for the design day and 11.6% of the total skiers for the peak day on Presidents Day Weekend. This analysis is shown in Table 3.

Table 3: Recent Transit Data

	February	Total Transit	Total Skiers	% Utilizing Transit
2011-2012				
1st Saturday in February	Saturday	787	5,070	15.5%
Presidents Day Weekend	Saturday	2,121	4,861	12.6%
	Sunday		5,760	12.6%
	Monday		6,168	12.6%
2012-2013				
1st Saturday in February	Saturday	683	6,288	10.9%
Presidents Day Weekend	Saturday	1,700	5,093	11.5%
	Sunday		4,796	11.5%
	Monday		4,896	11.5%
2013-2014				
1st Saturday in February	Saturday	741	5,874	12.6%
Presidents Day Weekend	Saturday	1,914	5,722	11.4%
	Sunday		5,219	11.4%
	Monday		5,857	11.4%
2014-2015				
1st Saturday in February	Saturday	595	4,595	12.9%
Presidents Day Weekend	Saturday	1,499	4,750	10.8%
	Sunday		4,835	10.8%
	Monday		4,357	10.8%
Average for 1st Saturday in February				**13.0%**
Average for Presidents Day Weekend				**11.6%**

Based on the surveys completed in 1999, 14% of skiers utilized transit and 34% of employees utilized transit. While current data does not differentiate between employees and skiers, the data shows that there is a decrease in transit activity at the resort from that in 1999. A possible explanation for this decrease is an increase in employee ridesharing options.

Several new incentive programs have been implemented to encourage higher vehicle occupancy for the employees. An employee carpooling program allows for designated parking areas closer to Snowbird Center and Cliff Lodge if employee has 3 or more in vehicle. In addition, another positive incentive has been that employees nominated for monthly drawing if they are carpooling, riding the bus, employee shuttles or part of a rideshare van group. Ten names are drawn monthly, each receiving a $10 gift

certificate (to Smith's Grocery)

Based on the data provided in Table 4 and Table 5 as well as well as incentives for carpooling including drawings and closer parking locations for 3 or more occupants per vehicle an average of at least 172 employees utilize these incentives. So the UTA transit volumes most likely reflect a majority of skier related users.

Table 4: Non-UTA Transit Operations

Canyon Transportation	Ridership	Total # Vans	Paid Vans	Contract Vans	Riders per day	Potential Vehicle Trips Reduced	Riders per vehicle
Nov20 2013 -May13 2014	10,431	2,350	479	1871	58	116	4.4
Nov21 2014 -May10 2015	8,435	2,098	427	1671	47	94	4.0
RideShare	Ridership	Total # Vans			Riders per day	Potential Vehicle Trips Reduced	Riders per vehicle
Nov 2013 - Apr 2014	17,601	9			98	196	10.9
Nov 2014 - Apr 2015	25,196	15			140	280	9.3

Table 5: UTA Transit Operations

UTA Winter Bus Service – 2015			Snowbird
Month	Total EFC Trips	Shuttle EFC Trips	Regular Ski Route EFC Trips
December	11,322	249	11,073
January	14,885	196	14,689
February	12,759	160	12,599
March	11,112	149	10,963
April	2,959	29	2,930
Total	53,037	783	52,254

5. Parking

The Snowbird parking is distributed throughout the four accesses and is comprised of employee, overnight guest and day skiers. The capacity of 2,722 parking spaces is distributed based on the following approximate spaces for each type.

- 804 Employee / Overnight spaces
- 195 SR 210 Roadside Spaces
- 1,723 Day skier spaces

The day skiers comprise approximately 65 percent of the Snowbird total spaces and 70 percent with the SR 210 roadside spaces considered. It is estimated that during a non-holiday week day, daily counts are around 1200-1500 vehicles. Weekends are typically around 2000 vehicles and will average 2400-2700 during an event, snow day. Table 6 shows the estimated parking capacities by lot locations provided in 2015 by Snowbird.

Table 6: Parking Locations

Parking Location	Parking Spaces
Entry 1	95
Lower gad	275
Upper gad	200
Wilbere hill	122
Main lot	220
Valet Strip	90
Upper circle	50
Pond lot	110 -125
Entry II	60 -70
Iron Blosam Main	40
Sports Court	85
Entry III	81
Chickadee	70
Volleyball Court	20
Superior	250
Cliff Valet and Portico	30 -35
Structure Lot Outside	60
Structure	175
Batch Lot	90 -100
On and Off Ramps at Cliff	80 -100
Bypass	150 -175
Total Inside Resort	**2353 -2438**
Highway 210; E1-E4, South Side	300 -400
Total Outside Resort	**300 -400**
Total Parking	**2653 -2838**

The total parking capacity of Snowbird of 2,722 which was assumed in the 1999 EIS falls within the current parking range and therefore is assumed for this updated analysis. Of the 2,722 parking spaces, approximately 195 spaces are located along the shoulder of SR 210. Informal parking along SR 210 typically occurs once the designated parking areas have been fully utilized. The parking counts provided were usually performed

on peak skiing days as shown by four of the six days being above the 98th skier percentile.

On the 1999 Traffic Design Day, all Snowbird parking lots were counted in 2- hour intervals. A maximum of 1,599 vehicles were counted with 1,597 in the Snowbird parking lots and two on the SR 210 roadside. This indicates that 928 Snowbird designated parking spaces are available for future growth and expansion and 1,123 spaces are available if the 195 roadside spaces on SR 210 are considered. This includes total parking available although some of this is designated skier and some employee or overnight and therefore may need to be reassigned to accommodate the respective demand. This is the estimated parking available on the traffic design day and should not be confused with the peak traffic day when parking lots fill and little spare capacity is available.

6. Modal Split

The 1999 traffic survey included interviews of 200 skiers and 100 employees or five percent of the employees and five percent of the skiers. The surveys were used to determine the modal split for employees and skiers at the Snowbird Ski Resort. Based on the UTA data and employee parking incentives, the same splits that were assumed in 1999 are assumed in this analysis. While employee ridership on UTA is most likely lower the rideshare and shuttle services provided for employees offset this difference.

From the 1999 Employee survey, the following information was learned:

- 36% of the employees travel to Snowbird utilizing transit
- 10% reside in accommodations
- 54% travel by car to Snowbird with an average occupancy of 1.9 people per vehicle

From the 1999 skier survey, the following information was determined:

- 14% of the skiers travel to Snowbird utilizing transit
- 32% stay at accommodations
- 54% travel by car to Snowbird with an average occupancy of 2.4 people per vehicle

Based on these percentages, the 313 new skiers would be distributed by:

- 44 skiers by transit
- 100 skiers at overnight accommodations
- 169 skiers / 2.4 skiers per vehicle = 70 new day skier parking spaces.

The capacity for the transit and day parking at Snowbird is bound by:

- 1,918 on-site day skier parking spaces (includes the spaces along SR 210)
- 1,190 UTA and Private transit passengers to Snowbird

7. Summary

Based on the trend of increasing overnight guests (200-300 per year more for the past 4 years), the expanded transit and shuttle services being applied to both the day skiers and employees, the positive incentives for the employees both in rewards and parking location benefits, it is likely that the parking demand has been reduced by at least that increase that would be placed on the system with an additional 313 skiers. According to the EIS, on our design day, there was up to 928 spaces available although they may be designated as overnight or employee and not specifically day skier parking. The 1999 EIS indicated that the No Action Alternative would add 232 new skier vehicle demand and the Proposed Action Alternative would increase the parking demand by another 62 day skiers and 40 employee spaces. This still left an estimated 592 surplus parking spaces on property on the design day. Therefore, even if all the incentive and transit programs had not reduced the parking demand and Canyon traffic, the 70 additional projected parking space demand can be accommodated. The balance between overnight, employee and day skiers needs to be balanced against the location for those specific uses as it is still possible to overload any single parking area. The peak periods, such as Presidents weekend, will still experience some general congestion for all the transportation and parking aspects of the resort. SR 210 will experience 70 more trips in each direction on the design day. When spread over the loading period for the resort, this is estimated at 28 additional trips in the peak period. This represents a potential 2.1% increase in the peak hour traffic and a 1.2% increase in daily traffic over the 2014 data which appears more than offset by the expanded Snowbird support of transit and employee shuttle and rideshare program. .

Snowbird Transportation Master Plan
Table Ten
Summary Comparison of No Action and Proposed Action on Traffic Design Day

Impact	No Action Alternative	Proposed Action	Difference between Proposed and No Action Alternatives
Increase in Skier Visits	1,033 above 1996/97 levels	1,306 skiers above 1996/97 levels	273 more skiers
Increased Employees	0 additional employees above 1996/97 level	141 additional employees above the 1996/97 level	141 additional employees
Increased Transit Ridership	145 new skier riders 0 new employee riders	183 new skier riders 51 new employee riders	38 additional skier riders and 51 additional employee riders
Increased Parking Demand	232 new skier vehicles 0 new employee vehicles	294 new skier vehicles 40 new employee vehicles	62 additional skier vehicles 40 additional employee vehicles
Increased Traffic	31 vehicles per access in PM peak 93 vehicles on SR 210 in PM peak	45 vehicles per access in PM peak 135 vehicles on SR 210 in PM peak Extend	14 additional vehicles per access during the PM peak hour 42 additional vehicles on SR 210 during the PM peak hour
Increased Congestion	580 additional seconds of congestion over 1996/97 level	835 additional seconds of congestion over 1996/97 level	255 additional seconds of congestion.

From 1999 EIS Transportation Element

It is recommended that this winter, parking and transit data be continued to be collected to possible update the specific parking area demands.

Please contact me with any questions.

Sincerely,
A-Trans Engineering

Joseph Perrin, PhD, PE, PTOE
Principal

When recorded return to:
Robert G. Pruitt, III
Pruitt, Gushee & Bachtell
1850 Beneficial Life Tower
Salt Lake City, UT 84111

ENT 38920 BK 4607 PG 329
RANDALL A. COVINGTON
UTAH COUNTY RECORDER
1996 Apr 21 2:55 pm FEE 19.00 BY SS
RECORDED FOR BOB PRUITT

EASEMENT AGREEMENT

In consideration of the premises, and other valuable consideration received, including that separate Consideration Agreement between the parties, **ALTA A. NASH, SANDRA M. NASH, MICHAEL E. NASH,** joint tenants, (hereinafter collectively referred to as "**Nash**"), having an address of 327 South 750 East, Layton, Utah 84041, hereby warrant and convey to **SNOWBIRD LIMITED**, a Utah limited partnership, with addresses at P.O. Box 929000, Snowbird, Utah 84092-9000 (hereinafter referred to as "**Snowbird**"), a perpetual easement for the exclusive rights of skiing and ski resort related activities across the following described lands (herein "**Subject Lands**"):

Flora Lode Mining Claim, Mineral Survey No. Lot 98,
Comprising 20.66 acres, m/l, in Section 17, Township 3 South, Range 3 East, SLB&M
American Fork Mining District, Utah County, Utah.

1. Uses Authorized. Snowbird shall have the exclusive right to use the surface of the Subject Lands for snow skiing, snowboarding, avalanche control work, trail grooming, hiking, mountain biking and all other mountain activities normally conducted or reasonably necessary for a ski resort, including, but not limited to, the erection of ski lifts, chairlifts, tramways, lift towers, lift terminals and related structures, the placement of avalanche control equipment, the cutting of ski trails, cat trails, and construction roads, removal of rock outcrops, trees or other obstacles to skiing, the marking of boundaries and hazards, posting signs, location of emergency and safety equipment, powerlines, communications facilities, ski races or competitive events, waterlines, or snow making equipment. Nothing herein shall prevent Nash from mining or other use of the property consistent with zoning or other applicable rules and regulations now or hereafter affecting the property.

2. Limitations on Uses, Notice of Changes. No uses granted hereunder shall prevent Nash from the mining, use or development of the Subject Lands. In the event either party to this Easement Agreement shall construct or affix any permanent structure or improvement, of effect on the Subject Lands, such party shall give the other party at least one hundred twenty (120) days advance written notice of such intention, and such new improvement shall be designed to reasonably accommodate the then existing uses of the Subject Lands, including the skiing activities contemplated by this Easement Agreement.

3. Non-Liability of Nash for Easement Uses. This grant is made upon the condition that repair and maintenance of the Snowbird facilities located on the easement granted herein shall be the sole responsibility of Snowbird. Any improvements constructed on the Subject Lands by Snowbird shall remain the separate property of Snowbird, and Nash shall have no right or obligation with regard to improvements constructed by Snowbird. The parties agree

to hold each other harmless from all liability accruing from their respective uses of the Subject Lands. Nash shall be responsible for any and all liabilities related to the property, relating to the existing mining operations, tunnels, dumps and any liability associated therewith. Snowbird shall remain liable, be responsible and otherwise indemnify, defend and hold harmless Nash for any liability caused by Snowbird's use or the use of the Land by its agents, employees, customers, invitees or trespassers.

4. Duration of Easement. The grant of this easement is perpetual, and shall run with the land and shall be binding and inure to the benefit of all parties hereto, their heirs, successors or assigns.

5. Preferential Right to Purchase. In the event that Nash, their successors or assigns shall decide to sell, transfer or exchange the Subject Lands to any other person for value, they agree to first offer the subject Lands to Snowbird at the same price, terms and conditions being offered in writing by any bona fide third party purchaser, whereupon Snowbird shall have thirty (30) days to elect to exercise this right to purchase the Subject Lands on the same price, terms and conditions offered by the third party. Snowbird shall be entitled to a credit from the purchase price being offered by the third party equal to the amount paid for this easement as specified in the Consideration Agreement. This preferential right of Snowbird to purchase the Subject Lands shall not prevent the transfer of the Subject Lands by gift, estate plan, intestate succession, or any other transfer made without consideration to Nash to the children, heirs or descendants of Nash; provided, that the terms of this preferential right to purchase shall be binding on such successors, assigns, heirs, and descendants of Nash with regard to any sale, transfer or exchange of the Subject Lands for value.

6. Notice. Any notice required under this Agreement shall be made in writing, via certified mail to the respective parties as follows:

If to Nash:

Sandra Nash
327 South 750 East
Layton, UT 84041

Copies to:

Douglas M. Durbano
DURBANO LAW FIRM
476 W. Heritage Park Blvd., #200
Layton, Utah 84041]

If to Snowbird:

Bob Bonar
Mountain Operations
P.O. Box 929000
Snowbird, UT 84092-9000
(801)521-6040

7. Termination of Easement. The Easement shall terminate upon the occurrence of any of the following:

(a). Failure to use the Easement and provide, as agreed, the Additional Consideration identified in the Consideration Agreement for a period of four (4) consecutive years.

(b). Uses beyond the scope of uses identified in paragraph 1 above, following written notice of default, received by Snowbird, identifying the specific use constituting the breach, and a court order is obtained declaring a violation of this section.

The prevailing party in action regarding this Easement shall be entitled to recover the reasonable costs and attorneys fees incurred.

Alta A. Nash
ALTA A. NASH

Sandra M. Nash
SANDRA M. NASH

Michael E. Nash
MICHAEL E. NASH

Bob Bonar
BOB BONAR, President
Snowbird Corporation

STATE OF UTAH)
)ss.
COUNTY OF Davis)

The foregoing EASEMENT AGREEMENT was acknowledged before me this 17th day of April, 1998 by ALTA A. NASH.

Anna S. Padlo
NOTARY PUBLIC
My Commission Expires:

NOTARY PUBLIC
ANNA S. PADLO
951 Henderson Dr.
Ogden, UT 84404
My Commission Expires
December 14, 2000
STATE OF UTAH

STATE OF UTAH)
)ss.
COUNTY OF Davis)

The foregoing EASEMENT AGREEMENT was acknowledged before me this 17th day of April, 1998 by SANDRA M. NASH.

Anna S. Padlo
NOTARY PUBLIC
My Commission Expires:

NOTARY PUBLIC
ANNA S. PADLO
951 Henderson Dr.
Ogden, UT 84404
My Commission Expires
December 14, 2000
STATE OF UTAH

STATE OF UTAH)
)ss.
COUNTY OF Davis)

The foregoing EASEMENT AGREEMENT was acknowledged before me this 17th day of April, 1998 by MICHAEL E. NASH.

Anna S. Padlo
NOTARY PUBLIC
My Commission Expires:

NOTARY PUBLIC
ANNA S. PADLO
951 Henderson Dr.
Ogden, UT 84404
My Commission Expires
December 14, 2000
STATE OF UTAH

STATE OF UTAH)
)ss.
COUNTY OF SALT LAKE)

The foregoing EASEMENT AGREEMENT was acknowledged before me this 21 day of April, 1998, by Bob Bonar, the President of SNOWBIRD CORPORATION, a Utah corporation, the general partner of SNOWBIRD LIMITED, a Utah limited partnership.

Lorraine Fry
NOTARY PUBLIC
My Commission Expires: March 13, 2001

LORRAINE FRY
Notary Public
State of Utah
My Comm. Expires Mar 13, 2001
PO Box Snowbird UT 84092

0099\08\2snwbd73.or2

Josh Ivie - Fwd: Utah County Zoning Compliance Permit (Supplement to CUP Application)

From: Bryce Armstrong
To: Ivie, Josh
Date: 12/24/2015 1:46 PM
Subject: Fwd: Utah County Zoning Compliance Permit (Supplement to CUP Application)
Attachments: 26.2 Special Warranty Deed (Utah County - Resort Property).pdf; Snowbird Resort LLC - SpecialWarranty Deed - Mary Ellen Gulch - 12-8-15....pdf; Snowbird. revised (line 44, E toW) perimeter Legal Description - Wester....pdf

for packet documents

>>> "Banks, Martin K." [redacted] 12/24/2015 10:40 AM >>>
Hi Bryce: In response to your request below for additional information or clarification, please see my comments in red and the attached documents.

Marty Banks | Partner
STOEL RIVES LLP | 201 South Main Street, Suite 1100 | Salt Lake City, UT 84111
Direct: [redacted]
[redacted] | Bio | vCard | www.stoel.com

From: Bryce Armstrong [redacted]
Sent: Wednesday, December 23, 2015 11:38 AM
To: Banks, Martin K.
Subject: RE: FW: Utah County Zoning Compliance Permit

Marty,

I've begun the review of the applications and have come across some information/issues that may need to be addressed or clarified. They include:

1). The boundary description you provided has been reviewed and there appears to be a minor error related to one of the courses. On line 44 of the description, it reads "thence N 67°47'17"**E**, along line....". The **E** appears to need to be a **W** (west). Please contact Jason Thurlow in the Recorder's Office for additional information if needed at (801)851-8172.

The referenced minor error has been corrected, as reflected on the attached revised External Boundary Legal Description.

2). The application indicates the Mary Ellen Lift will have a launch tower for a "zipline or ziplines", and then indicates they will either follow the lift alignment or land at alternative sites in Mineral Basin or Mary Ellen Gulch. These alignments and associated facilities need to be clarified in the application and on the site plan.

The zipline or ziplines will follow the proposed lift alignment. Please disregard that portion of the referenced paragraph (page 9, second full paragraph under numbered paragraph 1.) suggesting that the

zipline or ziplines may possibly land at alternative sites in Mineral Basin or Mary Ellen Gulch. That referenced paragraph is hereby clarified by the following substitute language:

"It will likely be a gondola-style lift, with a capacity of about 450-500 pph. The mid-station will have load/unload capabilities because it will serve as the launch tower for a zipline or ziplines, ~~either~~ following the lift alignment to the top and/or bottom terminals, depending on final grade~~, or landing at alternative sites in MB or MEG~~."

3). The application proposes two warming huts, a "small" one and a "larger one". The only size reference relates to the number of people each will "comfortably" accommodate. I think we may recommend a maximum size, so the application may want to indicate the maximum size needed to serve each hut's purpose.

The maximum size needed to serve the small hut at the bottom terminal of the Mary Ellen lift is 1,000 square feet; the maximum size needed to serve the larger hut at the bottom terminal of the Sunday Saddle lift is 2,500 square feet.

4). The application indicates the inclusion of a proposed "lift equipment facility". Section 3-47-C of the Utah County Land Use Ordinance does not specifically identify this facility as a permitted facility.

This proposed facility would serve two purposes. First, it would be used to store equipment and supplies necessary for the operation and maintenance of the accessory ski lifts, including the ski lifts and the skier tunnel conveyor in Mineral Basin. We therefore contemplate locating the facility in Mineral Basin near the mouth of the skier tunnel conveyor, and anticipated that the facility would be deemed incidental, appurtenant or attendant to those accessory ski lifts, which are specifically identified as permitted facilities in Section 3-47:C.

As to the second purpose, the proposed facility would also be used as an operator shelter for those operating and monitoring the skier tunnel conveyor. Section 3-47:C specifically identifies as permitted facilities "Accessory ski lifts (e.g., towbars, chairlifts, gondolas) and lift operator shelters." The skier tunnel conveyor constitutes an accessory ski lift, and we believe the proposed facility constitutes a lift operator shelter. We would be happy to re-label that facility to better reflect its intended purposes if you think it appropriate.

Finally, if you are concerned about the proposed size (4,000 sq. ft.) of the facility, we would be willing to scale the request down to 1,800 sq. ft.

5). There appears to be a cabin on the "Silver Wave" mining claim. Verification that this cabin is a permitted structure will need to be provided. If it is determined to be a legal non-conforming use/structure, that status may be in jeopardy as per Section 1-6-B upon approval of this application.

The referenced historic cabin was not constructed by or at the request of Snowbird, was in place before Snowbird initiated any improvements in Utah County, and has not been permitted by Snowbird. Presuming the cabin is a legal non-conforming use/structure, if the approval of this application jeopardizes that legal non-conforming use/structure status, Snowbird will take appropriate responsive action.

6). The Utah County Recorder's Office has requested all recorded deeds or documents of each mining claim to verify ownership.

On July 12, 2014, a Snowbird entity (Snowbird, Ltd.) deeded the mining claims Mineral Basin (Utah County Parcel Number 11:058:0039 - Parcel X) to another Snowbird entity (Snowbird Resort LLC).

See attached recorded Special Warranty Deed. On December 8, 2015, another Snowbird entity (Snowbird Land Two LLC) deeded the mining claims in Mary Ellen Gulch to Snowbird Resort LLC. See attached recorded Special Warranty Deed.

I will continue my review and request any additional information as needed.

Please consider this email response to be a supplement to Snowbird's 12/7/15 Application for a Conditional Use. Let me know if we can provide any additional clarification.

Thanks,

Bryce Armstrong
Associate Director
Utah County Community Development
(801)851-8343