PARK CITY COUNCIL MEETING
SUMMIT COUNTY, UTAH
July 13, 2023

The Council of Park City, Utah, will hold its regular meeting in person at the Marsac Municipal Building, City Council Chambers, at 445 Marsac Avenue, Park City, Utah 84060. Meetings will also be available online with options to listen, watch, or participate virtually. Click here for more information.

CLOSED SESSION - 3:15 p.m.
The Council may consider a motion to enter into a closed session for specific purposes allowed under the Open and Public Meetings Act (Utah Code § 52-4-205), including to discuss the purchase, exchange, lease, or sale of real property; litigation; the character, competence, or fitness of an individual; for attorney-client communications (Utah Code section 78B-1-137); or any other lawful purpose.

WORK SESSION

4:15 p.m. - Thaynes Canyon Drive/Hotel Park City Parking Study
(A) Public Input
Thaynes Canyon Parking Study Staff Report
Exhibit A: Thaynes Canyon Drive/Hotel Park City Parking Study
Exhibit B: Parking History

REGULAR MEETING - 5:30 p.m.

I. ROLL CALL

II. COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF
Council Questions and Comments

Staff Communications Reports

1. Community Resources for Transient Use Impacts
Transient Use Community Resources Staff Report
Exhibit A: 2017 Transient Room Tax Staff Report

III. PUBLIC INPUT (ANY MATTER OF CITY BUSINESS NOT SCHEDULED ON THE AGENDA)

IV. CONSIDERATION OF MINUTES

1. Consideration to Approve the City Council Meeting Minutes from June 15, 2023
June 15, 2023 Minutes

V. OLD BUSINESS

1. Consideration to Approve a Ground Lease, in a Form Approved by the City Attorney's Office, with JF ENGINEHOUSE DEVELOPER, LLC., to Create 99 Units of Affordable Rental Housing on City-Owned Property Located at 1875 Homestake Road
(A) Public Input (B) Action

Engine House Affordable Housing Project Ground Lease Staff Report
Exhibit A: Development Agreement
Exhibit B: Parking Management Plan
Exhibit C: Homestake Affordable Housing Ground Lease Agreement

2. Consider the Appeal of the Planning Commission's Denial of the Washington School House Conditional Use Permit (CUP) for a Minor Hotel, Located at 543 Park Avenue
(A) Action
WSH Appeal Staff Report
Exhibit A: Public Comment
Exhibit B: June 27, 2022 543 Park Avenue CUP Final Action Letter
Exhibit C: Applicantâ€™s Appeal Letter Dated July 6, 2022
Exhibit D: Property Rights Ombudsman Advisory Opinion
Exhibit E: Hales Engineering Parking Study
Exhibit F: Residential Parking Permits Obtained by WSH
Exhibit G: Applicant's Conditions and Management Plan
Exhibit H: 1983 Bed and Breakfast CUP Approval Letter
Exhibit I: 1984 Parking Easement Agreements
Exhibit J: City Engineer's Parking Space Size Determination

VI. NEW BUSINESS

1. Consideration to Approve Ordinance No. 2023-36, an Ordinance Amending Land Management Code Sections 15-1-8 *Review Procedure Under the Code* and 15-1-18 *Appeals*
(A) Public Hearing (B) Action
Land Management Code Amendments Regarding Council Appeal Authority Staff Report
Exhibit A: Draft Ordinance No. 2023-36
Exhibit B: Western Planner 2020 Article

2. Consideration to Approve Ordinance 2023-35, an Ordinance Approving the Huntsman Estates First Amended Plat, Located at 5000 Royal Street, Park City Utah
(A) Public Hearing: (B) Action
Huntsman Estates Plat Amendment Staff Report
Exhibit A Ordinance 2023-35
Exhibit B: Recorded Huntsman Estates Plat
Exhibit C: Ordinance No 2020-31

3. Consideration to Approve Resolution 12-2023, a Declaration of Restriction on Open Sources of Ignition, Open Flames, and/or Fireworks
(A) Public Input (B) Action
Open Flames Prohibition Staff Report
Exhibit A: Determination of Restrictions on Open Sources of Ignition
Exhibit B: Open Flames Prohibition Resolution

4. Consideration to Approve Building Permit and Impact Fee Waivers for the Engine House Affordable Housing Project, Located at 1875 Homestake Road, Not to Exceed $2,000,000
(A) Public Hearing (B) Action
Engine House Affordable Housing Project Fee Waiver Staff Report
Exhibit A: Homestake Fee Adjustment Application
Exhibit B: Breakdown of Estimated Permitting and Impact Fees

5. Consideration to Adopt Resolution 13-2023, a Resolution Adopting Park City's Community Wildfire Risk Assessment

(A) Public Input (B) Action
Community Wildfire Risk Assessment Staff Report
Exhibit A: Community Wildfire Risk Assessment Resolution
Exhibit B: Community Wildfire Risk Assessment Final Report June 2023

VII. ADJOURNMENT

A majority of City Council members may meet socially after the meeting. If so, the location will be announced by the Mayor. City business will not be conducted. Pursuant to the Americans with Disabilities Act, individuals needing special accommodations during the meeting should notify the City Recorder at 435-615-5007 at least 24 hours prior to the meeting.

***Parking is available at no charge for Council meeting attendees who park in the China Bridge parking structure.**

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Sustainability
Item Type: Staff Report
Agenda Section: WORK SESSION

Subject:
4:15 p.m. - Thaynes Canyon Drive/Hotel Park City Parking Study
(A) Public Input

Suggested Action:

Attachments:
Thaynes Canyon Parking Study Staff Report
Exhibit A: Thaynes Canyon Drive/Hotel Park City Parking Study
Exhibit B: Parking History

City Council Staff Report

Subject: Thaynes Canyon/Hotel Park City Parking Study
Author: Heinrich Deters, Vaughn Robinson
Department: Trails & Open Space and Golf
Date: July 13, 2023
Type of Item: Administrative

This Staff Report was updated to reflect more recent information and new conditions.

Recommendation

Review, discuss, take public input, and consider providing initial direction regarding the Thaynes Canyon Drive/Hotel Park City (HPC) Parking Study (Study) (Exhibit A). We recommend three different long-term parking strategies for your consideration. Prioritized analysis of walkability improvements should continue regardless of the direction related to potential parking and management programs.

Importantly, this report was updated to reflect several parking-related solutions implemented since the Study was completed in late 2022, including;

- The striping of 8 additional surface parking spaces in Section B2 (map below);
- The removal of storage materials occupying approximately 12-14 underground parking spaces (this number has fluctuated and been less at times); and
- Eliminating the use of Thaynes Canyon Drive as temporary overflow parking.

The result of these changes is important, given that they increase the total on-site available 'Supply' parking from 191 to 213. The three options for your consideration are:

1. **(Status Quo) Forego any parking improvements on City-owned property along Thaynes Canyon Drive and require Hotel Park City, Golf, and Nordic concessions to implement 'Parking Management' and Transportation Demand Management (TDM) programs:**
    - Least expensive option and does not require the time, energy, and considerable land use approval process and construction;
    - Requires the hotel and concessions to "park within their means" as contemplated in the MPD;
    - Requires the Golf and Nordic concession to implement operational changes, and potentially recalculate revenue projections, reduce outside tournaments/events, and renegotiate agreements;
    - Does not address winter adaptive skier access, which will likely require planning approvals; and
    - Does not address summer parking shortages and requires considerable ongoing property enforcement commitments (PCMC Building, Police, Parking, and hotel) resources.

2. **Explore partnership with Hotel Park City to initiate a public planning process to build underground parking within Hotel Park City's MPD.**

- Initiate collaborative discussions between PCMC and Hotel Park City;
- Requires extensive public planning process and significant public outreach;
- Likely to have extensive construction impacts;
- The only option that may address the Study's conclusion of regarding a summer parking shortage without requiring off-site parking solutions (as implemented today);
- Hotel Park City will likely request additional density to compensate for constructing parking; and
- Cost estimated at well over $1M for underground options, and approximately $200K for surface options.

3. **Initiate a public process and evaluate surface parking, which prioritizes walkability improvements on City-owned Golf Course located along Thaynes Canyon Drive and require Hotel Park City, Golf, and Nordic concessions to implement parking management and Transportation Demand Management (TDM) actions.**
    - The Study options have not been evaluated by the Planning Commission for land use feasibility;
    - Allows ongoing public input during the design process and Council to authorize capital project implementation;
    - Requires reprioritization of funding and resources and a Conditional Use (CUP) land use approval;
    - Addresses the growing need to balance additional recreation parking with walkability improvements and neighborhood mitigations;
    - Requires Hotel Park City and concessions to implement parking management and TDM actions outlined in the Study;
        - While we support TDM programs, their success lies in the operators' commitment to implementation and enforcement;
    - Does not address overall summer parking shortages associated with the Hotel Park City MPD and is not subject to the Hotel Park City MPD;
    - Improvements involve a complimentary capital project and walkability investments on Thaynes Canyon Drive; and
    - Costs estimated between $175K to $850K and will likely not address peak demands.

Executive Summary

This meeting may be the first of several meetings in which the Council will discuss, take public input, and consider providing direction on balancing some of the competing interests of residential, commercial, and recreational goals within the Thaynes Canyon Neighborhood. The Thaynes Canyon neighborhood, as noted in the General Plan, is dominated by single-family homes. Planning goals for the neighborhood include prioritizing public amenities such as sidewalks, trails and parks, and access to public transportation.

The Parking Study consultants, Kimley-Horn (KH), will present information collected last summer and identify:

- A parking supply and demand analysis of the property;
- A recommended parking management and TDM strategy; and
- Potential walkability improvements and parking alternatives.

Background

Two distinct areas were reviewed, each subject to differing ownership and land use variables:

1. Hotel Park City Residential Condo Plat is roughly five acres in size and subject to the 1997 Golf Course Hotel MPD (HPC MPD). A background of the parking requirements associated with the HPC MPD is provided in Exhibit B.

2. Informal parking along Thaynes Canyon Drive was located partially within the 50' Thaynes Canyon Drive right of way (ROW) and on the City-owned Municipal Golf Course property, subject to the "Park City Golf Course Back Nine Subdivision." While this land area is given consideration to expand overall parking, it is separate from the HPC MPD and associated zoning.

Over the years, PCMC has received various public input and requests, both for and against overflow parking. Recently, PCMC created a website (Engageparkcity.org/thaynes-parking) to receive additional input and held a neighborhood open house on June 2, 2022.

On April 28, 2022, Council supported researching long-term strategies to consider overflow parking strategies along Thaynes Canyon Drive in collaboration with the neighborhood and Hotel Park City. For the 2022 season, the Golf Team implemented a temporary parking overflow plan to reduce and mitigate parking impacts. A June 9, 2022, Staff Report outlined the plan authorized by Council, pending the outcome of the Kimley-Horn (KH) Study.

For the 2023 season, the Golf Team entirely eliminated overflow parking along Thaynes Canyon Drive.

On July 21, 2022, City Council authorized KH to study the property, review parking supply and demand, and overflow parking. The scope also included an assessment of the property's existing entitlements and TDM strategies.

Parking Study Stakeholders, Data Collection and Modelling
The City and KH hosted an initial kick-off meeting with Hotel Park City, the Nordic Concessionaire, and Golf management. Each stakeholder met with KH and provided historical data and operational information. Below is an overview:

- Hotel Park City – Hotel occupancy, special events, employee transportation trends, visitation transportation trends, off-site parking arrangements, spa, and restaurant visitation.
- Nordic Concession – Annual passes sold, day tickets, rental packages, youth programming, and special events.
- Golf Course – Annual golf rounds played, local programming, tournaments, and special event attendance.
- PCMC – The HPC MPD application, Development Agreement, staff reports, and TDM strategies.

KH conducted three (3) site visits (August 17, 20, and 24) to collect parking data. On October 17, 2022, KH conducted a final site visit to collect walkability data to consider those types of improvements concurrently with future parking improvements.

KH utilized software modeling derived from the Urban Land Institute's (ULI) *Shared Parking, 3rd Edition,* and the Institute of Transportation Engineers' (ITE) *Parking Generation Manual, 5th Edition,* to determine usage. The model was adjusted for site-specific conditions, including occupancy, spa, restaurant, shuttles, rideshare, and transit, as well as employees (service and office). Spa, Golf, and Nordic land use ratios were based on historical data and programmatic insights provided by managers and concessionaires.

Analysis

Parking Supply and Demand
Initially, the Study identified a deficiency in both summer and winter 'on-site' parking supply. (Figure 1 below) The analysis is relatively consistent with the original LMC parking requirements.

- The report 'Supply' analysis includes the number of physically identified 'striped spaces' (191 summer/185 winter). The winter supply numbers are slightly lower due to snow storage.
- It included seasonally dependent Hotel 'off-site' parking (40 summer/10 winter) arrangements for employee parking by Hotel Park City.
- **As noted, efforts were undertaken to improve property compliance and stripe additional spaces, increasing the new 'Supply' analysis to 213 summer & winter.**

Based on a shared-parking model and property observation, KH recommends the Hotel businesses maintain 275 parking stalls in the summer and 199 in the winter:

- Including off-site parking, the model shows a summer parking deficit of ±**22**. Excluding off-site parking, the summer deficit is ±**62**.
- The updated model shows a surplus of parking independent of the on-site or onsite-offsite designation in the winter.

Figure 11: Projected Seasonal Peak Demand & Existing Estimated Deficits

Season	Projected Peak Demand (spaces)	Scenario	Supply (spaces)	Deficit (spaces)
Summer	275	Onsite + Offsite supply (+40 offsite spaces)	253	-22
		Onsite only	213	-62
Winter	199	Onsite + Offsite (+10 offsite spaces)	223	+24
		Onsite only	213	+14

(*Figure 1)*

The Study recommends operational (Parking Management, TDM, and Circulation) parking management and capital alternatives to address shortages. Below is a list of recommendations and options:

- *Parking Management*: Several opportunities exist to maximize existing parking spaces such that visitors are less likely to perceive parking shortages that lead to parking in undesignated and/or illegal areas. These include additional striping, compact vehicle parking spaces, new signage, valet program improvements, reclaiming spaces utilized for Hotel Park City storage, and continued monitoring for non-compliant use. **Many are implemented.**

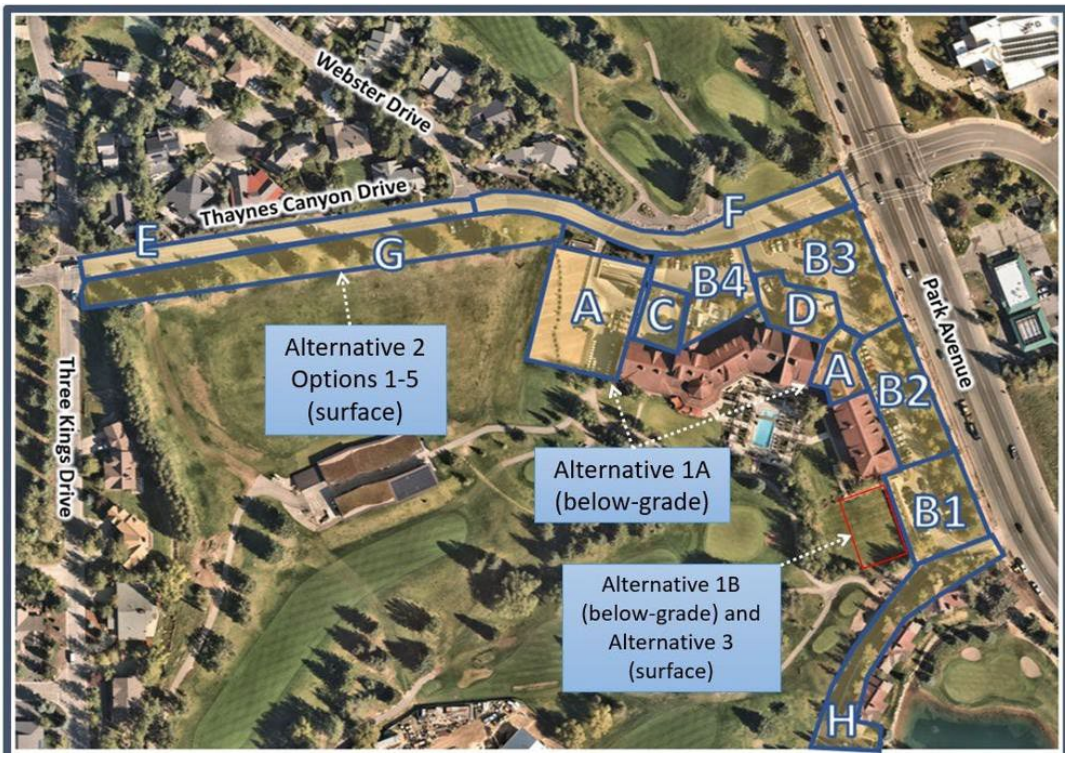
- *Transportation Demand Management*: Operational and TDM measures can reduce visitor and employee parking demand by incentivizing and supporting alternative transportation and low-occupancy vehicles. It is a heavily underutilized tool for hotel guests and employees.

- *Traffic Circulation/Drop-Off Area*: While more of a circulation issue rather than parking, the Hotel, Nordic, and Golf managers expressed concern that the roundabout does not accommodate safe and efficient pick-up/drop-off. This is particularly acute during winter and summer special events when many shuttles and other oversized vehicles are present.
    - Viable areas to stage more vehicles and shuttles on the property are limited due to space constraints.

- *Parking Alternatives*: The Study identifies several capital project alternatives and conceptual costs to add parking capacity if desired. They include two (2) underground parking alternatives, one within the HPC MPD and five (5) surface options along Thaynes Canyon Drive.
    - An additional surface parking option on the HPC property was also provided.
    - Each option provides an estimated cost and net gain to the total parking supply. (Figure 2 and supporting Map)

Alternative	Net Added Spaces	Estimated Cost	Notes
1A	30+	$1,050,000 - $1,650,000+	$35,000-$55,000/space
1B	88	refer to contractor	
2 Option 1	39	$319,784 - $499,592	Pull-in from west; street narrowed from 26' to 24'; $7,500 - $12,000/stall + $4.75 - $5.50/shared use path sq. ft.; 45-degree stalls; 520 ft. lot shared use path + 198 ft. additional shared use path to Site; 8 ft. shared use path width
2 Option 2	18	$175,926 - $263,388	" "; Parallel stalls; 12 ft. shared use path width
2 Option 3	35	$289,784 - $451,592	" "; One row 45 degrees; 13.5 ft. aisle
2 Option 4	68	$537,284 - $847,592	" "; Two rows 45 degrees; 15.5 ft. aisle
2 Option 5	22	$194,165 - $297,770	" "; One row retaining trees; 13.5 ft. aisle; 10 ft. additional shared use path width of 198 ft.
3	14	$105,000 - $168,000	$7,500 - $12,000/stall; 90-degree stalls; 18' X 9' stall; 2 rows

(Figure 2)



(Map)

Parking Alternatives Summary
Figure 3 is a summary of the parking alternatives and accounting to meet the seasonal 'Projected Demand (275 summer/199 winter)' in Figure 1. The table considers the seasonal off-site parking and reclaiming existing spaces through 'Parking Management' practices. The numbers reflect approximate 'reclaimed spaces' incorporated into updates made at the property over the winter and summer (painting spaces and cleaning up storage areas).

Alternative	Net Added Spaces	Net Total Spaces							
		Summer (includes offsite)		Summer (excludes offsite)		Winter (includes offsite)		Winter (excludes offsite)	
		Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces
1A	30+	269-278+	261+	229-238+	221+	230-250+	225+	220-240+	215+
1B	88	327-336	319	287-296	279	288-308	283	278-298	273
2 Option 1	39	276-287	270	238-247	230	239-259	234	229-249	224
2 Option 2	18	257-266	249	217-226	209	218-238	213	208-228	203
2 Option 3	35	274-283	266	234-243	226	235-255	230	225-245	220
2 Option 4	68	307-316	299	267-276	259	268-288	263	258-278	253
2 Option 5	22	261-270	253	221-230	213	222-242	217	212-232	207
3	14	253-262	245	213-222	205	214-234	209	204-224	199

Notes:
Green counts meet or exceed projected parking demand (275 spaces in summer and 199 spaces in winter). Red counts do not meet projected demand.
Offsite parking = 40 spaces in summer and 10 spaces in winter.
Reclaimed spaces = 8-17 summertime stalls and 5-25 wintertime identified onsite in Parking Management Recommendations section.

(Figure 3)

In addition, the Neighborhood First Committee (Committee), consisting of Police, Streets, Engineering, Transportation Planning, Parking, Trails and Open Space, Fire District,

and Peak Traffic Manager, met December 20, 2022, to review the KH Study. The Committee believes that each option presented along Thaynes Canyon Drive requires additional public input, surveying, engineering, planning, and budgeting before final consideration. The Committee will be present at the Council meeting, and available to answer questions, if necessary

Exhibits

Exhibit A- Kimley-Horn Thaynes Canyon Drive/Hotel Park City Parking Study
Exhibit B- Hotel Park City Development Background Specific to Parking

Thayne's Canyon Drive / Hotel Park City

Parking Study

Park City, UT

December 21, 2022

Prepared by

Kimley»Horn

111 E. Broadway, Suite 600, Salt Lake City, UT 84111

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MEMORANDUM

To Mr. Heinrich Deters
Trails & Open Space Program Manager
445 Marsac Avenue
Park City, UT 84060

From Jeremiah Simpson, Kimley-Horn and Associates, Inc.
Brent Crowther, Kimley-Horn and Associates, Inc.

Date: December 21, 2022

Re: ***Thayne's Canyon Drive / Hotel Park City Parking Study, Park City, Utah***
Kimley-Horn Project: 196572000

Kimley-Horn and Associates, Inc. ("We" or "Kimley-Horn") is pleased to submit this memorandum to Park City Municipal Corporation ("PCMC") documenting our analysis of current and future parking needs for the area including Thayne's Canyon Drive and Hotel Park City ("Hotel") referred to collectively as the "Site." The Park City Golf Club ("Golf Club") and the White Pine Touring Nordic Center ("Nordic Center") facilities are also located on the Site and share parking resources.

The memorandum includes the following: a Site parking supply and demand analysis, recommended parking and transportation demand management strategies, and recommended parking expansion options and analysis.

Background

PCMC is interested in addressing a current overflow parking issue that periodically occurs along Thayne's Canyon Drive between Park Avenue and Three Kings Drive west of Hotel Park City. The overflow parking conditions are generated during certain peak activity periods when the Hotel parking lot is filled and/or when visitors seek to park closer to the Golf Club driving range or cross-country ski terrain. Peak parking periods are generally associated with winter ski events and holidays, as well as weddings and summertime golf tournaments.

According to Hotel staff, there has been a notable increase in Hotel Park City condo owners residing onsite year-round in recent years that has reduced the parking supply available to Hotel, Golf Club, and cross-country ski visitors. Further, the growth in recreational activities throughout the City and specific to golf and cross-country skiing has impacted the ability of the facilities parking infrastructure.

Unauthorized and informal overflow parking in this area has become an issue for the community and an ongoing concern for nearby residents. On-street parking along Thayne's Canyon Drive is neither permitted or prohibited under the existing master planned development (MPD) approvals for Hotel Park City. The area is in violation of LMC 15-3-3:

15-3-3 General Parking Area And Driveway Standards
Off-Street parking shall meet the following standards:

> *B. SURFACING. Parking Areas and driveways must be Hard-Surfaced, impervious, maintained in good condition, and clear of obstructions at all times. See Required Setback Exceptions in Chapter 2 for further drive and parking requirements in specific Zoning Districts.*

In April of 2022, City Council requested City staff to procure a parking study for the area and return with practical options by which the issue could be resolved.

Existing Parking Supply & Demand

The MPD approvals associated with Hotel Park City and other onsite commercial uses require 210 stalls be provided. These approvals acknowledge shared use of the stalls between the Hotel and the Golf Club/Nordic Center concessionaire.

The onsite parking supply aims to provide all daily parking needs for both the Hotel (including the onsite Ruth's Chris Steak House, Bandannas Grill, and spa) and the Golf Club/Nordic Center. The primary parking lots include a parking garage underneath the Hotel (with entrances in Zone A in Figure 1) and surface parking on the north and east sides of the Hotel (Zones B1-B4 in Figure 1).

Figure 1: Site Map with Parking Zones

Figure 2 shows the usable onsite parking supply consisting of 191 spaces throughout Zone A and Zone B1-B4. The scope of this parking study includes identifying all 'striped or marked' parking stalls. Kimley-Horn staff found during their August 2022 site surveys days that there are approximately 14 garage spaces permanently occupied by equipment or otherwise functionally unusable in addition to the 191 usable spaces for a total of 205 identified stalls. The other 5 stalls of the 210 MPD-approved parking supply may have existed at some point in time in Zone H near the cottages, Zone B2 along what is now the fire lane, or within the Zone A below-grade garage, but Kimley-Horn was unable to locate them or learn about their locations from Site staff or available documentation.

There are currently 4 time-limited (15-minute) spaces adjacent to the cottage spaces in Zone H, and approximately 8 unstriped parallel spaces in Zone B2 that are often utilized. These unusable stalls are not included in the existing parking counts referenced throughout this study, although we recommend exploring striping for 8 parallel spaces in Zone B2. See Parking Management Recommendations for further discussion.

Additionally, roughly 6 Zone A garage stalls are occupied by snow equipment and unusable in the winter.

Figure 2: Existing Usable Onsite Parking Supply

Parking Zone	Summer Supply	Winter Supply
A (Valet)	18	18
A (Non-Valet)	93	87
B1	20	20
B2	22	22
B3	24	24
B4	14	14
Total Onsite	**191**	**185**
Offsite nearby	10	10
Offsite commercial	30	0
Total Onsite + Offsite	**231**	**195**

Note: Zones with no usable supply are not shown.

According to the Hotel, employees routinely use roughly 40 offsite parking spaces including ~30 stalls available in summer months via an informal agreement with a nearby commercial property and roughly 10 additional nearby spaces. Note that these two sources of off-site parking are subject to continued excess capacity. In particular, the commercial space parking may not be a long-term parking option if this property is sold, redeveloped, or its parking needs change. Roughly 6 spaces in the Zone A garage are occupied by snow equipment in the winter months, yielding 87 stalls in the Zone A non-valet area instead of 93 spaces. Figure 2 shows parking supply with these seasonal scenarios taken into consideration.

SUMMER SURVEY DAYS

Kimley-Horn analysts completed site parking demand surveys on 8/17/22 (Wed), 8/20/22 (Sat), and 8/26/22 (Fri) to establish a present-day usable parking inventory and to gather parking counts during summer peak conditions. The summertime parking surveys were structured to capture the peak hours of both weekdays and weekends as described by Hotel and Golf Club management. The tables and observational notes from these survey dates are included in Attachment A.

On 8/17/22, parking counts were gathered hourly from 3:00 pm to 7:00 pm. Conditions were clear and ideal for golfing. The surface parking zones were near or beyond full capacity throughout the afternoon. Meanwhile, the parking garage had availability in the valet and non-valet areas. Zone B2 had excess parked vehicles along the curb that is not designated parking.

By 6:00 pm, there were 189 parked vehicles, close to the 191-space combined usable parking capacity. Between 1-4 vehicles were observed to be parked, most likely for short periods, at Zones C and D, which are not a designated parking areas as they are the golf club and Hotel entrances. No vehicles were observed parked on Thayne's Canyon Drive (Zones E, F, G).

On 8/20/22, parking counts were gathered hourly beginning at 10:00 am since golfing activity generally begins earlier on weekends and there was a golf tournament scheduled for this date. The parking garage non-valet area was nearing capacity with 85 parked vehicles at 10:00 am. Zone B2 again had 8 vehicles parked in unmarked spots.

Parking demand began to dwindle between 11:00 am - 12:00 pm and then rainy conditions persisted from 12:00 pm for the remainder of the 4-hour survey period, so the parking survey was concluded early. No vehicles were observed parked in Zones E-G between 10:00 am and 12:00 pm. The full extent of golf tournament parking demand likely did not materialize due to these weather conditions.

On 8/26/22, parking counts were performed hourly 3:00 pm - 7:00 pm. Parking garage non-valet demand peaked around 4:00 pm with 91 parked vehicles. Demand peaked between 6:00 pm - 7:00 pm with 196 vehicles parked throughout all zones. During this period, Zones B2 and B4 were overparked by 9 vehicles occupying undesignated spaces. Zone H, which has no designated parking, had one illegally parked vehicle. Zones C and D had 3 parked vehicles, one of which was parked for two hours. There were 2 illegally parked vehicles along the grass in Zone G at 6:00 pm.

The parking garage valet area had consistently lower observed demand than the 18-space usable supply throughout the 3 survey days.

ULI / ITE Parking Demand Projections

The various land uses at the Site tend to have complementary parking demand patterns throughout a given day. For example, Hotel visitors may leave for day activities, providing open parking stalls in the parking garage and surface parking areas for use by golfers and cross-country skiers.

To illustrate this shared parking dynamic, the Site land uses were applied to a model derived from the Urban Land Institute's (ULI) *Shared Parking, 3rd Edition* and the Institute of Transportation Engineers' (ITE) *Parking Generation Manual, 5th Edition.* Spa, Golf Club and Cross-Country Ski Course land use ratios were based off historic attendance data and programmatic insights provided by spa, Golf Club, and Nordic Center management.

The model was adjusted for site-specific conditions: captive Hotel visitor usage of the spa facilities and restaurants, restaurant hours, and expected shuttle, rideshare, and transit usage. Employees (service and office) were assigned a 95% driving rate based on local transportation usage statistics; 5% are assumed to commute by carpool, transit, or drop-off.

Restaurant, spa, meeting room, and hotel adjustments were primarily informed by guest data provided by the Hotel. The non-captive spa visitor ratio was adjusted to 40% as described by hotel management. All non-captive spa visitors are assumed to drive to the Site.

The Hotel driving adjustment were discussed with the hotel manager and are typically higher in the summer peak months than the winter. Based on data received from the Hotel, the assumed drive ratio was revised from the national median of 50%, for similar resort hotels, to 75% in summer because: 1) Park City is a relatively remote and affluent vacation destination and 2) there has been a reported increase in the number of Hotel condo owners living onsite year-round in recent years that tend to bring a vehicle to the site. The winter Hotel driving ratio was adjusted lower to 65% because the Hotel reports a slightly higher rate of carless hotel guests who rely on ski shuttle service to get around during their stays.

The restaurant driving ratio was kept at the 63% ULI/ITE base rate based on assumed usage from on- and off-site guests. Likewise, the restaurant non-captive ratio was left unchanged from a ULI/ITE base ratio of 90%.

The meeting/banquet space driving adjustment and non-captive ratios were kept at 68% and 60% ULI/ITE rates, respectively.

The cross-country ski course drive ratio was adjusted to 40% because of the historically high shuttle use amongst tourists attending winter cross-country ski events. Meanwhile, the golf course visitor driving ratio (which includes assumed volunteers) was kept at 100% because Golf Club staff have described a very high rate of single-occupancy vehicle (SOV) use at golf tournaments.

Employees of all Site land uses were assigned a 95% driving ratio to account for some carpool and transit usage.

SUMMER PROJECTIONS

The weekday and weekend projected peak hour parking demands are similar, with 275 weekdays stalls needed (shown above) versus 264 weekend stalls needed (shown in Figures 3 and 4 below). The weekday is projected to be slightly higher due to the percentage of restaurant visitors parking onsite that is calculated by the model. However, since the projected peak demands are similar, we conclude that either a weekday or a weekend would have a similar probability of generating the peak demand, simply based on the specific amount of guest, hotel, and golf activity for a given day.

It should be noted that Figures 3 and 4 do not display any parking demand for the cross-country ski course land use because the Nordic Center is inactive in the summer. The annual peak parking demand projection occurring in the summer is the result of a higher base parking demand ratio and a higher driving ratio applied to the golf course land use compared to the cross-country ski course land use. The summer months have the compounding factors of high hotel occupancy rates, slightly higher onsite vehicle rates amongst hotel guests (as shown in historic Hotel parking data), weddings and other events utilizing the meeting/banquet space, and large golf tournaments, particularly in July and August. Hotel, Golf Course, and Nordic Center staff report a significantly lower prevalence of charter buses, vans, and other shared transportation vehicles onsite during summer golf tournaments compared to winter cross-country ski use and programming.

Figure 3: Projected Peak Parking Demand by Hour – Weekdays (Summer)

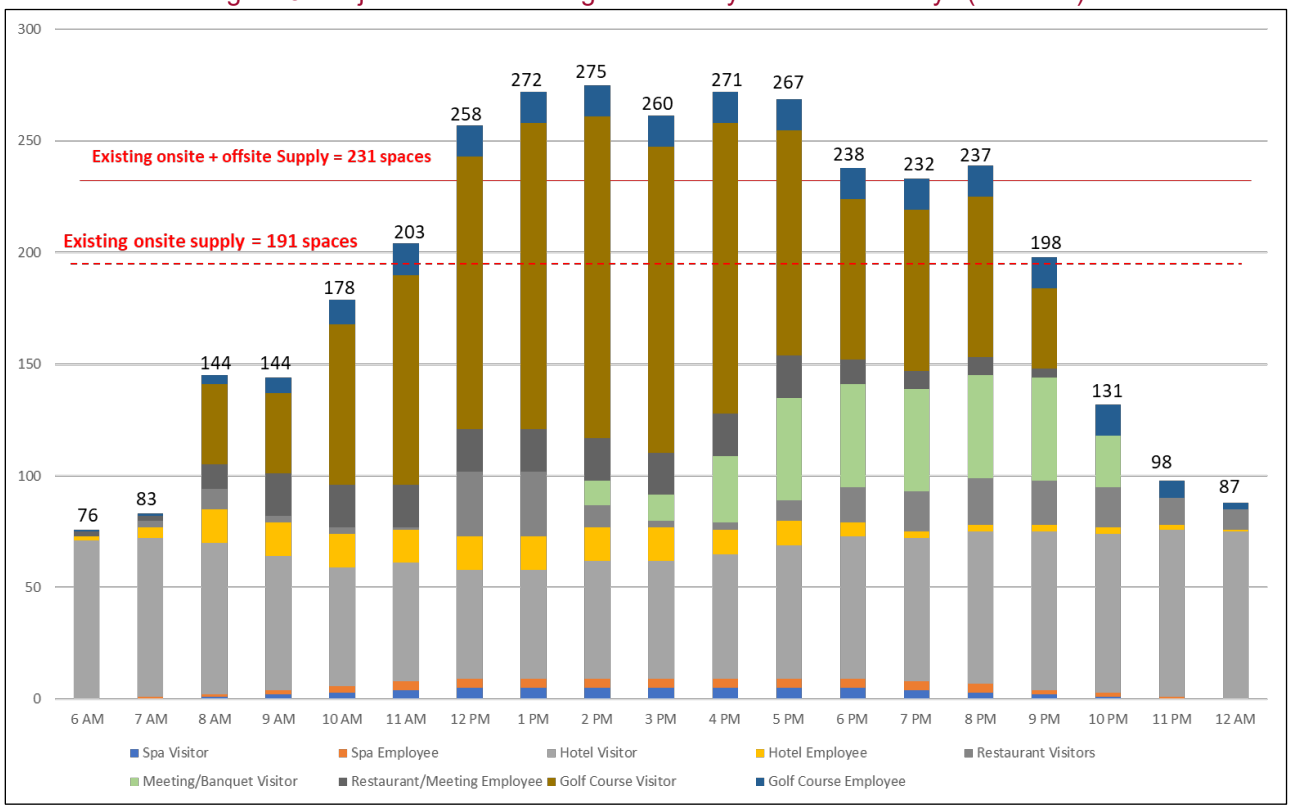
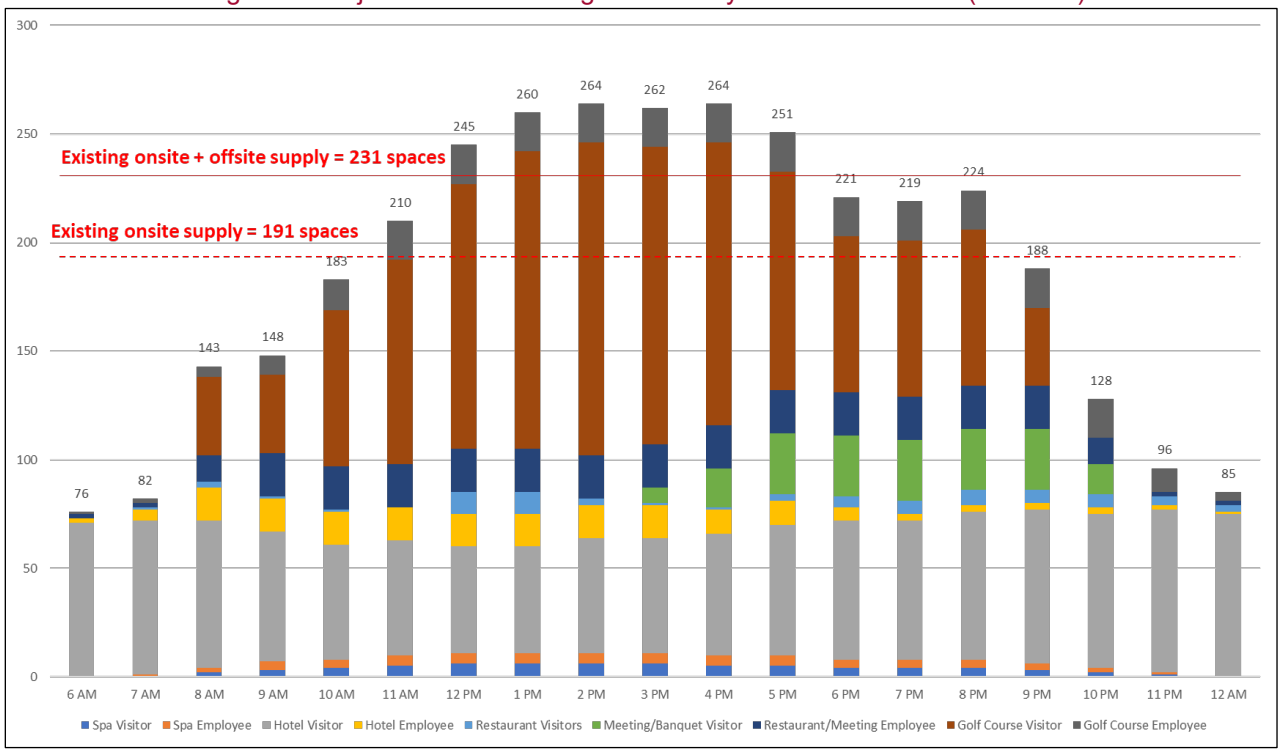


Figure 4 below shows projected hourly demand during peak weekends in the summer, when demand is expected to peak at 4:00pm at 264 spaces based on the parking ratios and adjustments.

Figure 4: Projected Peak Parking Demand by Hour – Weekends (Summer)



Based on the ULI/ITE shared parking model and onsite observations, we recommend that the Site businesses maintain a capacity of **275 parking stalls** to meet projected peak demand conditions.

The model results show an existing summertime onsite parking deficit of **±44 stalls** (231 spaces supplied versus demand for 275 spaces) when including the offsite employee parking in the parking supply. Excluding offsite parking, the summertime deficit is **±84 stalls**. This projected deficit explains the spillover into the surrounding streets on the highest peak visitor days. Since these events peak in the early afternoon, there is a moderate amount of parking that becomes available onsite when hotel guests leave with their vehicles for daytime activities.

The summer and winter parking demand model charts, including all base ratios and adjustments, can be found in Attachment B.

WINTER PROJECTIONS

Winter parking demand analysis was derived from qualitative data provided by the Nordic Center and quantitative occupancy data provided by the Hotel. This data was compiled into parking estimates that reflect historical peak conditions November-April.

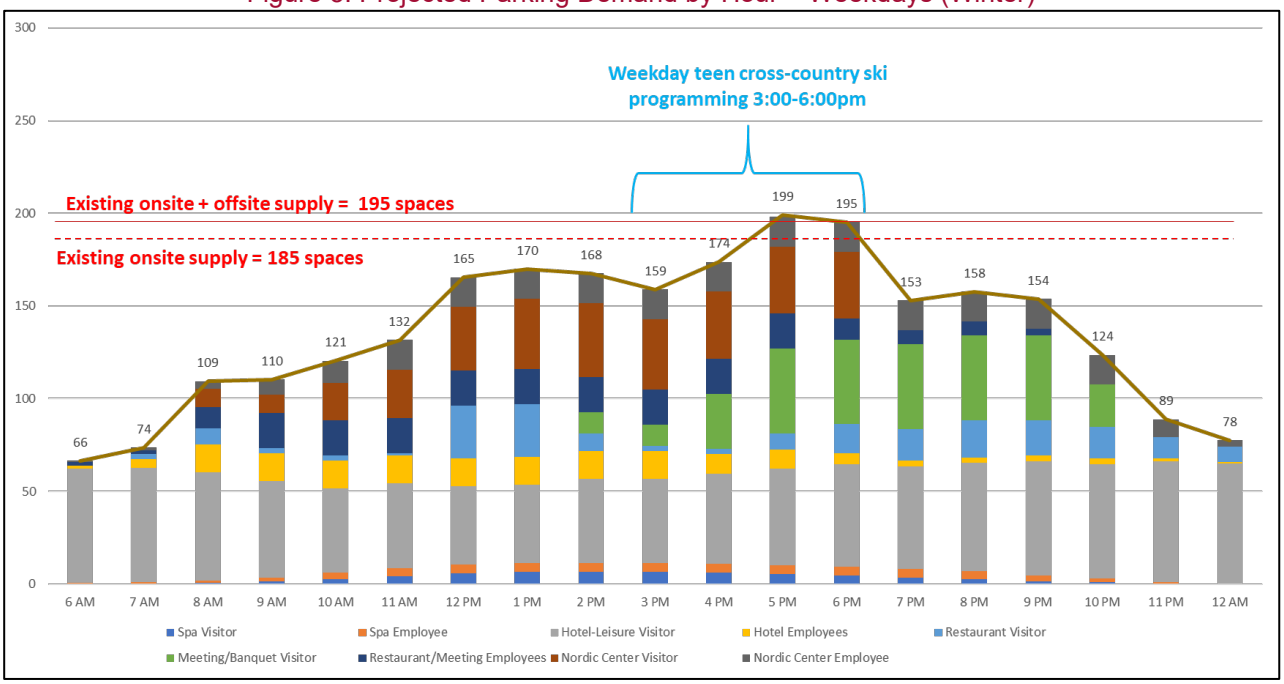
November and April are shoulder-season months with variable winter/snow conditions. During these months there is low cross-country skiing activity and the Golf Club is closed, although some golfers free play the course on fairer weather days. High parking demand and associated pressure for drivers to seek parking on Thayne's Canyon Drive are generally not observed during the shoulder season.

December to March is the busy season with regular cross-country ski use and programming held at the Site coupled with high nightly Hotel occupancy rates.

Youth programming at the Nordic Center runs throughout the winter season on weekdays 3:00pm-6:00pm. Approximately 20-50 vehicles arrive for child dropoff and pickup during these programs. Some of these vehicles park onsite during the programs, which is reflected in Figure 5 below. A vehicle queue tends to form at the roundabout in Zone C that causes traffic circulation issues during these winter weekday afternoon periods. The roundabout was not designed to accommodate traffic volumes observed onsite by Site staff.

Although traffic and circulation analysis is outside the scope of this parking study, some of the Zone G options outlined in the Parking Expansion Alternatives section of this report present an opportunity to direct Nordic Center pickup and dropoff activity to a designated area adjacent to Thayne's Canyon Drive.

Figure 5: Projected Parking Demand by Hour – Weekdays (Winter)

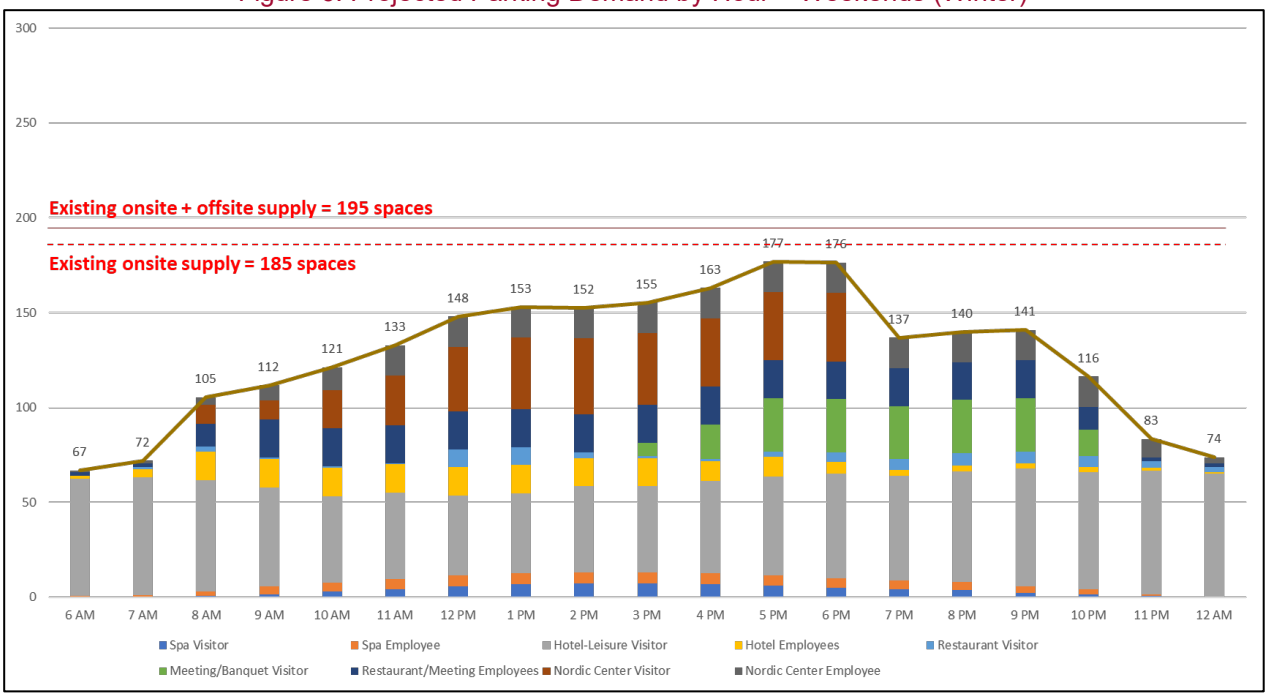


The shared parking model projects a modest parking spillover during large weekday cross-country youth ski programming in winter when the meeting/banquet space is also being utilized and the Hotel is fully occupied for the winter high season. Notice the relatively moderate ski course parking demand that is due to the aforementioned carpooling and child dropoff behavior that was accounted for in the adjustments as well as the slightly lower Hotel parking demand due to a higher rate of carless Hotel guests in winter months who rely on ski resort shuttles to get around. This projected demand for 199 peak winter weekday parking spaces indicates a modest parking deficit of **±4 stalls** compared to the winter parking supply of 195 spaces when ~6 garage spaces are occupied by snow equipment, 30 offsite Hotel employee spaces are not available, and the 10 offsite nearby spaces are usable. Excluding the 10 offsite nearby spaces, the wintertime deficit is **±14 stalls**, or 185 available stalls versus demand for 199 stalls. Accounting for natural driving choice fluctuations, this projection indicates the possibility of modest real and/or perceived parking deficits on some peak winter days when the parking lots approach 100% occupancy.

Not included in these deficit counts are the 4-5 stalls occupied by plowed snow at certain times in winter. The snow pile removal recommendation mentioned in the Parking Management Recommendations section will help maximize available wintertime parking in the B Zones with 4-5 more spaces after snowfall.

The model projects demand for 177 peak winter weekend parking spaces, shown in Figure 6 below. Onsite supply can generally meet this amount of projected parking demand.

Figure 6: Projected Parking Demand by Hour – Weekends (Winter)



The summer and winter parking demand model charts, including all base ratios and adjustments, can be found in Attachment B.

Parking Management Recommendations

The Summer 2022 parking surveys revealed a tendency for drivers during higher-demand periods to park in undesignated spaces in the Hotel parking area Zones A-B or along Thayne's Canyon Drive Zones E-G. This reflects the concerns raised by PCMC that peak parking conditions at the Site involve spillover that negatively impacts the surrounding neighborhood and may be a nuisance to nearby residents.

There are several opportunities onsite to maximize existing parking such that visitors are less likely to perceive parking shortages onsite that lead them to park in undesignated and/or illegal areas. These combined recommendations yield **5-25 additional stalls in winter and 8-17 additional stalls in summer.**

STRIPE PARALLEL PARKING STALLS IN ZONE B2

The frequent use of the east side of the drive aisle in Zone B2 for undesignated parallel parking is an example of unmanaged parking behavior onsite. If necessary, the Hotel consider may consider conducting a site structural review to determine whether there is adequate passenger and emergency vehicle clearance in the drive aisle to designate these stalls with striping.

By bringing these currently undesignated spaces into managed parking status, the Hotel can add additional parking spaces that are already functioning as de facto spaces on a regular basis. This parking supply can be added at a very low cost compared to the building of new parking infrastructure. New paint striping costs roughly $10 per stall, much less than the $7,500-$12,000 per stall rate for newly built surface parking.

Clear stall striping would serve to clearly delineate each individual parallel space so that 1.) drivers can easily identify the area as a parking option and 2.) vehicles are more likely to be parked efficiently, which maximizes the available supply of parking compared to the existing unstriped conditions in this area.

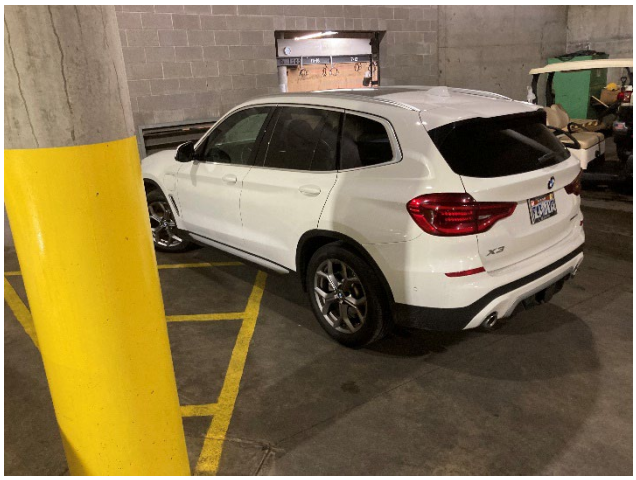
With 22-ft. stall lengths, these new striped spaces would add approximately **8 additional spaces** to Zone B2's parking supply between the existing fire lanes.

RECLAIM PARKING SPACES

There are currently 125 striped parking spaces in the parking garage at Zone A. The August 2022 parking surveys showed that approximately 11 stalls are unusable because they are occupied by various Hotel and Golf Club supplies and equipment. 9 of these stalls are in the valet-only area. *An additional 3 stalls in the non-valet area are striped but functionally unusable because they are located too close to utilities and other structures*.

The Nordic Center uses 5-6 stalls in the parking garage from November to April for the storage of snow equipment, rendering these spaces unusable during the winter months.

Figure 7A-7D: Parking Zone A (Parking Garage) Observed Conditions (August 2022)



Hotel and Golf Club management may consider relocating this equipment to another area of the Site so that these valuable spaces can be returned to the usable parking supply. High-quality, prefabricated storage structures can be added onsite for $1,500-$15,000, depending on the size and materials selected. These structures are significantly more cost-effective option for parking maximization than constructing new below-grade parking, which can cost $35,000-$55,000 per stall. Fully enclosed storage buildings can also provide more security for high-value equipment than publicly accessible parking garages.

This parking management recommendation provides **11-17 additional parking spaces**, depending on the season. Along with the B2 stall striping recommendation for roughly 8 stalls, these recommendations present low-effort opportunities to reclaim usable space onsite for parking.

After significant snowfall, roughly 4-5 parking spaces in Zone B1-B4 may be occupied by snow piles created after the lots are plowed. These spaces may remain unusable for multiple days until the snow melts. We recommend Hotel or Nordic Center staff clear these snow piles from the lots as promptly as possible, especially in advance of high hotel occupancy periods and/or large cross-country ski tournaments. We included these sporadically unusable parking spaces in the standard winter parking capacity referenced throughout this study since their usability is weather-dependent.

Dynamically Adjust Valet Parking

The parking surveys revealed a chronic underutilization of parking capacity within the valet-only in the parking garage (Zone A), even during peak times such as golf tournaments and dinner hours. The observed peak valet-only parking occupancy rate was 6:00 pm-7:00 pm on 8/26/2022, with 13 of 18 stalls occupied.

This excess capacity presents an opportunity for valet staff to dynamically manage individual valet-only stalls with cones or other markers based on historic demand patterns while leaving the excess supply for non-valet parking use. Survey data suggests this valet stall management change could provide approximately 12 additional non-valet parking spaces during the daytime period and 5 spaces during the evening period. Valet stacking of vehicles in the drive aisles may also be considered for additional peak capacity if needed.

While this shift in stall designation should not be considered additional to the overall parking supply, the change would serve to increase the unreserved parking supply onsite, which decreases the likelihood that the average driver will perceive an onsite parking shortage and instead park on Thayne's Canyon Drive, Webster Drive, or other nearby streets illegally.

ADD PARKING GARAGE AVAILABILITY SIGNAGE

Visitors will naturally gravitate toward straightforward surface parking in lieu of below-grade parking, except perhaps during inclement weather conditions. It is therefore recommended for the Hotel and Golf Club to use signage, managed by the valet team, to indicate park garage stall availability during high-demand periods so that visitors more readily recognize this parking area as an option.

Signage options include:

- An illuminated sign above the parking garage ingress/egress that displays "available" or "full" status and is centrally controlled by the valet team
- A high-quality sandwich board-style sign placed on the sidewalk between Zone B3 and Zone B4 facing the parking lot ingress/egress to Thayne's Canyon Drive that displays "available" or "full" status, managed by the valet team

One or both signage options could be implemented to communicate availability to visitors. This simple signage scheme will ensure the parking garage capacity is efficiently used during high-demand periods, minimizing spillover onto the shoulder of Thayne's Canyon Drive.

CONSIDER ADDITIONAL DROP-OFF / PICK-UP AREA

Managers at the Hotel, Nordic Center and Golf Club have expressed concerns that the roundabout in Zone C is not large enough to accommodate pick-up/drop-off demand during large winter and summer events, especially when many shuttles and other oversized vehicles are present. Viable areas to stage these vehicles onsite are very limited due to space constraints and the existing built environment.

Kimley-Horn has identified an opportunity to direct pickup and dropoff vehicles to a designated portion of the new paved area created by expansion alternative 2 options 1-5. Coning off some of the parking stalls or actively managing the drive aisles could allow vehicles to stop in the paved area for safe pick-up and drop-off without interrupting Thayne's Canyon Drive or parking lot drive aisle traffic flow.

See the Parking Expansion Alternatives section and Attachment D of this report for further information about these expansion options.

Transportation Demand Management Recommendations

This section provides transportation demand management (TDM) measures that can reduce visitor and employee parking demand by incentivizing and supporting alternative transportation modes to low-occupancy vehicle driving.

Housing costs are extremely high in Park City and surrounding Summit County, and there are currently no dedicated nearby workforce housing options available to Hotel, Golf Club or Nordic Center staff. Most employees are likely to commute from areas 30+ minutes away from the Site, necessitating motorized transport modes.

Regional transit is limited, but Utah Transit Authority's PC-SLC Connect provides coach bus service from Salt Lake City and Jeremy Ranch to nearby Kimball Junction, from which riders could transfer to the High Valley Transit 101 - Kimball Junction Shuttle bus and deboard near Thayne's Canyon Drive. Thus, transit commuting is feasible but inconvenient. PC Transit and High Valley Transit provide transit options to visitors and staff staying or living in Summit County. Several routes, including the PC Transit micro-transit pilot, provide service to the area.

Considering these conditions, we recommend the following TDM measures aimed at influencing visitor and employee transportation behaviors year-round:

- Employee commuter benefit program, which provides a pre-tax savings on monthly commute costs for employees and payroll tax deductions for employers
  - Option to offer bonus incentives for those who consistently opt to carpool or use transit rather than park onsite to "gamify" employee commute choices
- Advertise the "Ride On" platform that is provided for free by PCMC and the Park City Chamber of Commerce, which allows for carpool matching, incentive-based programs for carpooling and transit, and monitors employee use of alternative modes and parking demand
- Promote the use of the Ecker Hill Park & Ride as an off-site park-and-ride facility, at which the Golf Club could require employees to park during large Site events and allow them to clock in once they enter the park-and-ride lot
- Link Site employees to the Site's parking management programs through active outreach, handouts, newsletters, etc.
- Increased promotion of airport shuttle options and ski resort shuttles on the Hotel, Golf Club, and Nordic Center website

- Dedicated "Getting There" and "Getting Around Town" webpages, with links to these webpages in emails related to Hotel bookings and Golf Club/Nordic Center events
- Provide a UTA van share to employees

We also recommend the following seasonal TDM strategies:

- Temporary or permanent covered bike parking for visitors in convenient areas (summer season)
- Hourly + daily bike rental program for visitors (summer season)
  - A small bike rental program can be scaled up to meet growing demand
- Continuation of golf benefits (free range balls) for carpool and transit users
- Carpool requirements for golfers during peak times
- Explore a reservation system for peak winter times/events
- Rideshare (Uber, Lyft) promos for golf tournaments to encourage competitors and spectators staying at Hotel Park City or in nearby lodging to come to the Site without parking their own vehicles
  - Promos can be arranged by contacting rideshare company marketing departments directly

Furthermore, the Site's various management teams should remain engaged with their staff, City officials, and the local community as the public discourse regarding a greater need for workforce housing in and around Park City develops.

Parking Expansion Alternatives

The following parking expansion alternatives are proposed, all of which include input from PCMC, Hotel, and Golf Club management:

1.) Expand below-grade parking structure
   a. Westward under the driving range (Zone A); variable stall count.
   b. Additionally, the Hotel has previously worked with Think Architecture to expand the hotel onto what is currently the outdoor event grass area to the west of parking Zone B1. This proposed addition includes a below-grade parking garage expansion of roughly 99 spaces that connects to the existing parking garage below the Hotel, with a garage entrance that would remove approximately 11 spaces in zone B1. See Attachment B for a sketch of this conceptual design.

2.) Add surface parking along the south side of Thayne's Canyon Drive adjacent to the golf driving range (Zone G) with a shared use path connecting to the paved Golf Club area

   Option 1 - 39 angled stalls with west approach.

   Option 2 - 18 parallel stalls.

   Option 3 - 1 row of 35 total angled stalls with west approach; drive aisle in place of trees on Driving Range.

   Option 4 - 2 rows of 68 total angled stalls with west approach; center drive aisle in place of trees on Driving Range.

   Option 5 – 1 row of 22 angled stalls with west approach; pavement cutouts retain existing trees.

3.) Pave the outdoor event grass area west of Zone B1; ~14 stalls.

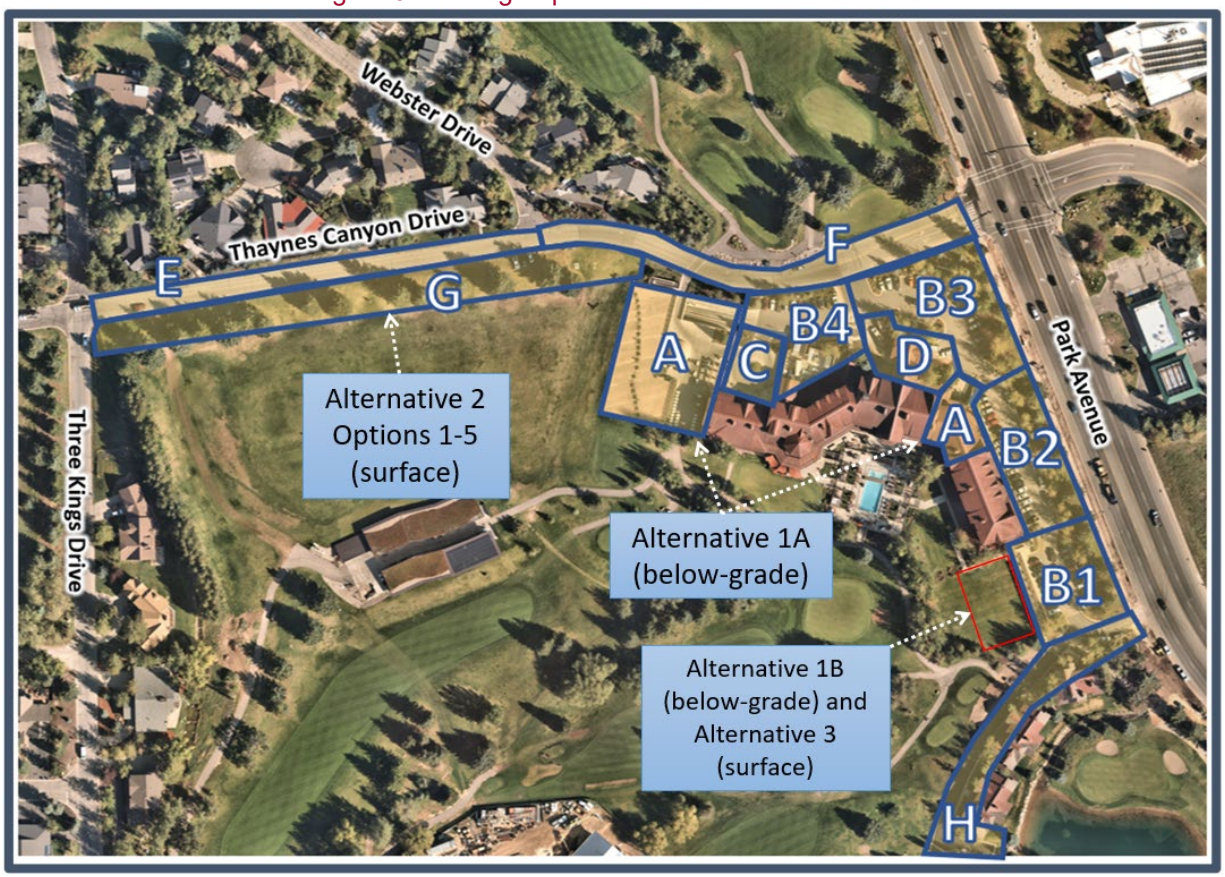
All Alternatives include an 8-12 ft. shared use path for pedestrian access to the rest of the Site, which would also connect to the proposed Three Kings Drive shared use path detailed in Attachment E and F. These redesign options benefit parking users as well as nearby neighborhood residents utilizing Thayne's Canyon Drive and Three Kings Drive for recreation and pedestrian movement.

Figure 8 below shows an overview of these parking expansion Alternatives. Figure 9 shows these Alternatives by Site location.

Figure 8: Parking Expansion Alternatives At-A-Glance

Alternative	Net Added Spaces	Estimated Cost	Notes
1A	30+	$1,050,000 - $1,650,000+	$35,000-$55,000/space
1B	88	refer to contractor	
2 Option 1	39	$319,784 - $499,592	Pull-in from west; street narrowed from 26' to 24'; $7,500 - $12,000/stall + $4.75 - $5.50/shared use path sq. ft.; 45-degree stalls; 520 ft. lot shared use path + 198 ft. additional shared use path to Site; 8 ft. shared use path width
2 Option 2	18	$175,926 - $263,388	" "; Parallel stalls; 12 ft. shared use path width
2 Option 3	35	$289,784 - $451,592	" "; One row 45 degrees; 13.5 ft. aisle
2 Option 4	68	$537,284 - $847,592	" "; Two rows 45 degrees; 15.5 ft. aisle
2 Option 5	22	$194,165 - $297,770	" "; One row retaining trees; 13.5 ft. aisle; 10 ft. additional shared use path width of 198 ft.
3	14	$105,000 - $168,000	$7,500 - $12,000/stall; 90-degree stalls; 18' X 9' stall; 2 rows

Figure 9: Parking Expansion Alternatives Locations



RECOMMENDED ALTERNATIVES

After an analysis of the benefits and drawbacks of the above identified parking expansion options, it is Kimley-Horn's recommendation that the various Site parties consider **Alternative 1A-1B or 2 Option 1, 3, 4, or 5** to address the combined Hotel, Golf Club, and Nordic Center parking needs discussed in this study.

Figure 10: Parking Expansion Alternatives Net Total Spaces Summary

Alternative	Net Added Spaces	Net Total Spaces							
		Summer (includes offsite)		Summer (excludes offsite)		Winter (includes offsite)		Winter (excludes offsite)	
		Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces	Including Reclaimed Spaces	Excluding Reclaimed Spaces
1A	30+	269-278+	261+	229-238+	221+	230-250+	225+	220-240+	215+
1B	88	327-336	319	287-296	279	288-308	283	278-298	273
2 Option 1	39	276-287	270	238-247	230	239-259	234	229-249	224
2 Option 2	18	257-266	249	217-226	209	218-238	213	208-228	203
2 Option 3	35	274-283	266	234-243	226	235-255	230	225-245	220
2 Option 4	68	307-316	299	267-276	259	268-288	263	258-278	253
2 Option 5	22	261-270	253	221-230	213	222-242	217	212-232	207
3	14	253-262	245	213-222	205	214-234	209	204-224	199

Notes:
Green counts meet or exceed projected parking demand (275 spaces in summer and 199 spaces in winter). Red counts do not meet projected demand.

Offsite parking = 40 spaces in summer and 10 spaces in winter.

Reclaimed spaces = 8-17 summertime stalls and 5-25 wintertime identified onsite in Parking Management Recommendations section.

Figure 10 indicates that Alternative 1A, 1B, 2 Option 1, 2 Option 3, and 2 Option 4 will more adequately address peak parking demand at the Site, particularly in summer. Modest deficits may persist if employee access to the offsite spaces is lost and/or not all the parking management recommendations that reclaim and stripe potential stalls are implemented.

The Alternative 2 options integrate with the Three Kings Drive shared use path concepts Kimley-Horn is preparing for the City in tandem with this parking study. See Attachment E for these illustrations.

Conclusions & Summary

As we have illustrated herein, there is unused parking capacity onsite at Hotel Park City that we recommend the Hotel, Nordic Center, and Golf Club bring under parking management using the steps detailed in this report.

Kimley-Horn identified an estimated existing parking need of **±275 stalls** and a deficit of approximately **±44-84 stalls** onsite during peak summertime conditions and a need of **±199 spaces** with a deficit of **±4-14 stalls** in the wintertime based on our site survey, shared parking model projections, and data provided by the Client and the Site businesses. The deficit causes drivers to park in undesignated and illegal parking areas at peak times such as during busy summer golf tournaments.

Figure 11: Projected Seasonal Peak Demand & Existing Estimated Deficits

Season	Projected Peak Demand (spaces)	Scenario	Supply (spaces)	Deficit (spaces)
Summer	275	Onsite + Offsite supply (+40 offsite spaces)	231	-44
		Onsite only	191	-84
Winter	199	Onsite + Offsite (+10 offsite spaces)	195	-4
		Onsite only	185	-14

This ongoing problem, a nuisance for residents near the Site, can be remedied with the parking resource maximization, active parking management, and optional capital expansion recommendations we have provided.

Attachments:
A. August 2022 Kimley-Horn Parking Survey
B. Summer & Winter Peak Parking Demand Model Charts
C. Hotel Park City Addition Remodel Illustrative Sketch (provided by Think Architecture)
D. Parking Expansion Alternatives 2 Options 1-5 Illustrative Sketches
E. Three Kings Drive Shared Use Path Illustrative Sketches
F. Three Kings Drive Shared Use Path High Level Engineer's Estimates
G. Golf Course Pathways Case Studies

Attachment A: August 2022 Kimley-Horn Parking Survey

Date:	Wednesday, August 17, 2022
Weather:	Sunny / Clear Skies

Parking Zone	Supply	Parking Demand			
		3PM-4PM	4PM-5PM	5PM-6PM	6PM-7PM
A (Valet)	18	7	4	4	12
A (Non-Valet)	93	72	80	84	86
B1	20	17	16	17	19
B2	22	23	23	24	29
B3	24	22	22	22	23
B4	14	14	14	14	15
C	0	0	0	0	2
D	0	2	1	4	3
E	0	0	0	0	0
F	0	0	0	0	0
G	0	0	0	0	0
H	0	0	0	0	0
Total	191	157	160	169	189

Notes:

1. Guest said parking has been much better since June meeting, mentioned employees parking off site
2. Lot B4 from 6PM-7PM, one of the counted vehicles was illegally parked in front of dumpster

Date:	Saturday, August 20, 2022
Weather:	Overcast / Rainy

Parking Zone	Supply	Parking Demand			
		10AM-11AM	11AM-12PM	12PM-1PM	1PM-2PM
A (Valet)	18	10	8	Rain, not counted	
A (Non-Valet)	93	85	81		
B1	20	19	19		
B2	22	30	26		
B3	24	22	22		
B4	14	11	11		
C	0	1	1		
D	0	2	1		
E	0	0	0		
F	0	0	0		
G	0	0	0		
H	0	0	0		
Total	191	180	169		

Notes:

1. Rain started and 12PM to 2PM was not counted
2. I was not able to tell if golf championship was still being held or not

Date:	Friday, August 26, 2022
Weather:	Sunny / Clear Skies

Parking Zone	Supply	Parking Demand			
		3PM-4PM	4PM-5PM	5PM-6PM	6PM-7PM
A (Valet)	18	5	6	6	13
A (Non-Valet)	93	80	91	77	89
B1	20	20	20	18	20
B2	22	27	28	26	30
B3	24	22	22	23	23
B4	14	13	13	11	15
C	0	0	1	1	1
D	0	2	1	5	2
E	0	0	0	0	0
F	0	0	0	0	0
G	0	1	1	1	2
H	0	1	1	0	1
Total	191	171	184	168	196

Notes:
1. Parked vehicle in area C from 5 PM to 7 PM was a motorcycle

Attachment B: Summer & Winter Peak Parking Demand Model Charts

SUMMER WEEKDAY

Land Use	Project Data		Weekday					Weekday		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 2 PM	Peak Mo Adj July	Estimated Parking Demand
Spa	6,500	sf GLA	2.90	100%	40%	1.16	ksf GLA	95%	70%	5
Employee			0.70	100%	100%	0.70		100%	80%	4
Hotel-Leisure	100	keys	1.00	75%	100%	0.75	key	70%	100%	53
Hotel Employees	100	keys	0.15	100%	100%	0.15	key	100%	100%	15
Restaurant/Lounge	7,800	sf GLA	6.67	63%	90%	3.78	ksf GLA	33%	98%	10
Meeting/Banquet (50 to 100 sq ft	8,000	sf GLA	14.00	68%	60%	5.71	ksf GLA	25%	100%	11
Restaurant/Meeting Employees	15,800	sf GLA	1.20	100%	100%	1.20	ksf GLA	100%	100%	19
Golf Course	18	holes	8.00	100%	100%	8.00	holes	100%	100%	144
Employee			0.75	100%	100%	0.75		100%	100%	14
Cross-Country Ski Course	20	acres	5.00	40%	100%	2.00	acres	100%	0%	-
Employee			0.80	100%	100%	0.80		100%	0%	-
								Customer/Visitor		223
								Employee		52
								Total		275

SUMMER WEEKEND

Land Use	Project Data		Weekend					Weekend		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 4 PM	Peak Mo Adj July	Estimated Parking Demand
Spa	6,500	sf GLA	3.20	100%	40%	1.28	ksf GLA	90%	70%	5
Employee			0.80	100%	100%	0.80		100%	80%	5
Hotel-Leisure	100	keys	1.00	75%	100%	0.75	key	75%	100%	56
Hotel Employees	100	keys	0.15	100%	100%	0.15	key	70%	100%	11
Restaurant/Lounge	7,800	sf GLA	7.67	54%	30%	1.24	ksf GLA	10%	98%	1
Meeting/Banquet (50 to 100 sq ft	8,000	sf GLA	7.30	68%	70%	3.47	ksf GLA	65%	100%	18
Restaurant/Meeting Employees	15,800	sf GLA	1.26	100%	100%	1.26	ksf GLA	100%	100%	20
Golf Course	18	holes	8.00	100%	100%	8.00	holes	90%	100%	130
Employee			1.00	100%	100%	1.00		100%	100%	18
Cross-Country Ski Course	20	acres	5.00	40%	100%	2.00	acres	90%	0%	-
Employee			0.80	100%	100%	0.80		100%	0%	-
								Customer/Visitor		210
								Employee		54
								Total		264

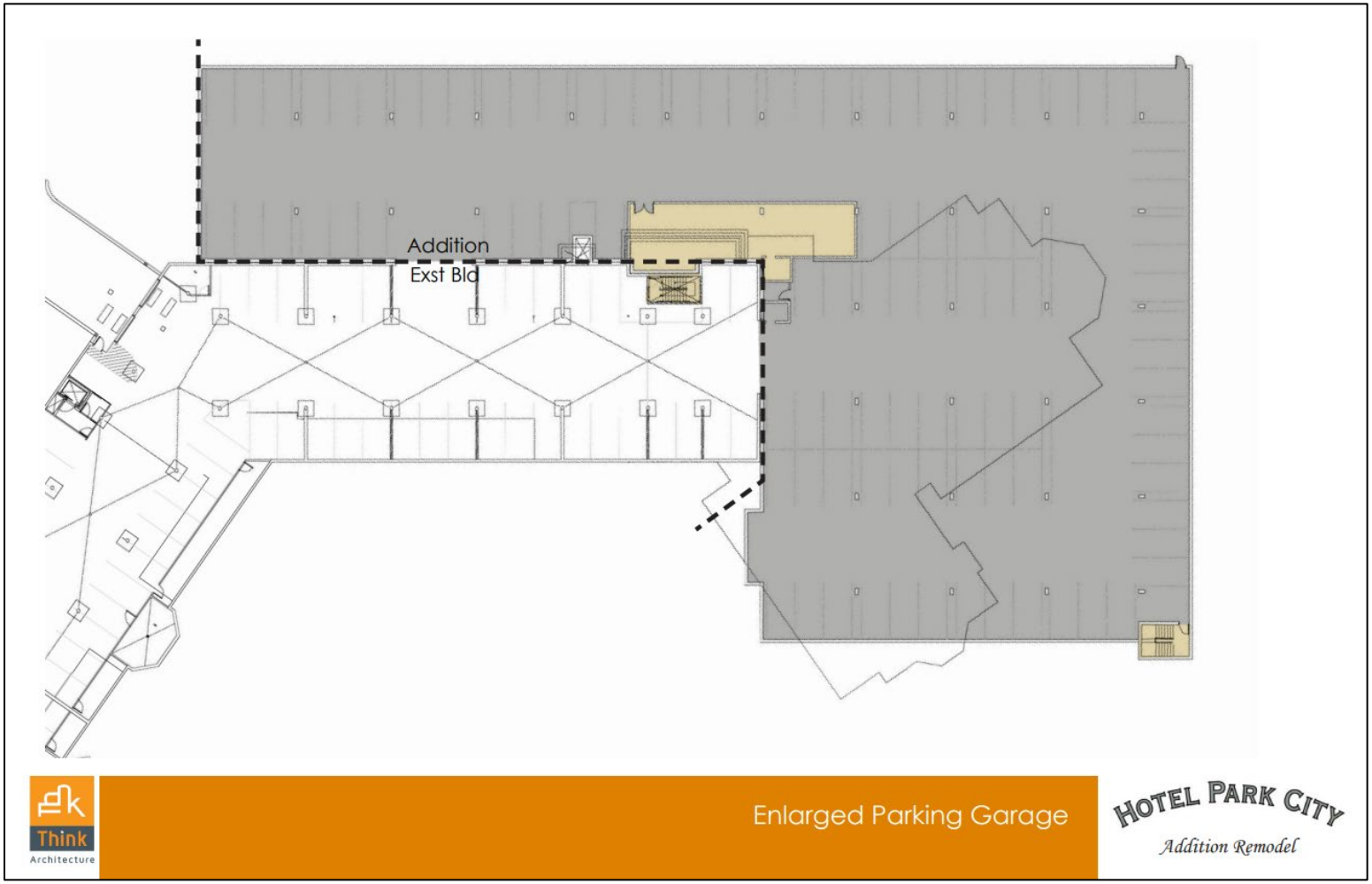
WINTER WEEKDAY

Land Use	Project Data		Weekday					Weekday		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 5 PM	Peak Mo Adj Late December	Estimated Parking Demand
Spa	6,500	sf GLA	2.90	100%	40%	1.16	ksf GLA	85%	85%	5
Employee			0.70	100%	100%	0.70		100%	95%	5
Hotel-Leisure	100	keys	1.00	65%	100%	0.65	key	80%	100%	52
Hotel Employees	100	keys	0.15	100%	100%	0.15	key	70%	100%	11
Restaurant/Lounge	7,800	sf GLA	6.67	63%	90%	3.78	ksf GLA	30%	95%	9
Meeting/Banquet (50 to 100 sq ft	8,000	sf GLA	14.00	68%	60%	5.71	ksf GLA	100%	100%	46
Restaurant/Meeting Employees	15,800	sf GLA	1.20	100%	100%	1.20	ksf GLA	100%	100%	19
Golf Course	18	holes	8.00	100%	100%	8.00	holes	70%	0%	-
Employee			0.75	100%	100%	0.75		100%	0%	-
Cross-Country Ski Course	20	acres	5.00	40%	100%	2.00	acres	90%	100%	36
Employee			0.80	100%	100%	0.80		100%	100%	16
								Customer/Visitor		148
								Employee		51
								Total		199

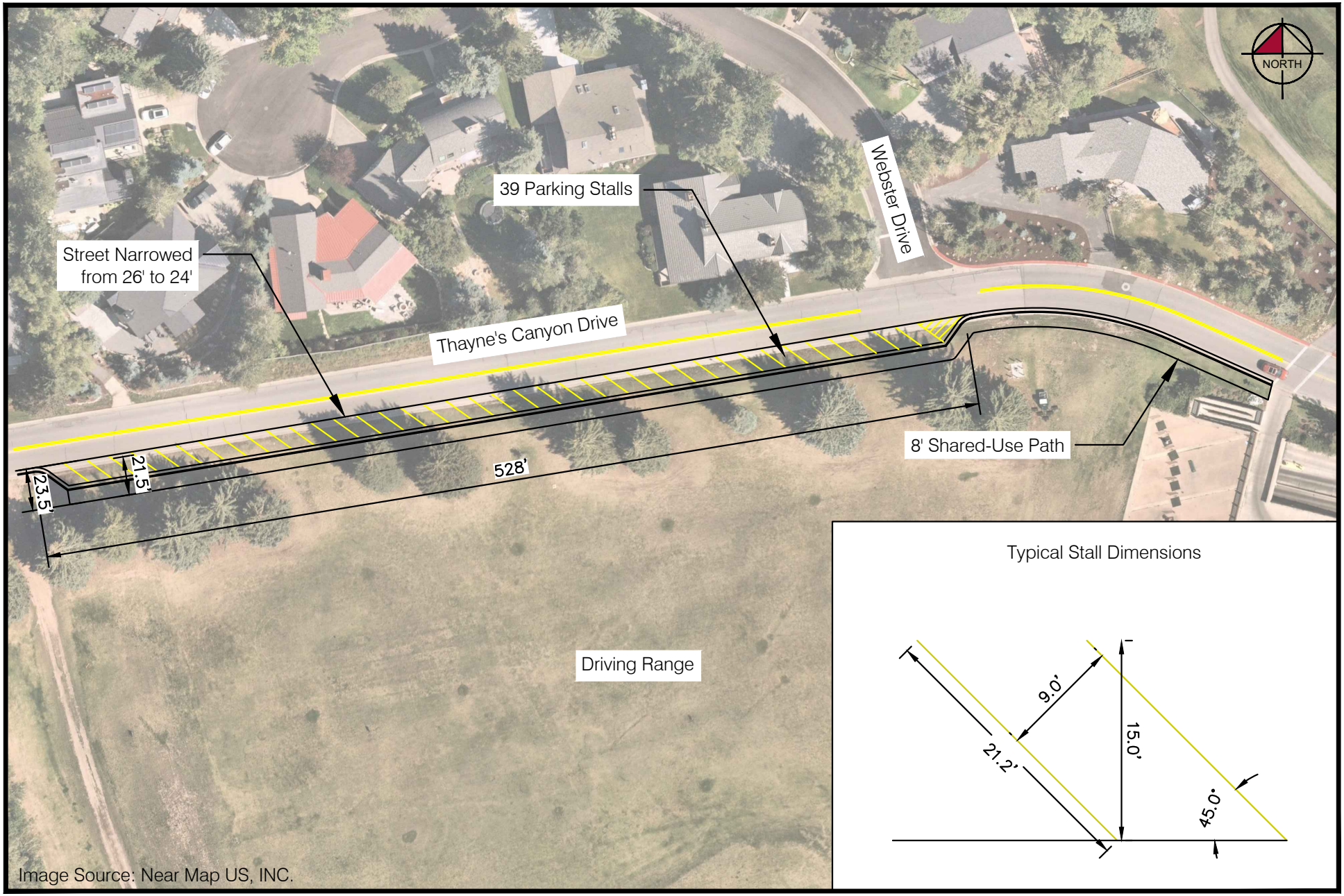
WINTER WEEKEND

Land Use	Project Data		Weekend					Weekend		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 5 PM	Peak Mo Adj Late December	Estimated Parking Demand
Spa	6,500	sf GLA	3.20	100%	40%	1.28	ksf GLA	85%	85%	6
Employee			0.80	100%	100%	0.80		95%	95%	5
Hotel-Leisure	100	keys	1.00	65%	100%	0.65	key	80%	100%	52
Hotel Employees	100	keys	0.15	100%	100%	0.15	key	70%	100%	11
Restaurant/Lounge	7,800	sf GLA	7.67	54%	30%	1.24	ksf GLA	30%	95%	3
Meeting/Banquet (50 to 100 sq ft	8,000	sf GLA	7.30	68%	70%	3.47	ksf GLA	100%	100%	28
Restaurant/Meeting Employees	15,800	sf GLA	1.26	100%	100%	1.26	ksf GLA	100%	100%	20
Golf Course	18	holes	8.00	100%	100%	8.00	holes	70%	0%	-
Employee			1.00	100%	100%	1.00		100%	0%	-
Cross-Country Ski Course	20	acres	5.00	40%	100%	2.00	acres	90%	100%	36
Employee			0.80	100%	100%	0.80		100%	100%	16
								Customer/Visitor		125
								Employee		52
								Total		177

Attachment C: Hotel Park City Addition Remodel – Enlarged Parking Garage Illustrative Sketch (Provided by Think Architecture)

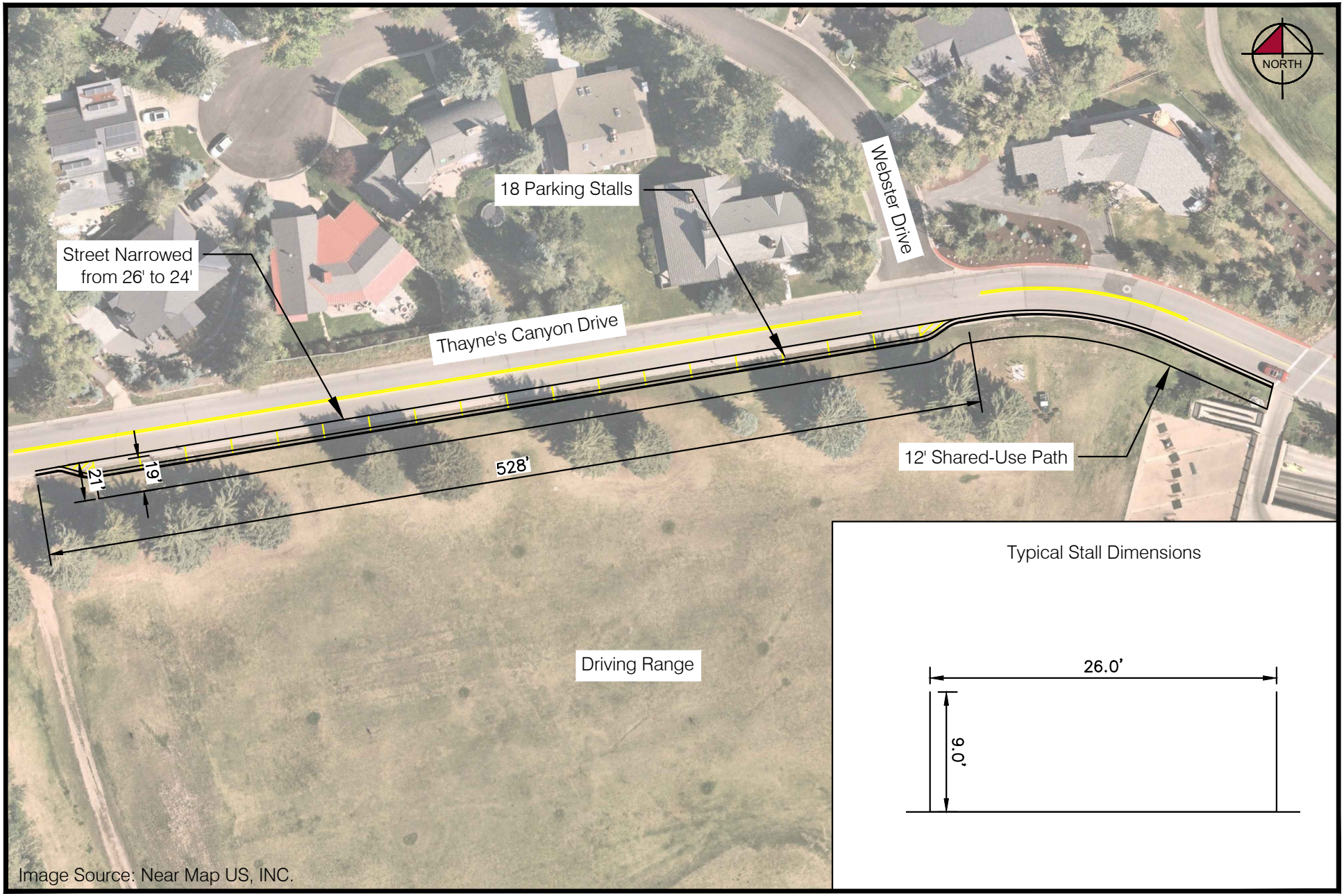


Attachment D: Parking Expansion Alternative 2 Options 1-5 Illustrative Sketches



Kimley»Horn

Option 1
Fourty-Five Degree Street Parking Concept



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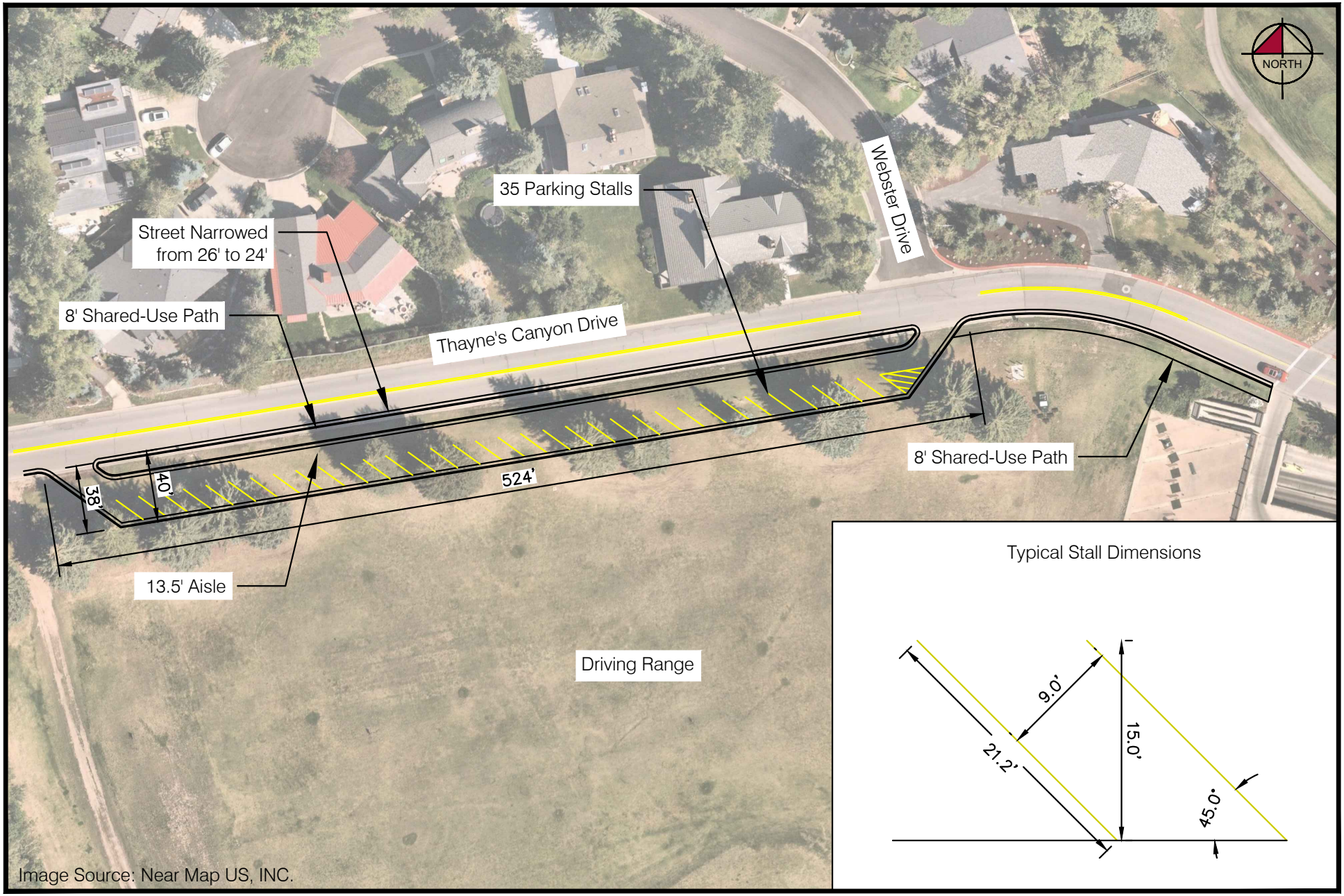
Option 2
Parallel Street Parking Concept



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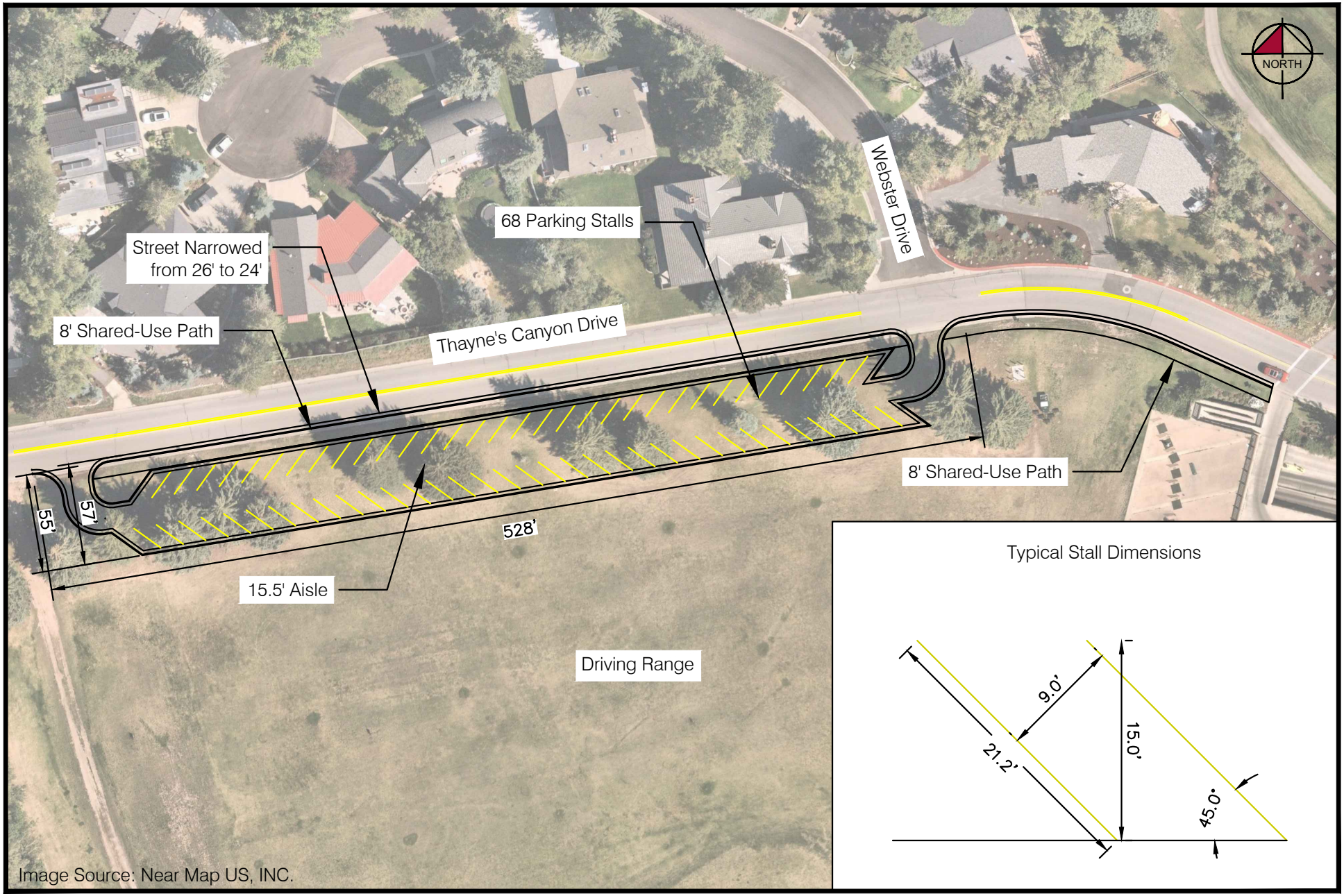
Option 3
Single Row Parking Concept



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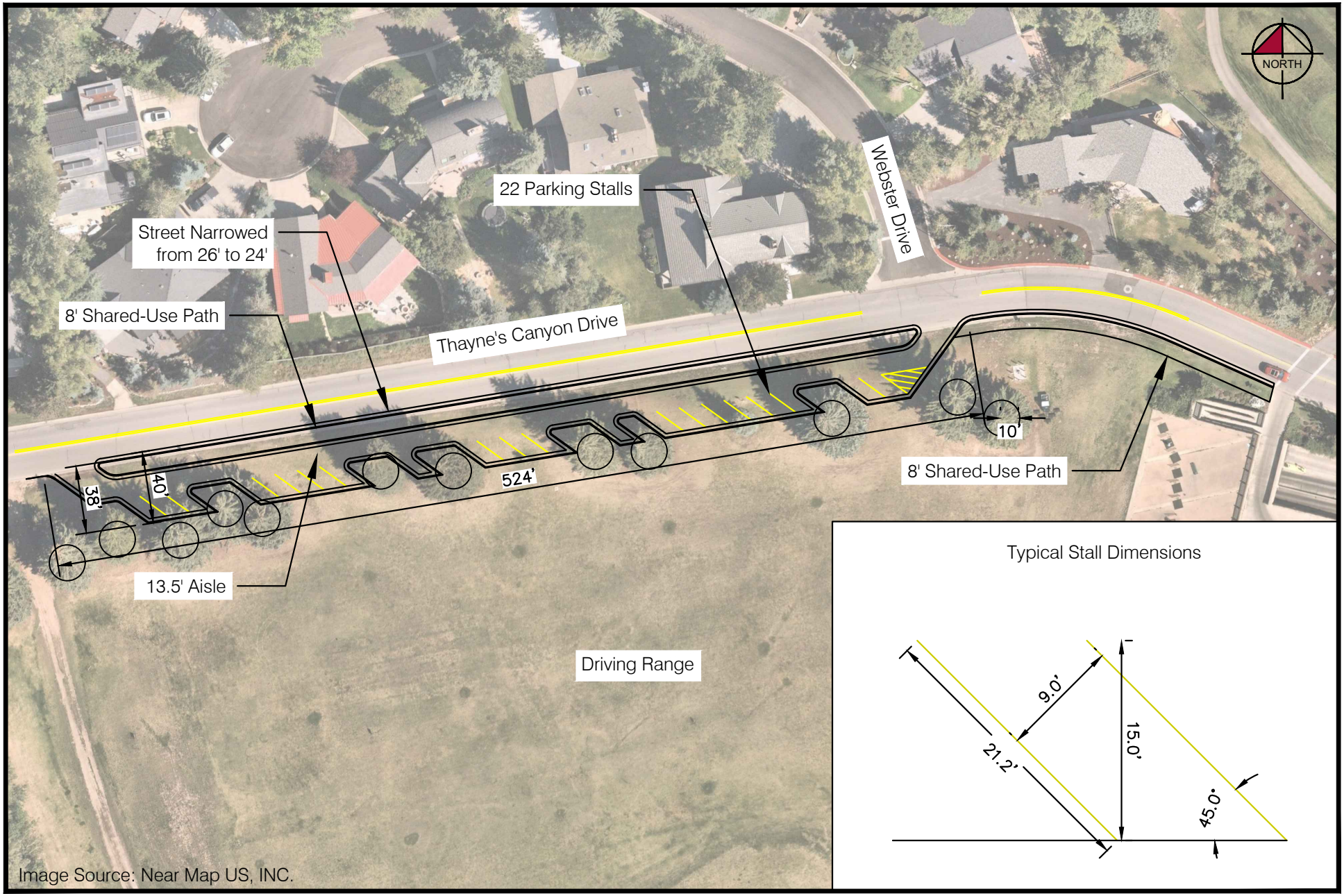
Option 4
Double Row Parking Concept



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Option 5

Single Row Parking with Tree Cut-outs Concept

Attachment E: Three Kings Drive Shared Use Path Illustrative Sketches

OPTION 1 - EAST SIDE
OPTION 2 - WEST SIDE
OPTION 3 - EAST SIDE + GOLF COURSE
EXISTING ROW LINES
STRIPING UPDATES

POTENTIAL IMPACTS

	Potential ROW Acquistions/TCEs	Driveway Impacts	Major Crossings	Minor Crossings	Culvert/Bridge Modifications	Length of Potential Walls (ft)	Length of Curb Bulb-Outs (ft)
Option 1	6	13	2	2	2	509	2651
Option 2	10	10	7	2	2	1316	771
Option 3	2	5	2	2	1	380	1547

PRELIMINARY
NOT FOR CONSTRUCTION

Kimley»Horn

THREE KINGS SHARED-USE PATH CONCEPTS

11/14/2022

SHEET 1

Kimley»Horn

THREE KINGS SHARED-USE PATH CONCEPTS

11/14/2022

SHEET 2

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THREE KINGS SHARED-USE PATH CONCEPTS

11/14/2022

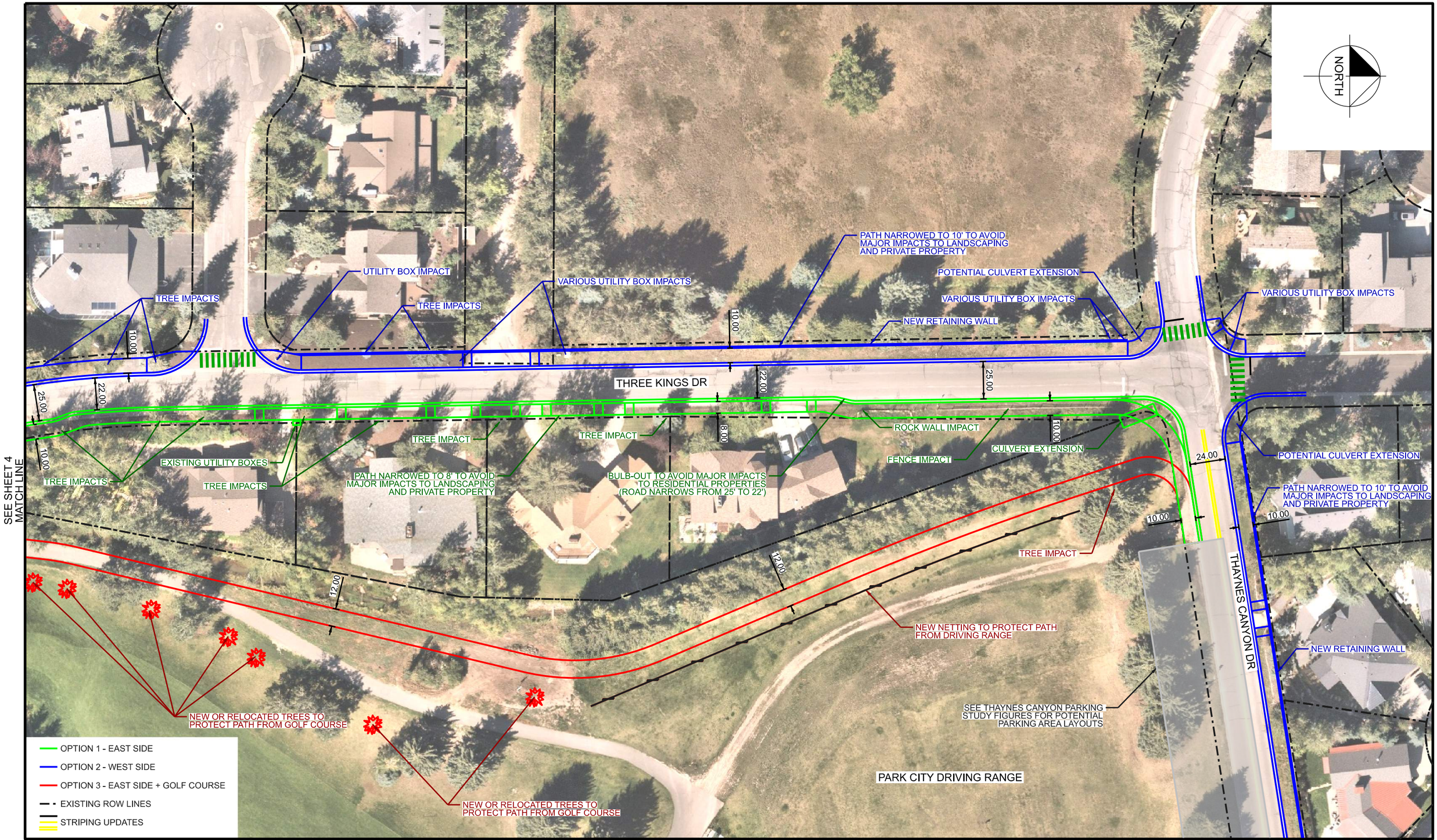
SHEET 3

Kimley»Horn

THREE KINGS SHARED-USE PATH CONCEPTS

11/14/2022

SHEET 4



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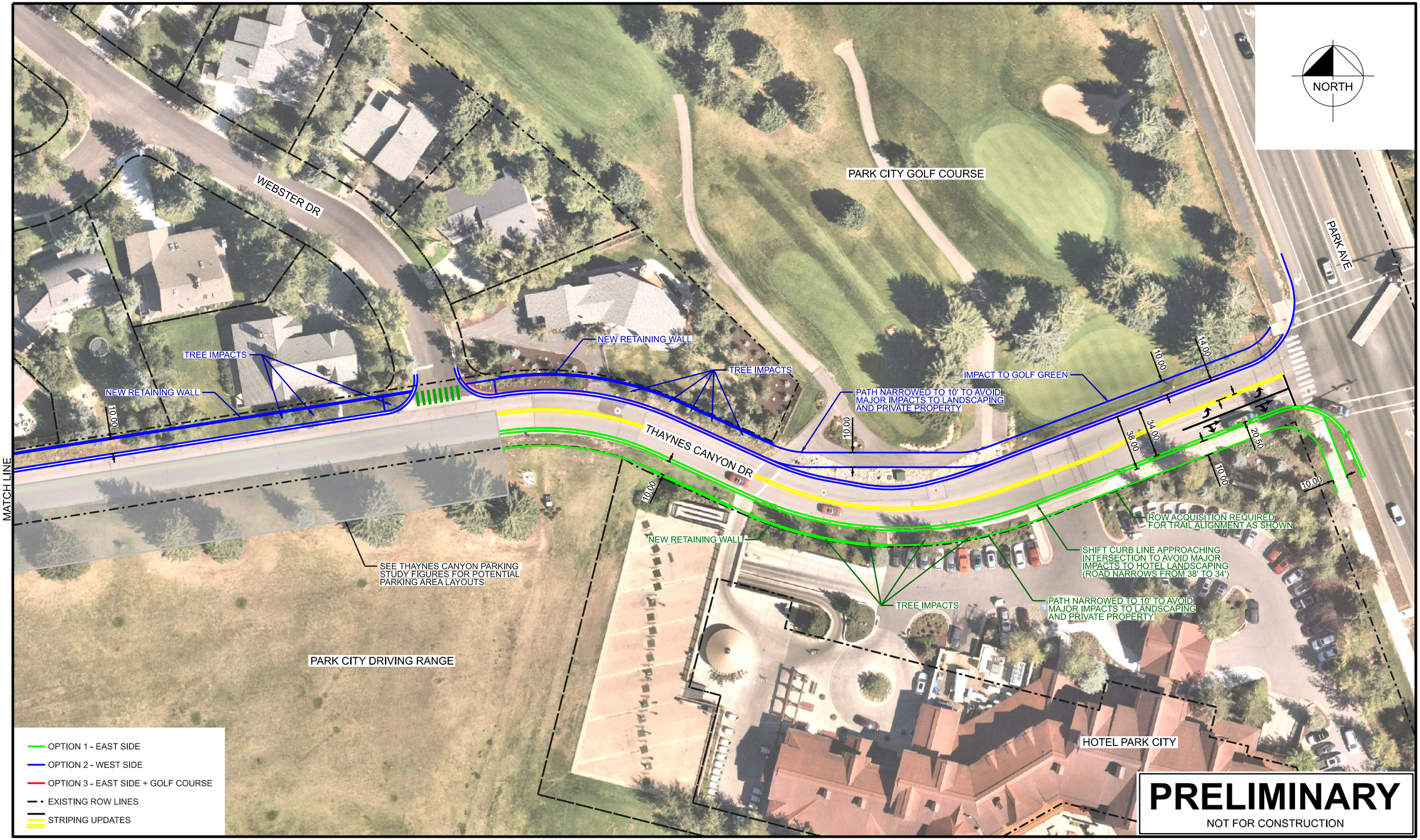
THREE KINGS SHARED-USE PATH CONCEPTS

PRELIMINARY

NOT FOR CONSTRUCTION

11/14/2022

SHEET 5



Kimley»Horn

THREE KINGS SHARED-USE PATH CONCEPTS

11/14/2022

SHEET 6

Attachment F: Three Kings Drive Shared Use Path High Level Engineer's Estimates

Option 1 - East Side

Item	Quantity	Unit of Measure	Unit Cost	Total Cost	Notes
ROADWAY					
LF of Trail	5,896	FT	$ 155.00	$ 913,804	Unit cost includes curb and gutter reconstruction (2'), roadway reconstruction, and concrete pathway (10' wide)
Retaining wall	2,543	SF	$ 120.00	$ 305,140	Height x Length (Assume 5' tall)
Driveway	13	EA	$ 450.00	$ 5,850	Assumed 6" thick concrete driveway (300 SQ FT EACH)
ROW strip take	777	SF	$ 60.00	$ 46,628	Total area of required ROW takes based on preliminary designs - does not include temporary construction easements
New Tree	-	EA	$ 500.00	$ -	
Major Crossing	2	EA	$ 10,900.00	$ 21,800	See calc table
Minor Crossing	2	EA	$ 10,400.00	$ 20,800	See calc table
Fence/Netting	-	EA	$ 3,000.00	$ -	Unit price assumes 20' wide by 100' tall sections
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 1				**$ 1,314,021**	
DRAINAGE					
Reconstruct Drainage Structure	1	EA	$ 5,000.00	$ 5,000	
Culvert Extension	304	SF	$ 50.00	$ 15,218	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 2				**$ 20,218**	
			Direct Subtotal	**$ 1,334,239**	
			Additional Calculated Construction Cost:		
			TESC (1%)	$ 13,342	
			MOT (2.5%)	$ 33,356	
			QA/QC (1.5%)	$ 20,014	
			Total Direct Cost	**$ 1,400,951**	
			Indirect Construction Cost:		
			Contractor OH/Markup (20%)	$ 280,190	
			General Escalation (5%)	$ 70,048	
			Total Indirect Construction Cost:	**$ 350,238**	
			Other Indirect Costs:		
			Environmental (2%)	$ 28,019	
			Design (10%)	$ 140,095	
			Total Other Indirect Cost:	**$ 168,114**	
			Contingency (20%)	**$ 280,190**	Cost increases, Earthwork, Unidentified Items, Utility Impacts
			Total Cost	**$ 2,199,493**	

Calculations

Cost of LF of Trail

	TRAIL	CG	ROAD		
			Excavation	UTBC	HMA
unit	sq yd	ft	cu yd	cu yd	ton
unit price	80.00	33.00	37.00	50.00	95.00
qnty	1.11	1.00	0.64	0.02	0.05
cost	88.89	33.00	23.68	1.23	4.69
sum	151.49				

Cost of Driveway

	Driveway
unit	sq yd
unit price	13.00
qnty	33.00
cost	429.00

Cost of Crossings

	Major		Minor	
	Stripe	Ped Ramp	Stripe	Ped Ramp
unit	ea	ea	ea	ea
unit price	100.00	5,000.00	100.00	5,000.00
qnty	9.00	2.00	4.00	2.00
cost	900.00	10,000.00	400.00	10,000.00
sum	10,900.00		10,400.00	

Option 2 - West Side

Item	Quantity	Unit of Measure	Unit Cost	Total Cost	Notes
ROADWAY					
LF of Trail	6,021	FT	$ 155.00	$ 933,273	Unit cost includes curb and gutter reconstruction (2'), roadway reconstruction, and concrete pathway (10' wide)
Retaining wall	6,581	SF	$ 120.00	$ 789,737	Height x Length (Assume 5' tall)
Driveway	10	EA	$ 450.00	$ 4,500	Assumed 6" thick concrete driveway (300 SQ FT EACH)
ROW strip take	2,032	SF	$ 60.00	$ 121,923	Total area of required ROW takes based on preliminary designs - does not include temporary construction easements
New Tree	-	EA	$ 500.00	$ -	
Major Crossing	7	EA	$ 10,900.00	$ 76,300	See calc table
Minor Crossing	2	EA	$ 10,400.00	$ 20,800	See calc table
Fence/Netting	-	EA	$ 3,000.00	$ -	Unit price assumes 20' wide by 100' tall sections
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 1				**$ 1,946,533**	
DRAINAGE					
Reconstruct Drainage Structure	1	EA	$ 5,000.00	$ 5,000	
Culvert Extension	246	SF	$ 50.00	$ 12,310	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 2				**$ 17,310**	
			Direct Subtotal	**$ 1,963,843**	
Additional Calculated Construction Cost:					
TESC (1%)				$ 19,638	
MOT (2.5%)				$ 49,096	
QA/QC (1.5%)				$ 29,458	
Total Direct Cost				**$ 2,062,035**	
Indirect Construction Cost:					
Contractor OH/Markup (20%)				$ 412,407	
General Escalation (5%)				$ 103,102	
Total Indirect Construction Cost:				**$ 515,509**	
Other Indirect Costs:					
Environmental (2%)				$ 41,241	
Design (10%)				$ 206,204	
Total Other Indirect Cost:				**$ 247,444**	
Contingency (20%)				**$ 412,407**	Cost increases, Earthwork, Unidentified Items, Utility Impacts
Total Cost				**$ 3,237,395**	

Unit Cost Calculations

Cost of LF of Trail

	TRAIL	CG	ROAD		
			Excavation	UTBC	HMA
unit	sq yd	ft	cu yd	cu yd	ton
unit price	80.00	33.00	37.00	50.00	95.00
qnty	1.11	1.00	0.77	0.02	0.05
cost	88.89	33.00	28.50	1.23	4.69
sum	156.31				

Cost of Driveway

	Driveway
unit	sq yd
unit price	13.00
qnty	33.33
cost	433.29

Cost of Crossings

	Major		Minor	
	Stripe	Ped Ramp	Stripe	Ped Ramp
unit	ea	ea	ea	ea
unit price	100.00	5,000.00	100.00	5,000.00
qnty	9.00	2.00	4.00	2.00
cost	900.00	10,000.00	400.00	10,000.00
sum	10,900.00		10,400.00	

Option 3 - East Side + Golf Course

Item	Quantity	Unit of Measure	Unit Cost	Total Cost	Notes
ROADWAY					
LF of Trail (Roadside)	4,148	FT	$ 155.00	$ 642,871	Unit cost includes curb and gutter reconstruction (2'), roadway reconstruction, and concrete pathway (10' wide)
LF of Trail (Golf Course)	984	FT	$ 110.00	$ 108,264	Unit cost includes concrete pathway (12' wide)
Retaining wall	380	SF	$ 120.00	$ 45,551	Height x Length (Assume 5' tall)
Driveway	3	EA	$ 450.00	$ 1,350	Assumed 6" thick concrete driveway (300 SQ FT EACH)
ROW strip take	412	SF	$ 60.00	$ 24,715	Total area of required ROW takes based on preliminary designs - does not include temporary construction easements
New Tree	11	EA	$ 500.00	$ 5,500	
Major Crossing	2	EA	$ 10,900.00	$ 21,800	See calc table
Minor Crossing	2	EA	$ 10,400.00	$ 20,800	See calc table
Fence/Netting	18	EA	$ 3,000.00	$ 54,000	Unit price assumes 20' wide by 100' tall sections
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 1				**$ 924,852**	
DRAINAGE					
Reconstruct Drainage Structure	1	EA	$ 5,000.00	$ 5,000	
Culvert Extension	100	SF	$ 50.00	$ 5,000	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
			$ -	$ -	
SUBTOTAL 2				**$ 10,000**	
			Direct Subtotal	**$ 934,852**	
			Additional Calculated Construction Cost:		
			TESC (1%)	$ 9,349	
			MOT (2.5%)	$ 23,371	
			QA/QC (1.5%)	$ 14,023	
			Total Direct Cost	**$ 981,595**	
			Indirect Construction Cost:		
			Contractor OH/Markup (20%)	$ 196,319	
			General Escalation (5%)	$ 49,080	
			Total Indirect Construction Cost:	**$ 245,399**	
			Other Indirect Costs:		
			Environmental (2%)	$ 19,632	
			Design (10%)	$ 98,159	
			Total Other Indirect Cost:	**$ 117,791**	
			Contingency (20%)	**$ 196,319**	Cost increases, Earthwork, Unidentified Items, Utility Impacts
			Total Cost	**$ 1,541,103**	

Calculations

Cost of LF of Trail (roadside)

	TRAIL	CG	ROAD		
			Excavation	UTBC	HMA
unit	sq yd	ft	cu yd	cu yd	ton
unit price	80.00	33.00	37.00	50.00	95.00
qnty	1.11	1.00	0.77	0.02	0.05
cost	88.89	33.00	28.50	1.23	4.69
sum	156.31				

Cost of LF of Trail (Golf Course)

	TRAIL	CG	ROAD		
			Excavation	UTBC	HMA
unit	sq yd	ft	cu yd	cu yd	ton
unit price	80.00	0.00	0.00	0.00	0.00
qnty	1.33	0.00	0.00	0.00	0.00
cost	106.67	0.00	0.00	0.00	0.00
sum	106.67				

Cost of Driveway

	Driveway
unit	sq yd
unit price	13.00
qnty	33.33
cost	433.29

Cost of Crossings

	Major		Minor	
	Stripe	Ped Ramp	Stripe	Ped Ramp
unit	ea	ea	ea	ea
unit price	100.00	5,000.00	100.00	5,000.00
qnty	9.00	2.00	4.00	2.00
cost	900.00	10,000.00	400.00	10,000.00
sum	10,900.00		10,400.00	

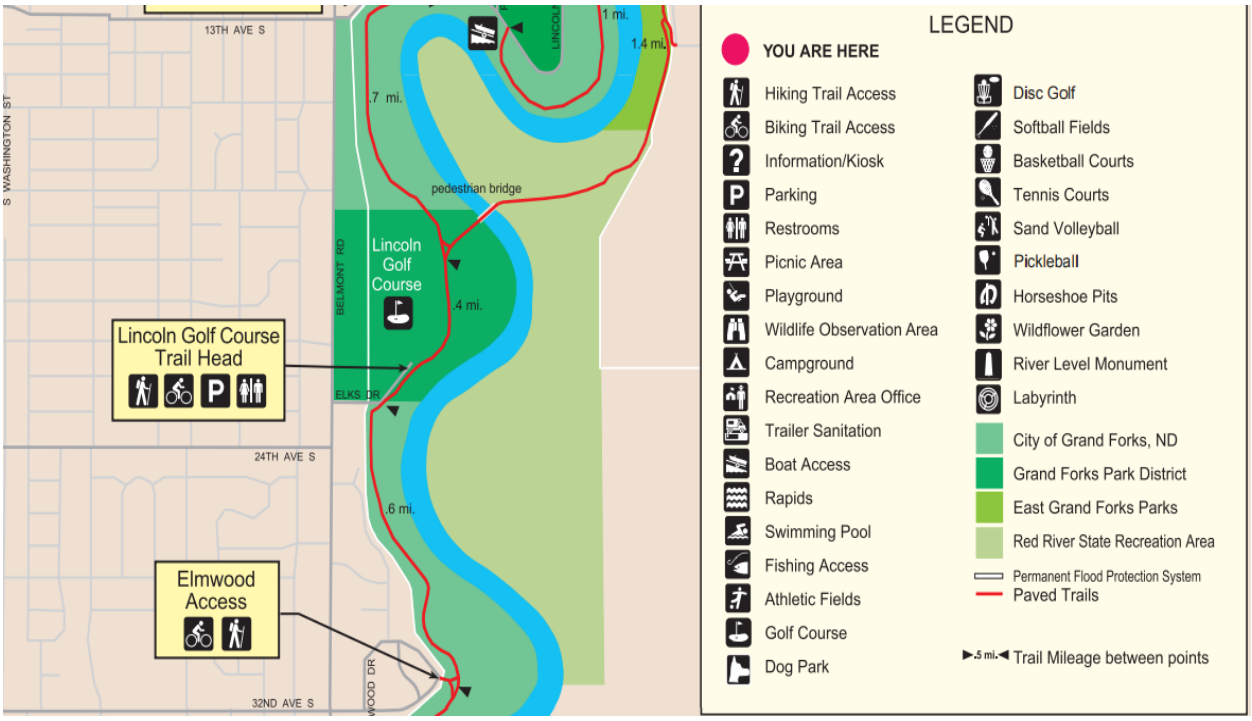
Attachment G: Golf Course Pathways Case Studies

Lincoln Golf Course

The Greenway- Grand Forks, ND

http://www.greenwayggf.com/uploads/2/0/1/8/20183519/finalgreenwaymap_april2012.pdf

In 2005, the City of Grand Forks and Corps of Engineers built a multi-use trail around and through Lincoln golf course. The Grand Forks Greenway Trail is riverward of the course getting as close as 50 ft. to one of the tee boxes. Segments of the trail through the course were constructed to connect to other parts of recreational areas where the greenway follows the river. Protective fencing (from golf balls) was not included in the design. Golfers do not need to cross the trail any area although they do go up and over an earthen levee built by the Corps of Engineers. There has been no known economic impact to the golf course as a result of the trail although the Park District has deemed the clubhouse as a trailhead. This 1/2-mile trail segment that goes through the course ties into about 20 miles of trail along the Red River in Grand Forks, ND and East Grand Forks, MN.



Regents Glen Golf Club
York County Heritage Trail, York County, PA

The York County (PA) Heritage Rail Trail Runs through the Regents Glen Golf Club. There are nine holes on each side of the trail. The golf course was under construction at the same time as trail construction. The trail receives about 300,000 user visits annually. There is no evidence that trail users "disturb" the golfers and there haven't been any accidents or injuries reported. Golf carts must yield to trail users and stop signs are located on the golf cart path on either side of trail. Crossing is "one way" only and golf course maintenance staff also cross the trail and occasionally travel up or down the trail. The golf club is not aware of any positive or negative economic impacts occurring from the interaction of the trail and the golf course. This trail continues before and after the golf course. Facilities along the trail include benches, picnic tables and restrooms. Communities along the trail offer more extensive services and facilities. Trail and restrooms are ADA accessible. While the trail is not fenced, there is natural buffer between the trail and the greens of the golf course.

Mt. Si Golf Course, Snoqualmie, WA
Snoqualmie Valley bike and pedestrian trail

The Snoqualmie Valley bike and pedestrian trail runs through the Mt. Si Golf Course. The section of the trail through the golf course has netting on both sides of the trail to protect against golf balls. The trail is a straight line that runs approximately half a mile through the golf course. The trail is a packed gravel pathway with the golf course sitting on both sides of the trail. Entrance to the trail is on the north and south sides of the course. It is not particularly accessible from the actual golf course due to the protective netting extending multiple feet into the air. The full trail is 31 miles in length from Snoqualmie to Duvall.

San Ramon Golf Club, San Ramon, CA
Iron Horse Regional Trail

This paved trail through the San Ramon Golf Course is meant for hikers, bikers and horseback riders. The pathway extends through the center of the golf course for about half a mile before entering into residential housing on each end of the golf course. Sections of the path have high fences paralleling the path, and other sections have a fully enclosed fence that protect the path from above and on the sides with periodic openings for golfers to walk through. While there are places for golf carts to cross this path, golf carts are not permitted on the pathway. The completed Iron Horse Regional Trail, as of 2014, spans a distance of 32 miles and connects residential and commercial areas, business parks, schools, public transportation (BART, County Connection), open space and parks, regional trails, and community facilities

Exhibit B- *Development Background and Agreements Specific to Parking*

In 1979 the land for a future municipal golf course was purchased by the City from Greater Park City Company (GPCC). A parcel, known as the 'Hotel Parcel' located on the southwest corner of Park Avenue and Thaynes Canyon Drive was retained by GPCC for a future development. The Hotel Parcel remained with GPCC as several development proposals were brought forward from 1979-1987.

1987 Agreement Golf Course Hotel

The Development Agreement was approved in August 1987 (known as Agreement Golf Course Hotel) which superseded all previous agreements.

- The 1987 Agreement, granted 68 residential UE, 15 commercial UE, and an allowance of 5% for hotel support commercial in accordance with the Land Management Code in effect at the time. The 1987 Agreement included a requirement that the hotel provide 25 surface parking spaces for golf.

1997 Development Agreement Golf Course Hotel MPD

On December 18, 1996, the Planning Commission approved a subsequent Master Planned Development for the Golf Course Hotel. Due to conditions of the MPD approval, certain amendments were necessary to the 1987 Agreement. A Development Agreement was subsequently approved on July 30, 1997, which serves as the current Development Agreement Golf Course Hotel MPD. Amendments relevant to parking were:

- A total of 210 parking spaces were required to be constructed under a 'shared parking' plan, with the City contributing 48% of the cost of parking construction and use. (Total City contribution $1,056,000)
- The property was rezoned from RD to RD-MPD and the golf course was re-zoned to ROS to address the density transfers that occurred with the MPD under the 1987 Agreement.

In the June 26, 1997 Council Minutes (page 15), City Council expressed concern about insufficient parking. Staff was concerned about parking not being over-built. The Applicant/Developer attorney, Tom Clyde, acknowledged that there may be "peak day problems, but both parties are better off than with old agreement (where only 25 spaces were to be provided for golf)."

The 1997 Agreement included a clause whereby the Applicant could request of the City an easement for additional underground parking, under the Golf Course driving rangeby January 1, 2003 and to commence construction of the additional parking within one year of grant of easement. The applicant did not make a request for an easement by the January 1, 2003 date and the option for grant of easement expired.

Construction of Park City Hotel

Construction commenced on the hotel and final certificates of occupancy were issued for Building A by December 2004. Construction of the cottages commenced in 2005 and final certificates of occupancy were issued in 2007.

Recordation of Condominium Plats

A condominium plat for Building A, memorializing constructed units, commercial, support commercial, meeting space as well as identifying private, common and limited common areas was recorded at Summit County on October 7, 2004. The first supplemental condominium plat for the cottages was recorded on February 2, 2006. Several interim condominium plat amendments were approved and recorded with the latest recorded on April 1, 2010.

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Planning
Item Type: Staff Report
Agenda Section: COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF

Subject:
Community Resources for Transient Use Impacts

Suggested Action:

Attachments:
Transient Use Community Resources Staff Report
Exhibit A: 2017 Transient Room Tax Staff Report

City Council
Staff Communication

Subject: **Transient Uses and Community Resources**
Authors: **Building, Economic Development, Finance, Housing, Parking, Planning, and Police**
Date: **July 13, 2023**
Type of Item: **Informational**

Summary
Pursuant to Council direction on April 27, 2023 (Minutes, p. 13), this Staff Communication provides an update regarding resources related to transient use impacts in residential neighborhoods (including timeshares, private residence clubs, and fractional use) available to community members, outlining information on nightly rentals, complaint processes for disruptive properties in residential neighborhoods regardless of the status as a nightly rental, timeshare, private residence club, or fractional use, and updates to lodging parking permits.

The Staff Communication addresses:

- Park City nightly rental land use regulations and enforcement limitations imposed by the state
- Nightly rental tracking and licensing
- Complaint process
- Affordable deed restrictions
- Updates regarding the seven-day lodging parking permit
- Transient Room Tax information

As a resort community, Park City has worked to balance the sometimes-competing interests of primary resident neighborhoods with transient uses. In the past 15 years, developing technology, such as online listings for nightly rentals, increased opportunities for property owners. The 2014 General Plan recommends evaluating the impacts of nightly rentals by directing them to resort neighborhoods and prohibiting them in primary resident neighborhoods. However, as outlined below, in 2017 the Utah Legislature prohibited local enforcement authority's use of online listing for enforcement, which presents challenges with nightly rental compliance.

On January 4, 2018, the City Council reviewed a nightly rental market assessment that the City requested in partnership with the Park City Chamber & Visitors Bureau and Summit County (Staff Report, p. 8; Minutes, p. 2). The market assessment concluded nightly rentals had pervasive impacts on resort communities, both positive and negative, and many nightly rentals operate without a valid business license. To protect primary resident neighborhoods despite increasing threats of further state preemption, the City has implemented resources for the community to encourage nightly rental licensing and compliance with required regulations, as well as implementing a system for tracking

disruptive properties.

On December 17, 2020, the City Council conducted a work session and provided input on nightly rental tracking, online resources for community members to file complaints, updates to the seven-day lodging parking permit, and community outreach to encourage property owners to obtain a nightly rental business license (Staff Report; Minutes, p. 1).

(I) Park City Nightly Rental Land Use Regulations

Over the years, the City has worked to create a balance between primary residents and nightly rentals. One of the core values identified in the General Plan is *Sense of Community*. Goal 7 of the General Plan is to create a diversity of primary housing opportunities that address the changing needs of residents, and Objective 7C is to focus future nightly rentals in resort neighborhoods – near Park City Mountain Resort and Deer Valley. Community Planning Strategy 11.4 recommends restricting nightly rentals in primary residential neighborhoods.

Nightly rentals are allowed in most Zoning Districts and are only prohibited in the Single-Family,[1] Recreation and Open Space, Public Use Transition, and Community Transition Zoning Districts. Nightly Rentals require a Conditional Use Permit in the Historic Residential Low – Density Zoning District with five potential nightly rentals in the Lower Rossie Hill subzone and a maximum of 12 in the King Road/Sampson Avenue/Ridge Avenue subzone. In 2015, the residents of the McHenry Hill Historic Residential Low – Density Zoning District subzone petitioned the City Council to amend the Land Management Code (LMC) to prohibit nightly rentals in their area, and on November 5, 2015, the City Council approved their request and adopted Ordinance No. 15-44.

In total, seven subdivisions within the Residential Development Zoning District petitioned the City Council to amend the LMC to prohibit nightly rentals in their subdivisions. The City Council approved each request, and as a result, nightly rentals are prohibited in the April Mountain, Mellow Mountain Estates, Meadows Estates Phase 1A and 1B, Fairway Meadows, Hidden Oaks at Deer Valley Phases 2 and 3, Chatham Crossing, and West Ridge Subdivisions (see Land Management Code Section 15-2.13-2(A)(6), footnote 3). In addition to these requests, some homeowner associations prohibit nightly rentals through their Covenants, Conditions, and Restrictions (CC&Rs).

While the City may regulate nightly rentals through zoning, the State of Utah restricts municipal enforcement of nightly rental violations. As stated, in 2017, the Utah Legislature passed House Bill 253, enacted in Utah Code Section 10-8-85.4(2), prohibiting municipalities from enacting or enforcing an ordinance that prohibits an individual from listing or offering a nightly rental on a website, or to fine, charge, prosecute, or otherwise punish an individual solely for the act of listing or offering a nightly rental on a website.

Despite our intense lobbying efforts, the efforts of the Utah League of Cities and Towns,

[1] With one exception: allowed within the Prospector Village Subdivision.

Utah Association of Counties, and the extensive efforts of several other severely impacted communities (Moab, St. George, Springdale, Salt Lake City/County, etc.), House Bill 253 passed with overwhelming support and little debate. As a result of the additional limitations imposed by the state, the City is limited in compliance measures, mainly through nightly rental business licensing.

The business license regulations outlined in Municipal Code of Park City Section 4-5-3 *Regulation of Nightly Rentals* require the following from those operating a nightly rental:

- Snow removal during winter months for safe access to the building and parking
- Summer yard maintenance
- Structural maintenance and upkeep
- Regular trash collection
- Housekeeping services
- Occupancy compliance
- Noise Ordinance compliance
- A designated responsible party who resides within a one-hour drive of the property and is available by phone 24 hours a day

The City works with a consultant to track nightly rental listings, to obtain compliance with business license requirements, and to provide community support regarding complaints, outlined below.

(II) Nightly rental tracking and licensing

Due to the state restrictions regarding nightly rental compliance, the City entered into a contract with GovOS in 2021 to provide data mining technology that gathers details from nightly rental listings. Listings are matched to Summit County property records, and a compliance letter encouraging business license compliance and a blank application are sent to unlicensed property owners.

As part of the business license application process, the City requires the applicant provide their property management company and/or the name, address, and telephone number of a local responsible party who is available by telephone 24 hours per day. Additionally, all nightly rentals must pass a business license inspection from the Building Department. The Building Department evaluates each property for compliance with life/safety standards identified in the International Fire Code, International Building Code, Housing Code, and the Abatement of Dangerous Building Code.

Park City remains one of the few Utah municipalities with an extensive nightly rental licensing and compliance program. The main items reviewed are:

- Emergency egress from the property, including sleeping rooms
- Minimum square footage requirements
- Restroom facilities
- Kitchen areas

- Fire extinguishers
- Parking stalls
- Lock out units
- Emergency access

Inspections are performed after receiving a license application. If an inspection does not pass initially, a reinspection is required. Additionally, the Planning Department reviews business license applications to verify compliance with zoning. Once the Building and Planning Departments approve an application, the applicant pays the applicable fees and is provided with a license to operate.

(III) Complaint process and history of complaints[2]

In addition to the proactive compliance letters sent to those listing their property online without a business license, the City's contract with GovOS includes a nightly rental hotline and online complaint portal. The hotline is available 24 hours a day, 7 days a week. Since launching the complaint system in July 2022, the City received 19 complaints. Several complaints were logged on the same day for the same property, and if these duplicate complaints are excluded, the number of unique complaints in the past year is 14.

If the property addresses are isolated, the number of complaints drops to 10.

Unique Address	2022	2023	Total Complaints per Property
A	5		5
B	4	1	5
C	2		2
D	1		1
E	1		1
F	1		1
G	1		1
H		1	1
I		1	1
J		1	1
Total Complaints per Year	**15**	**4**	**19**

[2] Please note this complaint process is not specific to nightly rentals and is available to community members regardless of the underlying ownership of the property, including timeshares, private residence clubs, and fractional use.

In addition to using the City's complaint hotline, individuals that want to file an official complaint can also call Summit County Dispatch. In either case, complaints are taken, vetted, and then dispatched to the Police Department, Code Enforcement, or the appropriate department for mitigation. Some complaints are considered ongoing, or nuisance-related, and others are in progress, like noise, parking, disorderly, etc.

Complaints are also evaluated for accuracy, compounding reporting, and trends. The data is compiled regularly, and outreach is conducted with repeat offenders to further reduce complaints. The Park City Police Department and Code Enforcement continually respond to these types of complaints. Typically, one contact with the responsible party rectifies the situation. Compiling data over time and evaluating trends and repeat offenders allows for education and focused enforcement, which puts the responsibility back on the property owners to mitigate future nuisances.

(IV) Affordable deed restrictions prohibit transient uses

Affordable housing deed restrictions in the City prohibit transient uses. Long-term rental is only allowed in certain circumstances, such as renting a room to a roommate where the owner must live in the home or unit as their primary residence. Other instances that must be approved in advance include renting to a qualified household when an owner has not been able to sell the home in an acceptable timeframe, or their job transferred them, they are called to military service, or serving a religious mission. With approval, the owner may rent at an affordable price stipulated in the deed restrictions for up to two years but may do it no more than once.

As of June 26, 2023, there are 288 deed-restricted units the Housing Team monitors for compliance annually. The team is in the middle of the 2023 compliance process, but last year, the Housing Team had all but one unit in compliance, so the compliance rate is exceptionally favorable, at 99.9%, thereby almost negating the ability to defraud our deed restrictions.

(V) Updates regarding the seven-day lodging parking permit

Background – Park City Parking Services historically issued temporary residential permits known as "7 Day Lodging Permits." These have generally been effective in limiting the duration of lodging guests to secure on-street parking where off-street parking is unavailable.

Challenge – Businesses operating in residential permit zones have been able to do so free of charge, thus creating a largely unregulated environment as nightly rentals increased. Parking Services observed greater impacts to resident parking with no fees to regulate demand. The 7 Day Lodging Permit is less effective due to the open-ended nature of the free permit type.

Proposed Solution – In July 2022, City Council approved a proposed parking fee associated with residential business permits – up to $25/day. This tool is designed to

reduce demand and put the nightly rental tenant parking management responsibility on the property manager/management company. It also considers the cost of operating a business in an area of high demand. Fees for parking are a proven method to control and reduce the impacts of parking and traffic in areas with limited space.

Summary Plan – Parking Services intends to apply a portion of the Council-approved fee on July 1, 2023. The cost is $10 per day and $800 per year. The property manager/property management company will be responsible for applying for, purchasing, and managing the permits assigned with a $20 replacement fee for lost/stolen permits. The lost/stolen permit will be deactivated, and if discovered in use, the vehicle displaying the lost/stolen permit will be impounded and charged a $200 fine. The owner will be denied further permit issuance.

Below is the referenced Municipal Code. Staff will pursue a code amendment after July 1, 2023.

Current Municipal Code
9-5-3 Types Of Permits
The following permit types are established and shall be issued by the City upon payment of the appropriate fee, if any, as designated in the Fee Resolution: (see below)

LODGING GUEST PERMIT. Lodge guests permits shall be issued to, or approved for, lodges within a non-metered RPZ for the exclusive use of lodge guests during their period of stay at the lodge. Lodge owners shall fill out the lodge guest permit completely, using permanent ink, and instruct their employees and guests in the proper display and use of the lodge guest permit. Passes shall not be available for transient lodging units with available off-street parking for their guests and/or employees, or for lodging units located within a metered parking zone. Lodge guest permits may also be issued to individuals with unusual or special needs at the discretion of the City Manager or designee.

The lodge guest permit shall be valid either only during the guest's stay at the lodge, or for seven (7) days from the date of issue to the guest, whichever is less.

The lodge guest permit shall be valid only in the same residential permit Parking zone in which the host lodge is located.

Fee Schedule

SECTION 7. PARKING, METER RATES, VIOLATIONS, TOWING, AND IMPOUND FEES

7.6 Parking Permits
Residential Business Permit - $25.00 per day – businesses operating and requiring parking in residential permit zones including nightly rentals, construction, landscaping, plumbing, etc. The replacement permit cost is $20.00.

(VI) Transient Room Tax information

Background – The City's Transient Room Tax ("TRT") is generated by a 1% tax on lodging transactions in Park City. The TRT was enacted in July 2017 under Ordinance No. 2017-34, which adopted the TRT with no legal constraint on use. However, the past Council, at the time of adoption, gave public commitments to use the tax in the Bonanza Park Neighborhood Area (see page 268-269 in the linked file; Exhibit A) to acquire real property and support an art and culture district.

Historically, the TRT has been used for the Bonanza Park Neighborhood Area land acquisition and associated development planning, event, site remediation, and activation costs. Council has continued to budget consistently with past practice.

Growth of TRT Over Time – Since its inception, the TRT has grown as both traditional hotels and nightly rental lodging have correspondingly grown annual revenues and rates. The first year PCMC received a full year of TRT revenue was FY19. In FY23, PCMC has yet to see a full year of revenue, given that the sales taxes are remitted on a two-month lag from the State of Utah.

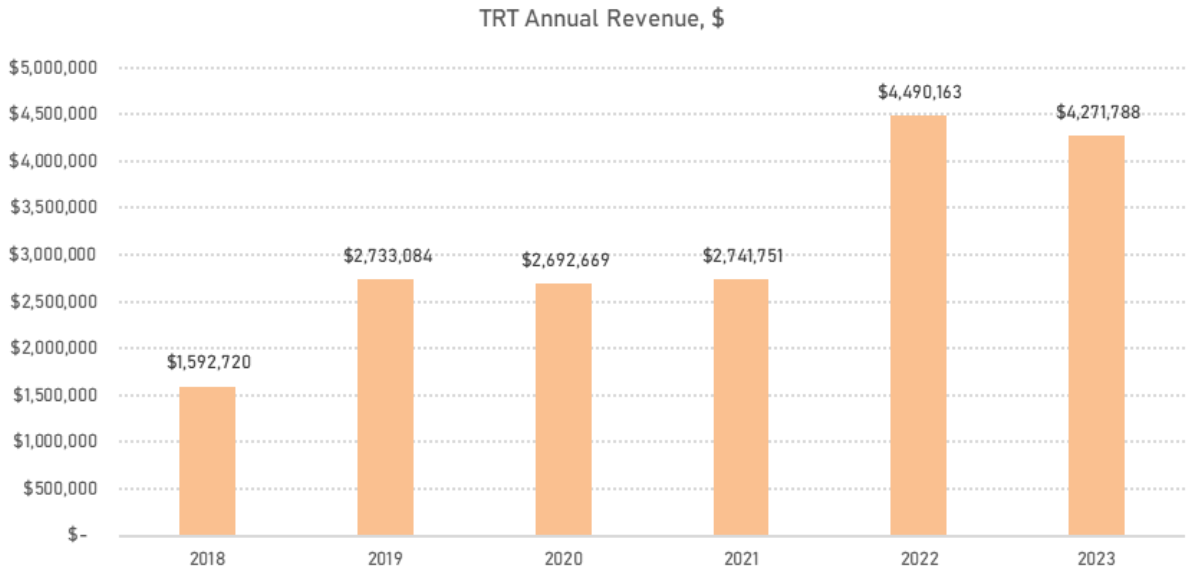


Figure 1: PCMC Annual TRT Revenue. Source: PCMC. As of June 2023.

Over the three full years, TRT revenue grew at an average annual rate of 21% per year. However, preceding the COVID crisis in 2020, the average growth rate matched a more moderate inflationary dynamic of ~2% per year growth. Yet, amidst the broader inflationary and migratory dynamic associated with COVID, TRT saw a 64% increase in year-over-year revenue change from FY21 to FY22. This was a fortunate occurrence, as the previous planning and design process for the cultural district required considerable resources over an extended period of time.

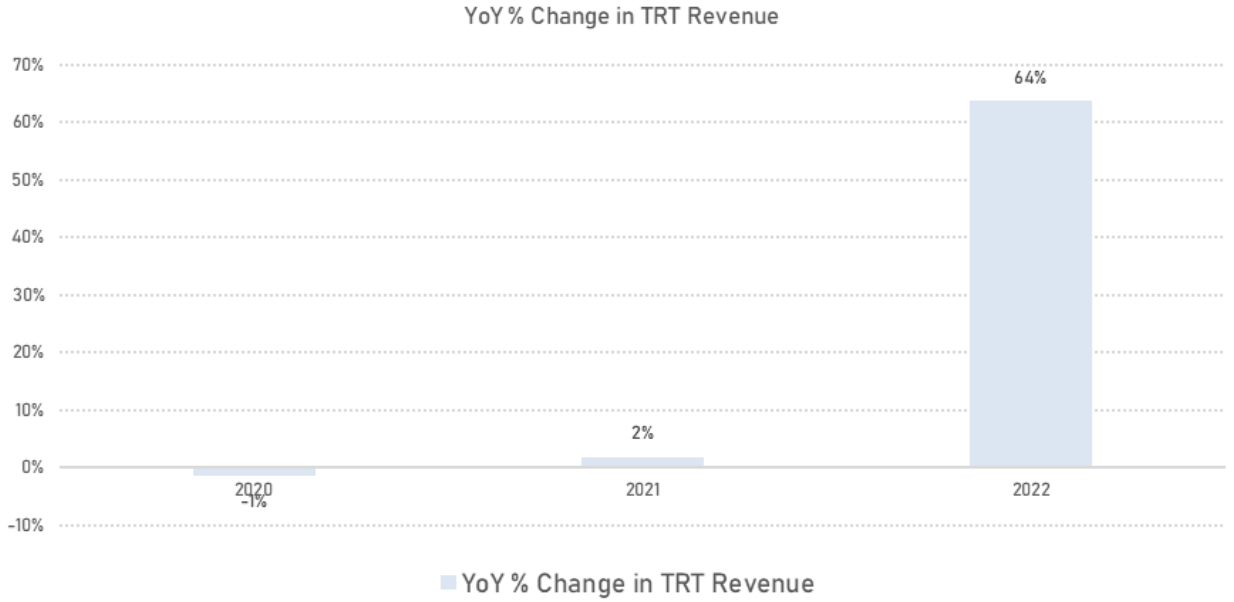


Figure 2: YoY % Change in PCMC Annual TRT Revenue. Source: PCMC. As of June 2023.

While the trend of annual growth has been robust over recent years, we expect the TRT growth to taper, closer back to historical norms.

Nightly Rentals Continue to Gain Market Share – While annual growth is clearly visible in the TRT data, it is also the case that lodging revenues exhibit strong seasonality, with winter months outpacing shoulder season. Yet, the growth of Park City's the shoulder season has been a significant source of positive change.

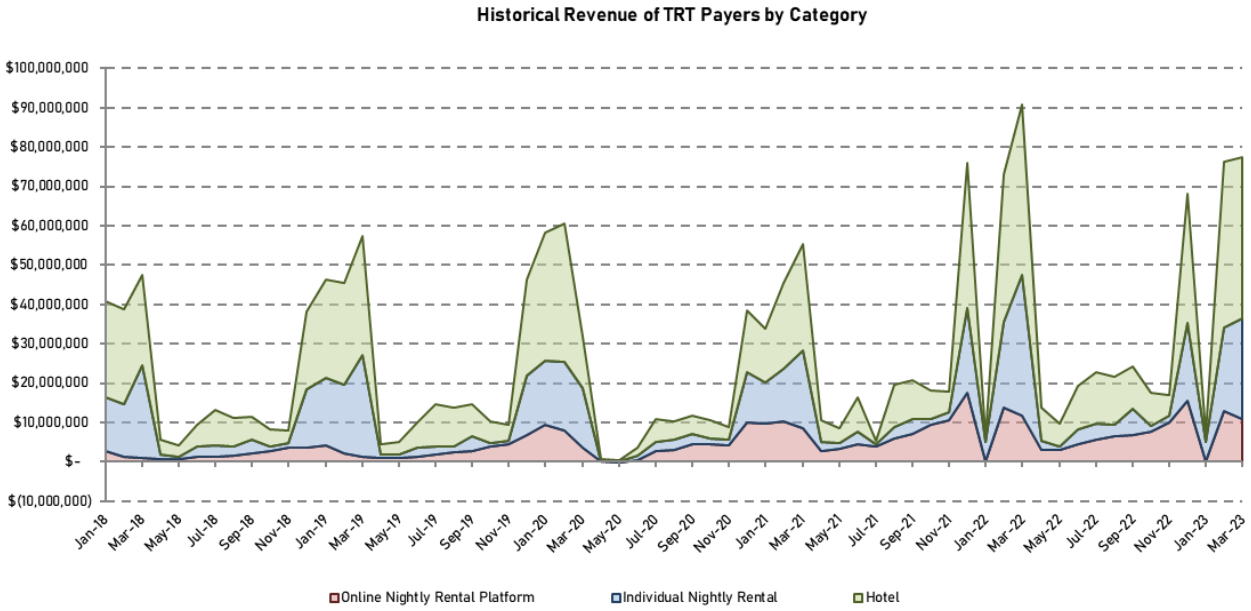


Figure 3: Monthly TRT Revenue Over Time by Lodging Category. Source: PCMC. As of June 2023.

Clearly, the nightly rental market is a significant driver of Park City's lodging industry. One persistent dynamic associated with nightly rentals is that units formerly marketed by individuals increasingly utilize online platforms to market listings. These online platforms collect and remit sales taxes to the State and, thus PCMC on behalf of the listings on their platform.

Over the months of calendar years 2022 and 2023, individual nightly rentals and online nightly rentals composed 49.6% of the total TRT revenue received. Considering nightly rentals compose nearly half of Park City's lodging market, these assets are a correspondingly critical source of supply for Park City's economy.

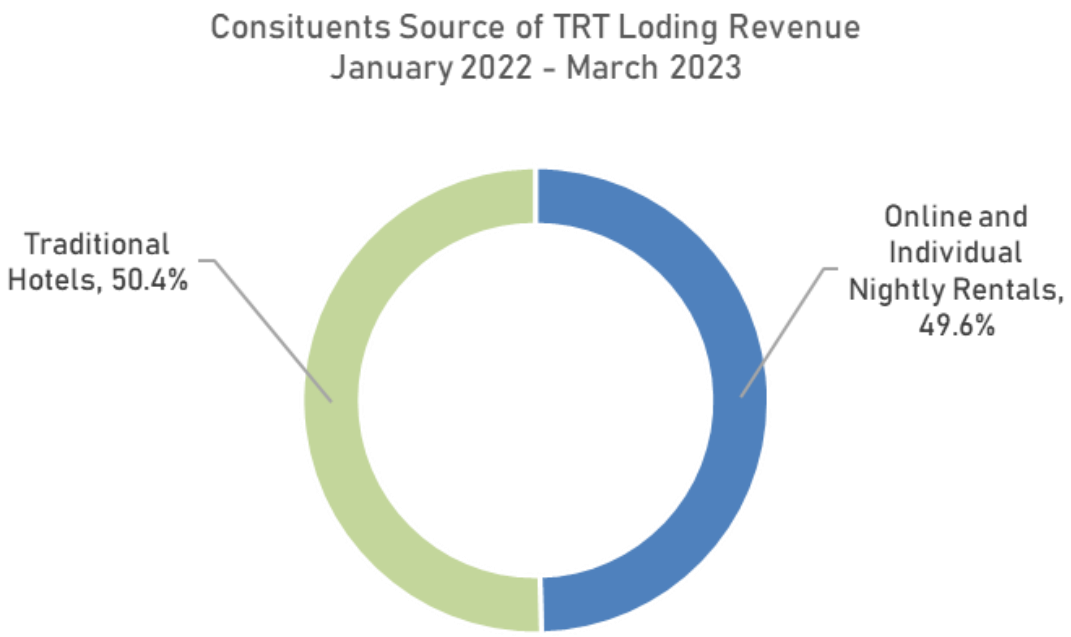


Figure 3: % of TRT by Traditional Hotels vs. Nightly Rentals. Source: PCMC. As of June 2023.

Furthermore, it is clear that the nightly rental market, relative to traditional hotels, is dominant during Park City's shoulder season. For example, over the months of May 2022 to December 2022, an online nightly rental platform was the top payer of the City's TRT, in many instances gaining more than 25% of the total market share. Only once the primary winter season commenced did a traditional hotel gain the top position in the lodging market share. This trend has been consistent over the previous three years.

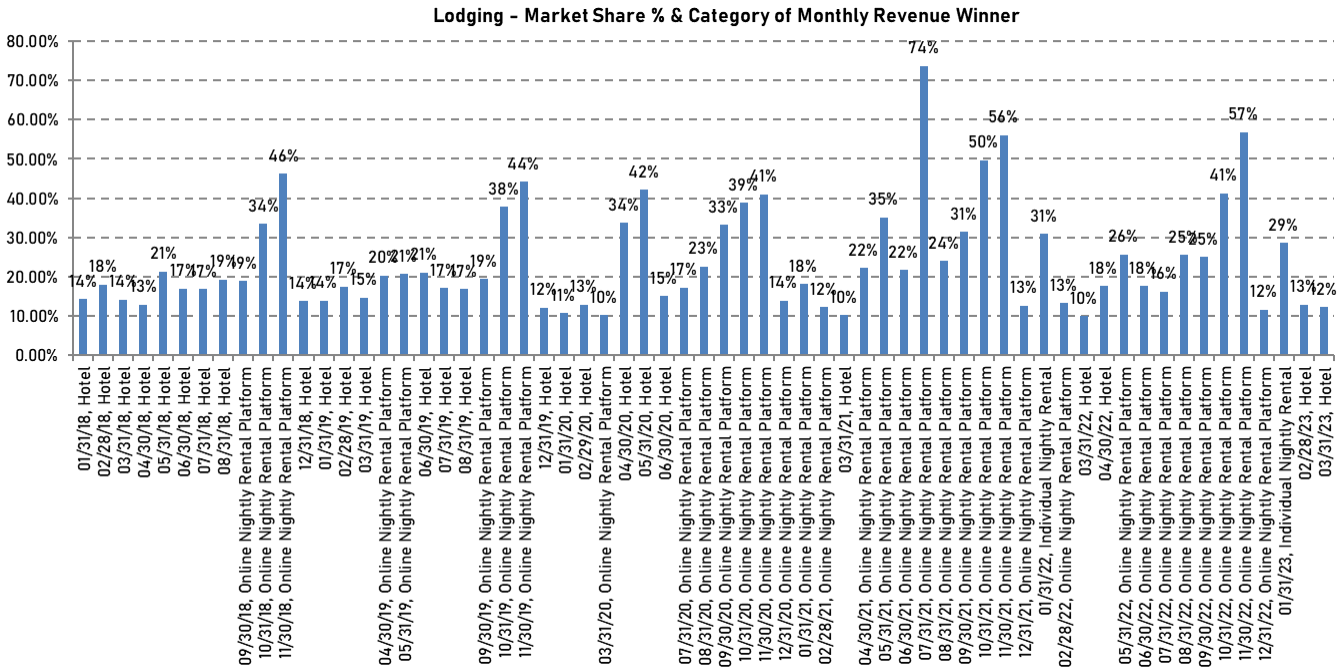


Figure 4: Monthly Market Share Winner by Category and % of Market Share. Source: PCMC. As of June 2023.

Composition and Characteristics of Nightly Rental Market – Within the nightly rental market itself, the City studies the primary drivers of revenue, utilizing data providers such as AIRDNA Marketminder. Analyzing Park City's nightly rental market by asset size, homes with more than four bedrooms generate more than 40% of the nightly rental revenue, with that trend only increasing over time. In the winter, 4+ bedroom assets generate more than 50% of the nightly rental revenue.

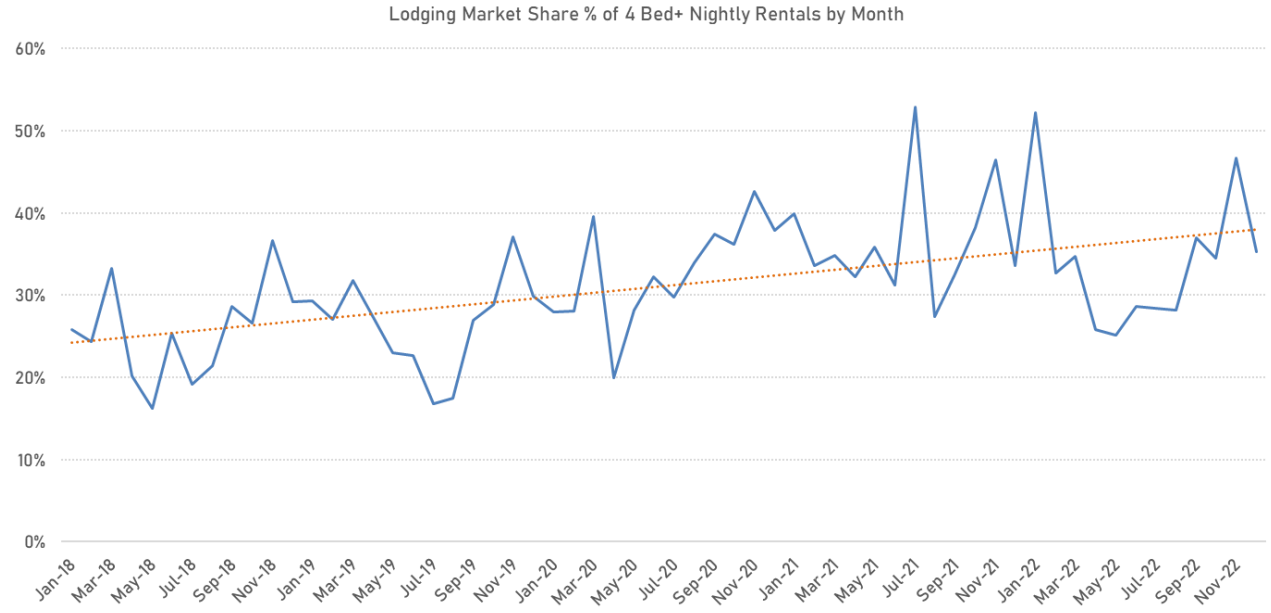


Figure 5: 4bed+ Share of Nightly Rental Revenue by Month. Source: AIRDNA, PCMC. As of June 2023.

Smaller homes and apartments are generally a minority contributor to nightly rental revenues. Since 2018, one- and two-bedroom assets have made up approximately 18% of the nightly rental revenue market share, with their share of the market revenue trending down over time.

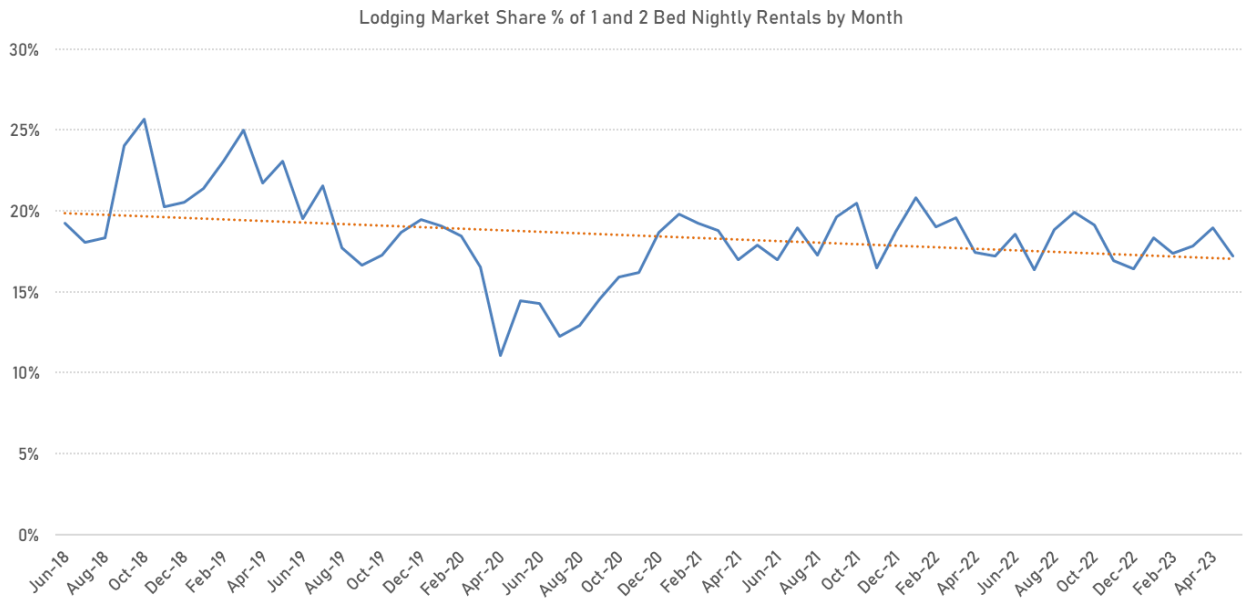


Figure 6: 1 and 2 Bedroom Share of Nightly Rental Revenue by Month. Source: AIRDNA, PCMC. As of June 2023.

Note, the percent share of market revenue does not perfectly equate to volumes of unit types, which is more challenging to determine in a given month. Yet, despite the fact that larger properties tend to also garner higher daily rates, it remains the case that Park City's housing stock, and correspondingly its nightly rental stock, is skewed to larger, single-family, properties.

Finally, to illustrate the scope and scale of the key drivers of Park City's nightly rental market, we examined the top 10 revenue-generating properties in Park City over the course of the 1-year trailing from May 2022 to May 2023.

The top property in Park City, in terms of annual revenue, is a 12-bedroom home estimated to generate more than $1.2M in annual revenue. Indeed, among the top 10 revenue generators, all are single-family homes that sleep more than 10 guests per night. In some cases, multiple properties in Park City's top 10 sleep more than 25 guests per night. These top 10 properties generate 10% of Park City's nightly rental-linked lodging income, and correspondingly drive 2% of the City's TRT.

Top 10 Online Nightly Rental Properties - Characteristics

Rank	Annual Revenue	Average Daily Rate	Bedrooms	Bathrooms	Number of Guests Accommodated per Night
1	$ 1,200,000	$ 3,775	12	11.0	27
2	$ 1,000,000	$ 3,303	5	4.5	13
3	$ 948,500	$ 3,887	6	6.5	14
4	$ 920,400	$ 5,320	6	10.0	16
5	$ 778,300	$ 2,937	7	7.5	36
6	$ 722,100	$ 4,751	5	5.5	10
7	$ 704,800	$ 3,025	5	6.0	12
8	$ 704,500	$ 3,688	5	5.0	10
9	$ 700,600	$ 4,491	4	4.0	11
10	$ 678,500	$ 5,064	12	11.0	16

Figure 7: Top 10 Nightly Rental Revenue Generators in Park City. Source: AIRDNA, PCMC. As of June 2023.

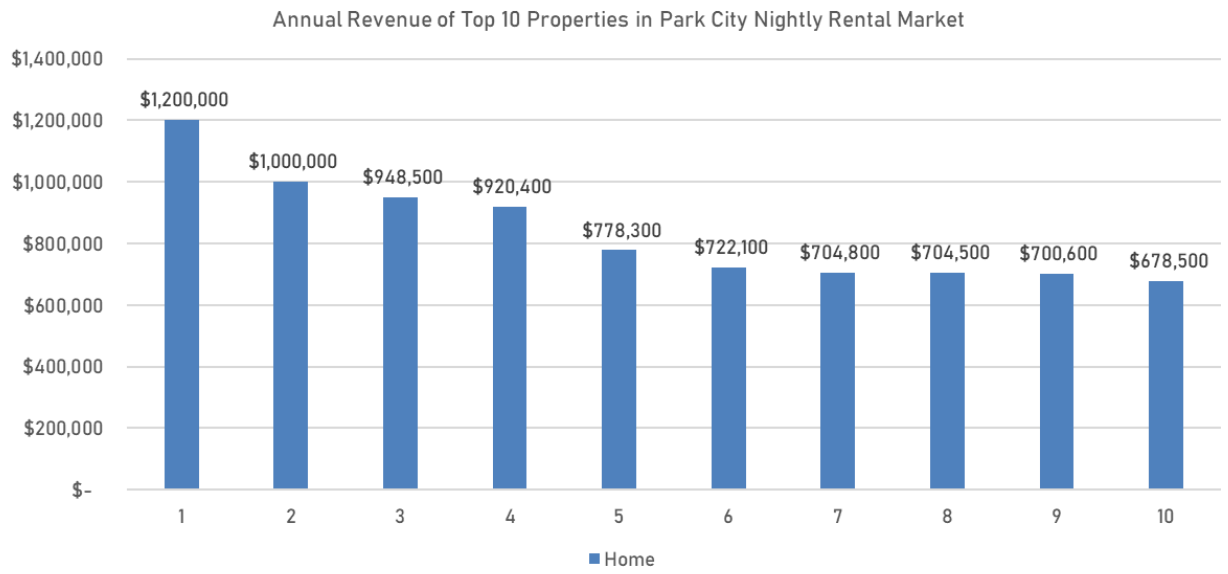


Figure 8: Top 10 Nightly Rental Revenue Generators in Park City. Source: AIRDNA, PCMC. As of June 2023.

Nightly Rental Market Key Takeaways – In conclusion, the nightly rental market is a key component of Park City's lodging industry and has only gained revenue market share over time. The presence of guests in nightly rental lodging is a key supplier of demand to Park City's economy. While the performance of many Park City nightly rental assets is substantial, the successful assets tend to skew toward larger, nearly hotel-like, homes that are not attainable for purchase by wage-earning workers. Furthermore, smaller unit sizes, while still part of the nightly rental market, continue to lose ground relative to their much larger peers.

Both online and individually managed nightly rentals are significant contributors to TRT,

comprising almost 50% of the revenue stream as of 2023.

Lastly, while traditional hotels have continued to gain positive revenue growth since the inception of the City's TRT, the growth of the nightly rental market has outpaced that of the conventional hotel providers.

City Council
Closed Session Staff Report

Subject: **Sundance Institute and Kimball Art Center public/private partnership to jointly develop a Park City Arts & Culture District and Council adopt one-percent municipal Transient Room Tax**
Author: **Nate Rockwood**
Department: **Budget, Debts & Grants**
Date: **July 20, 2017**
Item Type: **Legislative**

Summary Recommendation

City Council should consider the following proposal to buy the Bonanza Park East property for $19.5 million for the purpose of creating the Park City Arts and Culture District.

Council should review and adopt the attached Letters of Intent between Park City Municipal Corporation and Kimball Arts Center, and Park City Municipal Corporation and the Sundance Institute for the purposed of jointly planning and developing the Park City Arts and Culture District with the intention that both Kimball Art Center and Sundance Institute become primary owners in the District. Kimball Art Center and Sundance Institute will fund and own their own land and construction of their own facilities in the District.

City Council should adopt the Municipal Transient Room Tax, a one-percent tax on all overnight lodging, which will allow the first collection of the tax on January 1, 2018. Adoption of the tax at this time will allow the City to issue Sales Revenue Bonds sufficient to close on the property by no later than January 31, 2018 and begin the joint planning process in July. The City will use the Municipal Transient Room Tax to further develop City owned property in the Arts and Culture District, which supports and promotes the District's intended uses of arts and culture.

Acronyms

TRT	Transient Room Tax
Kimball	The Kimball Art Center
IPCC	Intergovernmental Panel on Climate Change
PCMC	Park City Municipal Corporation
PCSD	Park City School District
Sundance	The Sundance Institute
MPD	Master Planned Development
TIF	Tax Increment Financing
BPE	Bonanza Park East
ACD	Arts and Culture District
FBC	Form-Based Code
LOI	Letter of Intent
BRT	Bus Rapid Transit

Background

Why Bonanza Park Matters…to the Future of Park City

A history of planning efforts in the Bonanza Park Area
Visioning – 2009 Vision Park City completed and incorporated into Bonanza Park planning.

On January 25, 2011, Planning staff presented a white paper entitled "From Visioning to Planning to Implementation – A Case Study of Bonanza Park". This paper recommended that the 2009 Community Vision Core Values should be used as the foundation for the proposed General Plan and Bonanza Park Area Plan. The Planning Commission and City Council fully supported this approach and, ultimately, the Vision's Core Values were fully utilized as the base for both documents. The Park City General Plan, adopted on March 6, 2014 included a neighborhood approach to address specific planning issues relative to individual neighborhoods. The "plan" for Bonanza Park is built upon the Core Values from community visioning and recommends: a mixed-use neighborhood in which locals live and work, a neighborhood which maintains its authenticity, a district that serves as the local employment hub, sustainable redevelopment practices, improved connectivity, a central hub for public transportation, improved entryways for the city, and a commitment to maintain the current character of the district.

Very early on in the planning process, the Planning staff was most concerned about the possible gentrification of the neighborhood in light of the fact that the entire city of Park City had essentially gentrified over the past two decades (e.g. significant increase in household incomes and transition to majority second home owners). Anecdotally, many Parkites have lamented the fact that over the past 20 years, an average income family cannot afford to live in Park City. This is gentrification on a citywide level. The Planning Commission and City Council were both supportive of the "plan" for Bonanza Park that stressed maintaining a place for locals. Recognizing the fact that development and redevelopment pressures within Park City have been significant over the past two decades, and that change and/or growth is inevitable in Bonanza Park, Planning staff created a plan that incorporated tools that would create a local's neighborhood while also encouraging a better connected and walkable community.

Planning –The Bonanza Park Area Plan was completed on December 31, 2011 and incorporated into the 2014 Park City General Plan (adopted March 6, 2014).
Upon completion of the City's General Plan in March 2014, Planning staff reinitiated work with Gateway Planning on the proposed FBC for Bonanza Park. The FBC is the implementation tool for the Bonanza Park Area Plan in terms of achieving desired land uses, building fabric, design standards, block configuration, and connectivity. This code also incorporates an incentivized program to encourage additional affordable/attainable housing if a developer intends to add a partial fourth or fifth story. This provision within the proposed code stemmed from a series of City Council meetings that took place in the summer of 2011 regarding redevelopment planning. The consultant walked City Council members and city staff through a number of growth scenarios for Park City and how these growth pressures could best be addressed – everything from "do nothing" to the utilization of a strong set of planning tools to shape this future growth. Ultimately, the City Council and Planning Commission recommended a proactive approach to planning for this neighborhood with the intent to protect the uses and residential mix that currently exists. There was recognition that the aesthetic character of the neighborhood could be improved but the local businesses and demographic mix were to be preserved to the greatest extent possible. However, upon extensive public input on the proposed FBC and its complexity in 2015, the City Council decided not to pursue the code changes and instead focus on

the General Plan and Area planning implementation with existing (and updated) Master Plan Development regulations.

General Overview of Bonanza Park recent planning efforts, including Form-Based Code:

- April 14, 2010 – Planning Department presents planning strategies, FBC, and design concept for Bonanza Park to the Planning Commission
- April 22, 2010 – Planning Department presents planning strategies, FBC, and design concept for Bonanza Park to the City Council
- June 17, 2010 – Planning Department presents Bonanza Park long range planning informational session to a joint City Council/Planning Commission meeting
- January 25, 2011 – Planning Department presents a white paper, From Visioning to Planning to Implementation – A Case Study of Bonanza Park, to the City Council at the Visioning Retreat
- July, August, September 2011 – Planning Department presents Bonanza Park long range planning presentations at a series of four City Council Work Sessions
- December 31, 2011 – Planning Department completes the Bonanza Park – An Evolution of Plan area plan
- January 12, 2012 – Planning Department requests direction regarding Bonanza Park Area Plan and implementation at a joint City Council/Planning Commission meeting
- April 1, 2012 – PCMC signs contract with Gateway Planning to create a FBC for the Bonanza Park neighborhood
- Spring, Summer 2012 – Various Stakeholder meetings for Bonanza Park District held
- Fall 2012, Winter 2012, Spring 2013 – Various City Council meetings held to discuss Substation Relocation
- October 24, 2012 – Planning Department presents first draft of FBC to a joint City Council/Planning Commission meeting
- May 8, 2013 – Planning Departments holds work session with Planning Commission to discuss Bonanza Park Area Plan and FBC
- May 16, 2013 – Planning Department reviews Bonanza Park Area Plan and requests direction on draft FBC at a joint City Council/Planning Commission Work Session
- May 22, 2013 – Planning Department presents draft FBC at a Planning Commission meeting
- June 12, 2013 – Planning Department seeks policy direction on draft FBC at a joint City Council/Planning Commission work session - PCMC recommends putting the FBC work on hold to focus efforts on completing the General Plan
- March 6, 2014 – Adoption of the General Plan by the City Council with the Bonanza Park neighborhood plan and FBC recommendation incorporated
- May 13, 2014 – Planning Department reintroduces the draft FBC to a joint City Council/Planning Commission meeting
- June 12, 2014 – Bonanza Park Public Work Session with City Council on Bonanza Park Infrastructure
- August 6, 2014 – Planning Department presents draft FBC for discussion to Planning Commission in Special Meeting
- September 16, 2014 – Planning Department presents draft FBC for discussion to Planning Commission
- October 8, 2014 – Planning Department presents draft FBC for discussion to Planning Commission

• October/November 2014 – City Council recommends increased public outreach to property owners and public

In 2015, following additional public outreach, the City Council formally discontinued the FBC ordinance process. The land owner, who was waiting for a final determination on FBC regulations, re-initiated its MPD land use application. In May 2017, the City purchases the Yard South parcel primarily for affordable housing.

The Opportunity

City Council is proposing to jointly develop the Bonanza Park East property, a 5.25-acre parcel on the corner of Kearns Blvd and Bonanza Drive, for the purpose of creating the Park City Arts and Culture District. The Letters of Intent specifies that Park City, Sundance Institute, and the Kimball Art Center will jointly engage in a joint, collaborative planning and design process. This will include public outreach and compatibility with Park City's General Plan, Area Zoning and Land Management standards, such as height and design standards for Bonanza Park, as well as a full transportation study. Additionally, the City will also conduct a community engagement process focused on the other potential uses, other than the Sundance and Kimball buildings, that will help to create connectivity, walkability and vibrancy. The proposed Arts & Culture District pulls together a compelling series of opportunities for the community:

- Allow City Council to shape the future of the Bonanza Park area by partnering to secure approximately 20% of the landmass in the area and developing a vision of a sustainable, walkable, livable, vibrant community Arts & Culture District; and
- Will create a permanent location for Sundance and Kimball in Park City, in a core neighborhood within the city;
- Forward the City's Critical Priorities of Transportation, Housing and Energy by creating a net zero district that includes a transit hub in Bonanza Park with mixed-use neighborhoods that include affordable housing;
- Investment in a new cultural hub, which could transcend the traditional resident and visitor tug of war by providing educational and cultural enrichment creating a new dynamic sense of place, consistent with the General Plan;
- Further support Council's Energy Goal by using Bonanza Park as an economic climate adaptation strategy: As Park City's ski industry will be impacted, increasingly, by global warming, arts & culture tourism can fill in gaps while leveraging the existing tourism infrastructure of hotel rooms, restaurants and the transit system;
- The Bonanza Park Transit Center will be a key connector for the internal city circulator and with the BRT improvements to SR248 will facilitate the activation of the Richardson Flat Park and Ride; and
- Provide long-term economic diversification without adding disproportionate impacts of growth.

The Park City Arts and Cultural Area in Bonanza Park would be comprised of a mixed-use development area with the Sundance Institute and Kimball Art Center buildings featured prominently as anchor destinations. The Arts and Cultural Area would potentially be supported by:

- A small shared-space building for arts & culture non-profits;
- Additional retail, dining and office space; and

- A Transit Hub and Parking Facility will be located within the retail-walking corridor, which will facilitate foot traffic throughout the District.

The Bonanza Park Area will also include:

- Significant affordable housing locations, which will provide a mixed-use live work environment for locals.
- The retail corridor and arts and culture area will include ample outdoor walking and plaza space to facilitate outdoor activities.
- Affordable living space on a walkable one-block corridor connected to the Bonanza Park Public Transit Hub and Parking facility.

The Vision for the area is to create:

- a gathering place for locals;
- a destination for visitors to Park City;
- an integrated independent film and art center with local and international; and community draw and appeal.

Through early discussions about the potential uses that could be housed in their buildings, Sundance and Kimball have developed some high level concepts for their facilities:

> Sundance Institute is envisioning a 40,000 to 45,000 sq. ft. destination facility consisting of engaging exhibits and services that are open year-round to the public. It is envisioned to house a 300-seat theatre to serve as a venue during the annual Sundance Film Festival, offer community screenings throughout the year and be available for rental/use by other community groups. The building will establish a year-round, physical, recognizable, publicly-accessible hub for Sundance Institute and Sundance Film Festival.
>
> The Kimball Art Center initially envisions a 30,000 sq. ft. building with the opportunity to expand to 40,000 sq. ft. The building will likely house galleries, studio and maker spaces for painting and drawing, ceramics, metal-working, glass fusion and other disciplines, photo labs, and an interactive children's center. The building will be a showcase for local art and provide a community gathering place for locals and visitors to learn and create.

In preliminary visioning meetings with both Sundance and Kimball, both partners expressed a strong preference for a location within Park City. Both parties are considering future capital campaigns to fund the land acquisition and building construction. Sundance and Kimball are proposing significant infrastructure, which will provide an anchor for the Arts & Culture District, however both feel that other supporting arts and culture space, as well as retail, restaurant, and office space will be necessary for a successful district.

The Letters of Intent outline with both Kimball Art Center and Sundance Institute this process and outline other terms of intent. They also specify that the City will renegotiate the terms including the end dales of the Master Festival License agreements. The current MFL for Sundance ends after 2026 and Kimball Art Center ends after 2021.

Additive Value and Diversification: A New Opportunity to invest in Park City

The City has continued to invest significant capital and operating dollars into the community. Capital investment has come in the form of renovations and asset

improvements such as the Library, MARC, City Hall and sidewalks, streets and storm drain systems. These investments can revitalize current services the City provides and can be broadly classified as maintaining and updating the City's assets. The City is also investing significantly in transportation improvements, water infrastructure and affordable housing. These improvements can be classified as meeting and mitigating the demands of growth. Net zero, environmental expenditures and open space acquisitions help to preserve the environmental quality of life and protect the community from the effects of growth.

An Arts and Culture District represents an entirely new kind capital investment. It goes beyond maintaining and renovating existing buildings, beyond mitigating the effects of growth or resort congestion. It represents an opportunity for the community, using visitor-generated funds, to invest in Park City and solidify the community value of art and culture. This is an opportunity to invest in Park City as a community. Over the years, as the Sundance Film Festival and Kimball Arts Festival have grown, they have come to represent a significant piece of what Park City is, a cultural quality, which sets Park City apart from other ski towns, a quality which uniquely matches the ideals and views of the community.

The creation of the Park City Arts and Culture District, featuring the Sundance Institute and Kimball Art Center as key anchor locations for Park City locals and guests, represents an opportunity to for the City to invest in itself as a unique and iconic town. A chance to go beyond maintaining, preserving and mitigating, and actually being a part of further creating the essence of what is Park City.

Analysis

Park City intends to purchase a 5.25-acre parcel in Bonanza Park for $19.5-million to create the Park City Arts & Culture District. Funds for purchase, development, and maintenance will be generated by overnight visitors via a one-percent municipal transient room tax. No additional taxes will be assessed on Park City residents. The City intends to issues sales revenue bonds against the municipal TRT. It is anticipated that sales revenue bonds will be issued and sold no later than December 31, 2018. The property will be sold to the City, to close no later than January 31, 2018. If the City does not issue the bonds, the property deal will terminate and the $100,000 earnest money deposit will be returned to the City.

The District will be anchored by a new Sundance Institute facility and a new Kimball Art Center; these two entities intend to purchase from the City the land on which their buildings will sit. The Sundance Institute and Kimball Art Center intend to independently fund and construct their respective buildings.

The District will be jointly planned, designed, and executed through a public-private partnership composed of Park City Municipal, the Sundance Institute, and the Kimball Art Center. This Letters of Intent (see Attachments B and C) specify that Park City, Sundance Institute, and the Kimball Art Center will jointly engage in a collaborative planning and design process. This will include public outreach and compatibility with Park City's General Plan, Area Zoning and Land Management standards, such as height and design standards.

Park City will build and own the underground, surface, and structured parking facilities which will support the use of the district. It is anticipated that the site will require

approximately 400 parking spaces to meet the requirements of Park City's Land Management Code. Park City will also build and operate the Bonanza Park Transit Hub within the district.

Park City will create open spaces and common areas in addition to approximately 60,000-to-90,000 square feet of city-owned building space designed to support and complement the Arts and Culture concept.

Arts and Culture – Bonanza Park East and Yard South Master Plan Development
The City intends to jointly plan the Arts and Culture District - Master Planned Development (MPD) through a collaborative partnership between the City and Sundance Institute and Kimball Art Center. The City also intends to include planning the Arts & Culture District in context of a larger MPD area planning process which will also include the recently acquired Yard South property and other City property. This larger planning process may be beneficial to the overall Bonanza Park Area in several ways.

A larger planned footprint could facilitate area improvements in the following ways:

- Transportation - improved site access for auto, transit and pedestrian flow.
- Transportation Hub – A transit hub in the district will mitigate traffic, facilitate the activation of the Richardson Flat Park and Ride Lot and provide a strategically located internal circulator point. A transportation hub in the area will also activate the Arts and Culture District.
- Improve Parking Options – a large master plan can take advantage of shared parking facilities, which will reduce congestion in the Arts & Culture District and will allow the development to take advantage of economies of scale in parking construction cost and use.
- Affordable Housing Requirements – The City is pursuing significant affordable housing options in the Bonanza Park Area. A public/private partnership MPD can take advantage of planned affordable housing in the area, which will allow the area design to incorporate the correct location of affordable housing, parking and arts & culture areas along with retail, office space and restaurants, which are fully integrated to maximize use.

Proposed Funding

Municipal Transient Room Tax
A transient room tax is a set sales and use tax rate levied on the rental price of temporary lodging for stays of less than 30 consecutive days. Utah code currently allows both cities and counties to levy an independent transient room tax. State code allows counties to levy a countywide TRT up to 4.25% and cities to levy a municipal TRT up to 1%. The county and city TRT rates are not mutually exclusive.

Therefore, the total overlapping levy within a city and county can be 5.25% (there are special circumstances within state code which allow for a city or county to apply additional TRT rates; however, these circumstances are not applicable to Park City or Summit County). A TRT is applied in addition to other applicable sales tax rates. Because the TRT is a lodging tax, the tax does not have a direct impact of the affordability to the local resident.

County Transient Room Tax - By County in Utah	
Location	TRT
Salt Lake County	4.75%
Beaver County	4.25%
Box Elder County	4.25%
Carbon County	4.25%
Daggett County	4.25%
Davis County	4.25%
Emery County	4.25%
Garfield County	4.25%
Grand County	4.25%
Iron County	4.25%
Kane County	4.25%
Morgan County	4.25%
San Juan County	4.25%
Sanpete County	4.25%
Sevier County	4.25%
Uintah County	4.25%
Utah County	4.25%
Wasatch County	4.25%
Washington County	4.25%
Wayne County	4.25%
Weber County	4.25%
Tooele County	3.50%
Cache County	3.00%
Duchesne County	3.00%
Juab County	3.00%
Millard County	3.00%
Piute County	3.00%
Rich County	3.00%
Summit County	**3.00%**

Currently Park City does not levy a 1% municipal TRT. Summit County's current TRT rate is 3% countywide. State code limits the use of the Summit County TRT to (1) establishing and promoting recreation, tourism, film production, and conventions or (2) acquiring, leasing, constructing, furnishing, maintaining, or operating: convention meeting rooms; exhibit halls; visitor information centers; museums; sports and recreation facilities including practice fields, stadiums, and arenas; and related facilities.

The use of municipal TRT funds are not limited, but are allowed for municipal uses as defined by state code.

TRT across the State of Utah

TRT within Park City and Summit County are currently at the lowest level (3.00%) of any City and County statewide. 72 cities in the state levy at least the 1% TRT, including Heber and Midway. Among these 72 cities included all but three cities in the Salt Lake Valley. It should be noted that during the last Utah State legislative session, the State adopted a .32% statewide transient room tax. This tax will become effective January 1, 2018 and be applied to all overnight lodging purchases throughout the state.

All 29 counties in the state levy a county TRT. All but seven, including Summit County, levy the full 4.25% (Summit County TRT is at 3.00%). Cities in Salt Lake Valley generally have among the highest TRT rates at 5.75%; Moab also has a TRT of 5.75%. Sandy City and West Valley City have the highest TRT rates at 6.25%. Heber, Midway, and the majority of cities in Washington County have a TRT of 5.25%. Even with a 1.00% municipal TRT, Park City would be among the lowest TRT lodging rates in the State. (See table below – Transient Room Tax by Notable Cities in Utah)

Transient Room Tax - by Notable Cities in Utah					
Location	TR	TM	TA	TT	Total Trans Rate
Sandy	4.25%	1.00%	0.50%	0.50%	**6.25%**
West Valley City	4.25%	1.00%	0.50%	0.50%	**6.25%**
Moab	4.25%	1.00%	0.50%		**5.75%**
Cottonwood Heights	4.25%	1.00%		0.50%	**5.75%**
Draper	4.25%	1.00%		0.50%	**5.75%**
Holladay	4.25%	1.00%		0.50%	**5.75%**
Midvale	4.25%	1.00%		0.50%	**5.75%**
Millcreek	4.25%	1.00%		0.50%	**5.75%**
Murray	4.25%	1.00%		0.50%	**5.75%**
Salt Lake City	4.25%	1.00%		0.50%	**5.75%**
South Jordan	4.25%	1.00%		0.50%	**5.75%**
South Salt Lake	4.25%	1.00%		0.50%	**5.75%**
West Jordan	4.25%	1.00%		0.50%	**5.75%**
Provo	4.25%	1.00%	0.50%		**5.75%**
Lehi	4.25%	1.00%			**5.25%**
Orem	4.25%	1.00%			**5.25%**
Heber	4.25%	1.00%			**5.25%**
Midway	4.25%	1.00%			**5.25%**
Kanab	4.25%	1.00%			**5.25%**
St George	4.25%	1.00%			**5.25%**
Ogden	4.25%	1.00%			**5.25%**
Brian Head	4.25%	1.00%			**5.25%**
Alta	4.25%			0.50%	**4.75%**
Riverton	4.25%			0.50%	**4.75%**
Bryce Canyon	4.25%				**4.25%**
Park City (with new 1% TRT)	3.00%	1.00%			**4.00%**
Park City (current)	3.00%				**3.00%**
Snyderville Basin Tr Dist	3.00%				**3.00%**

*Effective January 1, 2018 a Statewide TRT of .32% will be collected

3.00% is the lowest TRT in any location in Utah

TR = Transient Room Tax (TRT) county-wide

TM = Municipal Transient Room Tax

TA = Additional Municipal TRT

TT = Tourism Transient Room Tax

Utah is actually quite low compared to many destination cities. Attachment A shows a comparison of destination cities in the US and Utah. This list has been updated to show major destination and convention center cities.

Park City Municipal TRT Revenue Estimate
It is estimated, that a 1% TRT in Park City would generate approximately $2.2 to $2.4 million annually. If leveraged to 65% of the revenue, over 15 years, a 1% TRT would allow the issuance of up to $23 million in bonds. After annual debt payments, the city would also collect approximately $850,000 in cash annually from the other 35%. These figures would likely increase annually with inflation or additional lodging growth. Cash and debt from the municipal TRT, Transit and Transportation Fund, Affordable Housing funds and funds received from the sale of land to Kimball and Sundance would allow the City sufficient funds to develop infrastructure supportive to the District.

Because the TRT only applies to short term-lodging, the tax could be considered a progressive sales tax; the tax has minimal direct impact on the local resident. The tax is applied only to overnight stays.

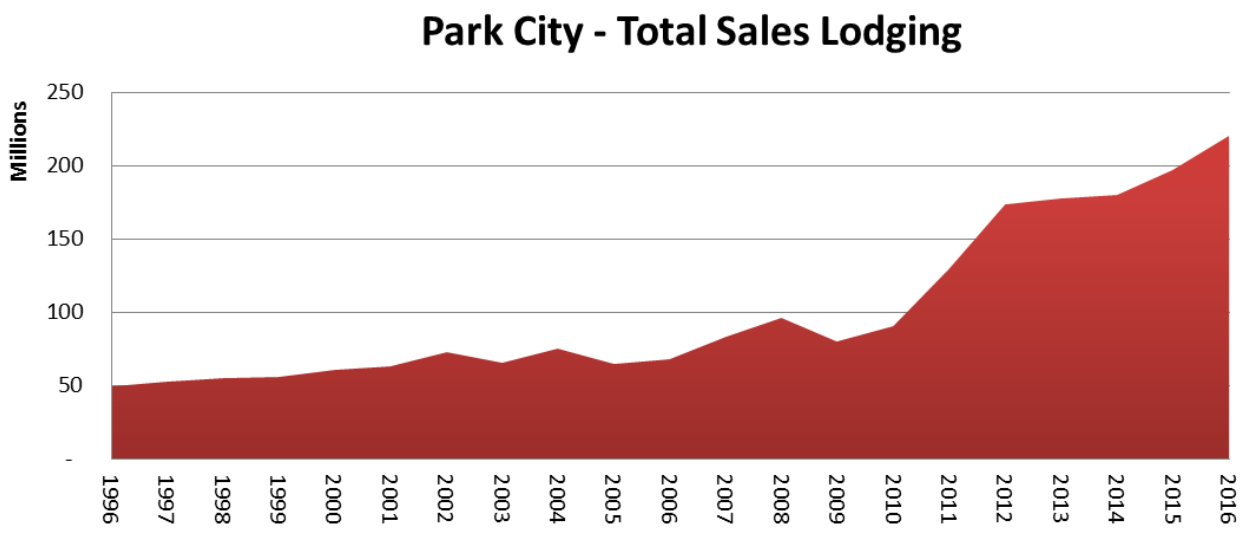
Implementation of a Municipal TRT
Because the tax does not apply to the local citizen, a citywide vote or truth-in-taxation hearing is not required or authorized by state code. The City enacts the tax by providing notice to the tax commission that the City intends to enact the tax and specifies in the notice, the effective date of the tax, the proposed rate of the tax and the statutory authority to enact the tax. The tax will become effective on the first billing quarter after a 90-day period beginning on the day the tax commission receives the notice from the City. Adoption of the notice requires the approval of City Council by Ordinance enacting the tax (see attachment E). The 90-day period is an administrative period to allow the tax commission the ability to provide businesses notification of the tax. It is not a contest period.

Therefore, if City Council were to enact the tax and provide notice to the Tax Commission in July, the 90-day period would end in September, and the tax would go into effect January 1. It should be noted that nearly 60 percent of the total lodging sales occur between January 1 and March 31 and another 20 percent come between October 1 and December 31. In order to issues sales revenue bonds sufficient to close on the Bonanza Park East property by January 31, 2018, the municipal TRT must be adopted within a time period that will allow the tax to be collected by January 1, 2018. Staff recommends that the TRT be adopted by July 20, 2017, this will allow the sales revenue bonds issuance process to start in August to be sold before December 31, 2017.

Impacts on Lodging Sales
As mentioned above, the TRT is levied on the overnight stay. Lodging sales in Park City have seen the most significant growth when compared to all other industries. This strong growth is due to:

- significant new development in the last several years;
- higher end offerings resulting in increased revenue spending per stay (RevPAR);
- a recovering leisure economy;
- and the impacts associated with Vail Resorts marketing strategies (epic pass).

In fact, lodging sales growth is primarily responsible for the overall city sales tax growth in the last five years. The following graph details the increase in lodging sales over that last 20 years. As show in the nationwide lodging tax comparison table (attachment A) and the County and City tables (see above), Park City will remain low in lodging tax statewide and among major destinations. The enactment of the Park City 1% municipal TRT is not expected to place Park City at a disadvantage within the ski destination lodging market.



The following highlight the pros and cons of a TRT funding strategy:

<u>Pros</u>

1. Funding decisions are made by City Council; this option effectively eliminates the majority of potential CRA (tax Increment Financing hang-ups (maximum returns and maximum density).
2. Project revenue needs are not increment based- the development can be phased in accordance with master cultural planning and partner contribution as opposed to being reliant upon private sector, front loaded development:
    a. Project could include a more arts and culture elements or nonprofit community partners
    b. Ability to add or retain “locals’ area” in the district.
    c. High-density and high-tax values are not required to drive increment growth
    d. Interlocal agreements are not required; no revenue comes from school district property tax growth.
    e. City would not be required to take on tax increment risk
    f. City could issue sales revenue bonds at much lower cost than TIF bonds
    g. City is able to develop at lower density and height without risk of undercutting tax revenue generation needed in a TIF funded project.

3. TRT is an ongoing revenue source, which could be used to further expand the Arts and Culture District or be allocated towards other critical and top priorities or other redeveloping districts with in the City which have a community benefit.
4. Tax would not affect local affordability issues and local arts and culture district would add to the local quality of life.
5. More space could be dedicated to affordable and attainable housing while reducing the need to include high dollar overnight lodging option or high-end nightly rental condos needed to drive tax increment.
6. TRT could eliminate the need to expand land requirements outlined under the Area Planning - Master Plan Development process – no variances for additional density.

Cons

1. City Council could potentially face opposition from business stakeholders such as Lodging Association and tax opponents.
2. City Council could not use potential TRT revenue in the short term for other critical priorities (until debt is retired).

Park City's Current Indebtedness and Debt Capacity

Park City Municipal Corporation currently issues three types of debt. 1) General Obligation Bonds levied by a vote against property tax value of the City (such as the recent Bonanza Flat open Space bonds). 2) Sales revenue bonds levied against sales revenue which has been adopted by City Council after a vote (such as the Additional Resort Community Sales tax in 2014).3) Utility fee revenue bonds, which are issued against water rates for the purpose of building water utility infrastructure.

State Policy limits a City to not exceed 4% of the assessed valuation of the City. City policy further restrict the City to not exceed 2% of the assessed valuation of the City. With the issuance of the $25 million Bonanza Flat bonds, the City is currently at 0.138% of the City's assessed valuation. The City continues to follow a policy to not exceed a 15-year term on any debt. Currently the city has $6,416,184 in debt payable in FY 2018. This debt drops off by half to $3,279,488 by 2025 and to $0 in 2033. The City continues to improve the finical position related to debt. With the issuance of the 2017 Bonanza Flats GO bonds the City was upgraded by Moody's Investment services to the highest Rating of Aaa (equivalent to AAA with S&P and Fitch).

The City does not issue sales revenue debt against sales tax that is received in the General Fund. In 2014, after voter approval the City adopted a 0.5%, Additional Resort Community Sales Tax. This revenue was dedicated to capital improvement projects, open space acquisitions and land acquisitions for affordable housing. The City has issued two bonds against this revenue - the 2014 and 2015 series sales revenue bonds. Currently the Additional Resort Community Sales Tax is leveraged at 25% of the annual revenue generated by the dedicated tax source. The City has nearly 15 times coverage on its three outstanding sales revenue bond issuances.

The City intends to issue nor more than 65% of revenue in debt against the municipal TRT for no more than 15-year terms.

Proposed Arts and Culture District Planning Process and Timeline
The following timeline outlines key dates moving forward:

- **July 7 - Joint Press Release** between Park City Municipal, Sundance Institute and Kimball Art Center.
- **July 11 – Community Open House** with Park City Mayor Jack Thomas and City Staff, Sundance Institute and Kimball Art Center (Community Room, Park City Library, 5:00 to 6:30 p.m.).
- **July 13 City Council Meeting,** City Staff Present:
    - Arts & Culture District Concept Plan;
    - TRT Funding Plan;
    - Letters of Intent; and
    - Purchase Agreement.
- **July 20 City Council Meeting,** City Council approve and adopt:
    - 1% municipal Transient Room Tax;
    - Kimball Art Center and Sundance Institute Letters of Intent; and
    - BPE Land Purchases Agreement.
- **July-August 2017 -** Begin joint RFP for planning and design process for Bonanza Park MPD with Sundance Institute and Kimball Art Center.
- **Aug 17, 2017** Council authorize resolution for issuance of Sales Revenue Bonds.
- **October 5, 2017** bonds parameter resolution adopted.
- **November/December - TRT Sales Revenue bond sale**
- **Jan 1, 2018 -** 1% Municipal Transient Room Tax effective date.
- **Jan 2018 –** Bonanza Park East property closing before January 31, 2018.
- **May to June 2018 – MPD process –** Intended Land purchase with MPD and vested approval rights (Sundance and Kimball).

Alternatives for City Council to Consider

1. **Recommended Alternative:** City Council should consider the following proposal to buy the Bonanza Park East property for $19.5 million for the purpose of creating the Park City Arts and Culture District.
2. Council should adopt the attached Letters of Intent between Park City Municipal Corporation and Kimball Arts Center, and Park City Municipal Corporation and the Sundance Institute for the purposed of jointly planning and developing the Park City Arts and Culture District.
3. City Council should adopt the Municipal Transient Room Tax, a one-percent tax on all overnight lodging, which will allow the first collection of the tax on January 1, 2018.
   <u>Pros</u>
   a. Allows the City to “get into the game” to effectuate the City’s redevelopment vision in Bonanza Park without sacrificing core “Keep Park City Park City” values;
   b. Addresses City Council’s Transportation, Housing & Energy Goals;

c. Creates an arts and cultural area with opportunities and relevancy for locals and visitors;
d. Takes advantage of the easiest lateral economic move possible; stick with tourism and augment skiing with arts & culture tourism while creating an area locals can enjoy.
e. Adoption of the transient room tax in July will allow the City to issue Sales Revenue Bonds sufficient to close on the property by no later than January 31, 2018 and begin the joint planning process in July.

Cons

a. May not allow time for a comprehensive evaluation of all other future potential economic opportunities that Park City could pursue;
b. Would require City Council take quick action with short period for public input. Extensive public impute will be taken during the planning process (MPD).
c. While a key location in the center of Park City, 5.25 acres is limited when evaluating all potential needs and uses in the context of the City's goals.

Funding

Funding of the proposed Park City Arts and Culture District are outlined above and would come from a combination of City funds including a 1% Municipal TRT, Transportation and Parking Fund, and designated affordable housing funds. The District will also be funded through a public private partnership with the Sundance Institute and Kimball Art Center who intend to fund the entirety of building design, land and building construction costs related to each respective building in the District. The Arts and Culture Master Plan Development (MPD) will be a joint City, Sundance, Kimball process that will include public outreach and follow the process required in the Park City Budget Procurement and Contracting policy. Funding for the MPD process will come from the Bonanza Park Development project as adopted in the City Budget and 5-Year Capital Improvement Plan.

Furthering the Goals of the General Plan

The Natural Setting chapter of the General Plan discusses the length the impacts of climate change on many aspects of Park City, including our economy. Goal Number 6 of the General Plan states: Climate Adaptation: Park City will implement climate adaptation strategies to enhance the City's resilience to the future impacts of climate change. http://www.parkcity.org/home/showdocument?id=12386 page 62

In the Sense of Community chapter of the General Plan also specifically discusses the idea of a "Film Festival Campus/Center" under a section titled "Strategy: Year-Round Economic Generators" http://www.parkcity.org/home/showdocument?id=12371 page 106

Lastly, in the aforementioned chapter of the General Plan, there is a section titled "Strategy: Attracting and Retaining the Creative Class" http://www.parkcity.org/home/showdocument?id=12371 page 112

Furthermore, Arts & Culture are one of the keys to a Complete Community: http://www.completecommunities.org/ answers the question "What is a complete community?" as follows:

We define a Complete Community as one that incorporates elements that contribute to the quality and character of the places where people live, work, move and thrive.

- **LIVING** - TO CREATE AND PRESERVE COMMUNITIES THAT PROVIDE AFFORDABLE HOUSING, INTEGRATED TRANSPORTATION SYSTEMS, AND QUALITY EDUCATION

- **WORKING** - TO ENHANCE REGIONAL ECONOMIC PROSPERITY THROUGH JOBS, TRAINING AND EDUCATION ACCESSIBLE TO PEOPLE WHICH ARE DESIGNED TO RETAIN AND ATTRACT NEW BUSINESSES

- **MOVING -** TO PROMOTE INCREASING AND IMPROVING MOVEMENT AROUND THE REGION USING PUBLIC TRANSIT, ELECTRIC CARS, AND ENCOURAGING WALKING AND BICYCLING TO ACHIEVE BETTER PHYSICAL WELL-BEING

- **THRIVING** - TO SUPPORT COMMUNITIES THAT PROVIDE ACCESS TO HEALTHY FOODS, ARTS, RECREATION, AND ENTERTAINMENT, WHICH MAKE US HAPPY AND FEEL MEANINGFUL THROUGH ACTIVE CIVIC ENGAGEMENT

Attachment

A – Lodging Comparison
B – Kimball Art Center Letter of Intent

Attachment A

Total Lodging Tax - Park City and Summit County*		
City/Town	Total Lodging Sales Tax Rate	*Rate Including 0.32% Statewide TRT (effective Jan. 1, 2018)
St Louis, MO	17.93%	17.93%
Columbus, OH	17.50%	17.50%
Chicago, IL	17.40%	17.40%
Knoxville, TN	17.25%	17.25%
Indianapolis, IN	17.00%	17.00%
Houston, TX	17.00%	17.00%
Kansas City, MO	16.85%	16.85%
San Antonio, TX	16.75%	16.75%
Atlanta, GA	16.50%	16.50%
Cleveland, OH	16.50%	16.50%
Lincoln, NE	16.48%	16.48%
San Francisco, CA	16.33%	16.33%
Wichita, KS	16.25%	16.25%
Louisville, KY	16.07%	16.07%
New Orleans, LA	15.75%	15.75%
Los Angeles, CA	15.69%	15.69%
Seattle, WA	15.60%	15.60%
Shreveport, LA	15.60%	15.60%
Baltimore, MD	15.50%	15.50%
Philadelphia, PA	15.50%	15.50%
Portland, OR	15.30%	15.30%
Charlotte, NC	15.25%	15.25%
Nashville, TN	15.25%	15.25%
Santa Fe, NM	15.19%	15.19%
Milwaukee, WI	15.10%	15.10%
Stamford, CT	15.00%	15.00%
Little Rock, AR	15.00%	15.00%
Detroit, MI	15.00%	15.00%
Dallas, TX	15.00%	15.00%
Denver, CO	14.75%	14.75%
New York, NY	14.75%	14.75%
Washington, DC	14.50%	14.50%
Boston, MA	14.45%	14.45%
Mammoth, CA	14.00%	14.00%
Mobile, AL	14.00%	14.00%
Honolulu, HI	13.96%	13.96%
Oklahoma City, OK	13.88%	13.88%
Moab, UT	13.85%	14.17%
Kanab, UT	13.20%	13.52%
Brian Head, UT	13.20%	13.52%

Alta, UT	13.10%	13.42%
Sandy, UT	13.10%	13.42%
Miami, FL	13.00%	13.00%
Salt Lake City, UT	12.60%	12.92%
Midway, UT	12.60%	12.92%
Provo, UT	12.60%	12.92%
Park City, UT (with City TRT 1.00% & State .32% TRT)		12.77%
Crested Butte, CO	12.50%	12.50%
Park City, UT (with new City TRT 1.00%)	12.45%	
Ogden, UT	12.35%	12.67%
Bryce Canyon, UT	12.30%	12.62%
Sun Valley, ID	12.00%	12.00%
Napa, CA	12.00%	12.00%
Price, UT	11.85%	12.17%
Vernal , UT	11.80%	12.12%
Breckenridge, CO	11.68%	11.68%
Steamboat Springs, CO	11.65%	11.65%
St George, UT	11.60%	11.92%
Heber, UT	11.50%	11.82%
Park City, UT (Current)	11.45%	11.77%
Aspen, CO	11.30%	11.30%
Beaver, UT	11.20%	11.52%
Logan, UT	10.60%	10.92%
Monterey, CA	10.50%	10.50%
Telluride, CO	10.40%	10.40%
Wasatch County, UT	10.20%	10.52%
Stowe, VT	10.00%	10.00%
Placer County, CA	10.00%	10.00%
South Lake Tahoe, CA	10.00%	10.00%
Vail, CO	9.80%	9.80%
Wendover , UT	9.70%	10.02%
Summit County, UT (Current)	9.55%	9.87%
Jackson, WY	8.00%	8.00%
Bozeman, MT	7.00%	7.00%

***Effective January 1, 2018 - A Statewide Utah TRT of .32% will be collected**

Sales Tax on Groceries - Park City & Summit County	**3.00%**
Sales Tax on all other Goods and Services - Park City	**7.95%**
Sales Tax Restaurants - Park City	**8.95%**

LETTER OF INTENT BETWEEN PARK CITY MUNICIPAL COPORATION ("PCMC") AND THE KIMBALL ART CENTER ("KAC").

(PCMC and KAC may be referred to individually as a "party" and collectively as "parties.")

July 6, 2017

RE: DEVELOPMENT OF THE PARK CITY ARTS AND CULTURE DISTRICT (the "District").

This Letter of Intent ("LOI") outlines the agreement of the parties to participate in the development of the District. This LOI will facilitate PCMC's adoption of a Municipal Transient Room Tax, pursuant to Utah Code § 59-12-3A et seq, as amended, and the approval of the Bonanza Park East purchase agreement. The parties intend to create the District in conjunction with the Sundance Institute ("Sundance") and to that end PCMC will be entering into a similar LOI with Sundance.

The below terms are agreeable to the parties and the parties intend as follows:

- PCMC shall notice the purchase agreement for the Bonanza Park East property (see image attached hereto as Exhibit A) and enactment of a 1% Municipal Transient Room Tax for the purpose of acquiring Bonanza Park East for public hearing on July 13, 2017, with possible action on July 20, 2017.
- PCMC shall issue debt against the sales tax revenue generated by the tax.
- PCMC shall close on the acquisition of Bonanza Park East no later than January 31, 2018.
- PCMC, KAC and Sundance shall participate in the joint planning and design of the District with the intention of obtaining the approval of a Master Planned Development ("MPD").
- The MPD process before Planning Commission and plat amendment before City Council shall run concurrently. Either party or KAC may decide to jointly or independently proceed with detailed architectural planning of their individual building(s) consistent with the MPD process at their own expense.
- PCMC shall issue a Request for Proposal ("RFP") for the site plan, engineering and design component of the MPD. PCMC, at KAC's request, may include a project scope alternative for additional design/architectural services for and to be paid by KAC.

- Subject to compliance with PCMC budget contract policies, the RFP for the MPD consultant(s) shall be approved by PCMC, Sundance and KAC by consensus vote.
- In planning and developing the District, all parties acknowledge that a central purpose of the District is to inspire creative expression and therefore agree to strive for a design of such District that is artistically and architecturally significant, so long as such design complies with City code.
- PCMC shall be the applicant and shall pay all costs associated with the MPD application and design costs of plans sufficient for a complete application. KAC may at its own cost procure additional detailed plans concurrently, including individual architectural plans of its Facilities.
- The MPD will adhere to the General Plan and Park City Land Management Code. No application for height exceptions are contemplated at this time.
- Once the MPD is approved and KAC has vested approval rights, KAC shall purchase from PCMC all land connected with and/or appurtenant to its new art center ("Facilities") as determined in the joint MPD process at a projected cost of $2,925,000 for approximately 15% of the site or 34,230 sq. ft. at $85.5 per square foot.
- PCMC shall reserve an easement in the sale of land to KAC for the purpose of constructing underground parking, utilities and common facilities. PCMC shall be responsible for any environmental site remediation as part of the Parking Easement and Purchase Agreement.
- KAC will act as an anchor destination, along with Sundance, and will be located prominently in the District.
- KAC's Facilities shall include a building consisting of office space, galleries, studios, kiln rooms, photo labs, a gift shop, a restaurant/café, and similar amenities (approximately 30,000 to 40,000 sq. ft.). KAC shall cover the full cost of building and engineering/design costs associated with its Facilities.
- KAC shall coordinate Facility design with overall master plan and parking design.
- The parties shall consider additional, creative ways to support the anchor tenants and future success and activities of the District in a continuous way, such as a management board supported by a percentage of annual transient room tax revenue.
- KAC shall reserve the right to sell any land purchased by KAC within the District should KAC determine in its sole discretion that it is not able to construct its Facilities. PCMC shall have a right of first refusal to purchase the land at the same price as that paid to PCMC by KAC.
- PCMC shall construct office and retail space, restaurants/cafés, event spaces, plazas, public ingress and egress, public art, nonprofit space complimentary to the District, affordable or attainable housing, and an innovation technology center or innovative food concept center, etc. (approximately 60,000 to 90,000 sq. ft.).

- PCMC shall construct, own, maintain, and operate approximately 400 parking stalls, including underground, surface and aboveground structured as determined necessary to serve the District by the MPD.
- PCMC shall construct and operate a transit connection hub within or adjacent to the District.
- PCMC shall retain ownership, management and control of all parking for the facilitation of the District.
- KAC shall pay an agreed rental amount to PCMC from the date of PCMC's closing on the Bonanza Park East property, or until such rents are assigned to PCMC, until KAC discontinues its operations from 1401 Kearns Blvd.
- PCMC shall hold all rents received from KAC and apply them as a credit towards the purchase by KAC of the land used for its Facilities.
- KAC and PCMC agree to renegotiate the Master Festival License Agreement dated December 19, 2016 between PCMC and KAC to incorporate, among other things, use of the new Facilities, special event use of flex plaza space, City parking, transportation, traffic mitigation, and new effective dates. The parties expect to complete and approve such amendments prior to closing on the purchase of KAC land for its Facilities.
- PCMC shall continue to assist KAC in its efforts to pursue other state and local government financial support of the KAC.
- PCMC shall use best efforts to find joint solutions with KAC to address increased challenges facing employee/artist housing.
- PCMC, KAC and Sundance shall review, approve and participate jointly in any relevant press and media releases and the parties intend that neither they nor KAC shall individually issue any such release.
- PCMC approval of this LOI is contingent upon the approval by the Park City Council at an open, public meeting (currently scheduled for July 20, 2017).

This Letter is intended to be a *nonbinding statement* and preliminary concept of the terms of the proposed transactions. It is subject to the preparation of the final purchase contract and any other documents reflecting the final agreement of the parties.

Accepted and agreed to by:

Kimball Art Center:

By: _____

Its: BOARD CHAIR

Park City Municipal Corporation

By: _____

Its: City Manager

EXHIBIT A

BPE Property

Aerial view of 5.25-acre parcel to be purchased by City

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Executive
Item Type: Staff Report
Agenda Section: CONSIDERATION OF MINUTES

Subject:
Consideration to Approve the City Council Meeting Minutes from June 15, 2023

Suggested Action:

Attachments:
June 15, 2023 Minutes

PARK CITY COUNCIL MEETING MINUTES - DRAFT
445 MARSAC AVENUE
PARK CITY, SUMMIT COUNTY, UTAH 84060

June 15, 2023

The Council of Park City, Summit County, Utah, met in open meeting on June 15, 2023, at 3:00 p.m. in the City Council Chambers.

WORK SESSION

FY24 Fee Schedule, Changes to the Tentative Budget and FY23 Budget Adjustments:

Jed Briggs and Penny Frates, Budget Department, presented this item. Darrington stated there were a few updates to the fee schedule since this item was last discussed with Council. There would be a $150 fee-in-lieu per U-rack for bike parking, a 10% increase for the water pumping surcharge, a new meter purchase price, and an increased renter water deposit. Council Member Rubell asked why there was a fee-in-lieu since the City wanted to move away from those. Rebecca Ward explained the fee-in-lieu was created for cases where there were no setbacks for bike racks.

Frates stated there were some additional operating budget requests, including increased funds for winter trail maintenance, rolling special service contract funds to FY24, and reclassing a Planner I to a Senior Planner. There were also requests to increase the pay range for Transit drivers, supervisors, and dispatchers; and there was an increase to the Workers' Compensation Fund. She indicated a few departments needed FY23 year-end budget adjustments, including an increase in Recreation for credit card fees, Trails for maintenance, Transportation for the Richardson Flat route and fuel adjustments, and the Self-Insurance Fund to align with year-to-date actuals.

Daenitz indicated a grant was received and the capital expenses were released. He also noted Library funds were moved from one project to the next. There was also a reduction in Transit expenses so they would be recognized in operations. He noted Legal software was capitalized. Council Member Dickey asked what the Meadows Drive Trailhead was. Deters indicated it was located on Aspen Springs.

Briggs asked if Council wanted to consider a budget allocation for childcare. He looked at one-time funding and suggested the following: delaying some projects, using some of the City's Capital Fund balance, reallocating some of the Operating Budget, or using some of the General Fund balance. He cautioned if this program evolved into an ongoing program, then ongoing revenue should be identified. The Council agreed they

wanted to fund childcare in FY24. Mayor Worel stated the Council was comfortable allocating $1 million. Council Member Gerber hoped to allocate the money without having to give up the Bonanza Park funding. Matt Dias, City Manager, stated the Budget Team chose the Marsac Remodel, Bonanza Park/RMP Substation, Capital Fund balance, and Operating Fund reallocation in order to have the least impact to the City. The packet included other pockets of money that could be used. Council Member Rubell stated the March sales tax revenue was exceeded by over $900,000. He asked if that played into Operating reallocation. Briggs stated the sales tax revenue was trending higher, but the FY24 budget was increased in anticipation of those increased revenues. Council Member Rubell stated the City was up $3 million so far this year and Council might be trying to solve a problem that didn't exist.

Council Member Toly asked how much of the FY23 budget needed adjusting. Briggs stated he understood the thought that sales taxes were higher and if Council wanted to allocate from that, it could happen by taking it from the Capital Fund balance. He was also ready to make sacrifices. Council Member Doilney thought the Council could use some money from projects that would not happen this year. Dias stated staff considered taking funds from the Capital fund, but they decided against that. After some discussion, Briggs summarized $200,000 would come from the Marsac remodel, $100,000 from the Social Equity fund, $350,000 from the Bollards Project, and $350,000 from the Capital Fund balance. The Council agreed to that allocation. Dias indicated a lot of work went into getting to that number and he thanked the Budget Team for analyzing how to minimize impacts to staff. This was a one-time allocation, but an internal committee was formed to scope out an ongoing program. Briggs stated he would add the additions to the final budget.

Briggs discussed the proposed General Obligation (GO) bond for recreation facilities. He explained the debt schedule would drop dramatically in the next 15 years so a new bond would not increase property taxes. Council Member Dickey asked what debt was falling off, to which Daenitz stated there was a 2009 bond that was ending. There were also bonds that were refinanced to lower interest rates and that reduced the debt payment. Daenitz displayed other entities' debt in the region. Council Member Rubell was concerned that the City took on debt for regional use. Daenitz stated most of the debt was for open space and he acknowledged it could be used by regional users. Council Member Rubell asserted new debt for recreation facilities would be used regionally as well.

Briggs displayed the scenarios shown at previous meetings of projects that would be funded by the City and options of projects that could be on a GO bond. Council Member Gerber asked if the City Park building and the aquatics improvements could be on the GO bond as well. She suggested using the $6 million saved from aquatics for future childcare funding. Briggs noted this was one-time funding. He thought childcare funding would be an ongoing priority, and it needed ongoing funding. Council Member Gerber suggested options for the future of childcare. Council Member Doilney stated the

Recreation Advisory Board (RAB) discussed the recreation needs extensively and the reason the City Park building and aquatics were funded through the budget was because existing infrastructure needed City support. In the past, the community pushed back on maintenance bonds. For those reasons, the items were left off the bond. The MARC expansion, pickleball facility and outdoor ice would be used regionally, but Basin Rec was expanding as well, and Park City residents were using those facilities. He supported putting all three projects on the ballot. Council Member Rubell supported leaving it to the voters to decide, but he thought the bond might fail if it was for $30 million. He didn't hear a lot of support for the MARC expansion. He was concerned about the pickleball facility and the National Abilities Center (NAC) concern. He supported the ice sheet and pickleball courts going on the ballot for $20 million. Council Member Toly stated the property tax increase was nominal between the options and she supported having all three facilities on the ballot. Council Member Dickey supported all three facilities being on the ballot as well. He noted Park City residents would be a minority of users. Council Member Gerber struggled with this because of the way the facilities would be used, but she supported a $30 million bond. Mayor Worel noted the pickleball community had sent the Council 53 emails in support of the GO bond that included the pickleball facility. Briggs stated he would bring a resolution supporting the GO bond to Council for adoption in July.

FY2023-24 City Manager's Recommended Budget: Budget Policies:

Kirsten Darrington, Budget Coordinator, stated the Budget team wanted to overhaul the budget policies. She highlighted some areas that were cleaned up, including clarifying fund balance thresholds for each type of fund, reorganizing different sections, consolidating policies, removing irrelevant policies, and removing items that didn't belong such as Special Event Services, Traffic Calming, and Neighborhood CIP Requests policies.

Council Member Rubell was concerned with the settlement authority part of the policy since there was no internal audit function within the City. With conditions around that, he could support it. Council Member Doilney was comfortable with the policies as written. Council Member Gerber was comfortable with the changes and noted staff could continue to work on the pieces that concerned Council Member Rubell. Council Member Dickey thought they seemed straight forward. He thought it would be important to bring it back and discuss the policies individually. Council Member Toly supported passing the policies as written. Briggs stated they would include it with the final budget adoption. He noted they could go through it in more detail at a future date. Council Member Rubell asked to look at the Economic Development Grants and the Settlement Authority. He hoped for period reporting on the settlements so there was transparency. Daenitz stated this summer, an Economic Development intern would study and revise the Economic Development program and compare it with other cities' practices.

Margaret Plane proposed adding a sentence to the Settlement Authority to get to a reporting function sot the Council could evaluate how it was working. Council Member

Gerber stated there were lease discussions regarding the library and she thought some of the Economic Development grants could be used for the leases. Daenitz stated he couldn't answer that question now. Briggs indicated the current policy was about business incentive, but there was funding in the Lower Park Redevelopment Agency (RDA).

Bonanza Flat Conservation Easement and Adaptive Management Plan Update:
Heinrich Deters, Trails and Open Space Manager, and Wendy Fisher, Utah Open Lands, presented this item. Fisher reviewed that the adaptive management plan was required to be reviewed no less than every five years. She thought it was valuable to look at the plan now. This plan was a toolbox for sustainable management, including conservation values. Within the plan there was conceptual trail design as well as Nordic skiing. Fisher stated some challenges included heavy use of the roads. The plan had detailed requirements for trailhead capacity. Parking areas were created to help with overparking. Enforcement was key to the success of this issue. Another challenge was trash and that was no longer a problem. Motorized vehicles in the area was a continuous challenge. Mayor Worel asked what was done when someone was illegally parked. Deters stated the car owner would receive a civil citation. Fisher indicated these issues seemed minor, but they had consequences for the area when there was disregard for the regulations.

Fisher stated part of the sustainable design was working with Mountain Trails Foundation. They found manmade trails that caused erosion, cut through wetlands, and affected wildlife. She noted there was a lot of work and science that went into restoration and conservation. They were relocating trails and restoring other areas to the original landscape. She stated the yurt deck would be replaced and she indicated it would be reduced in size. It would include a kiosk and a QR code so people could learn the history and ecology of the area.

Fisher referred to the six parts of the plan and wanted to return to Council and discuss the considerations, management zones, and adaptive management sections of the plan later. She thought the best way to revamp the plan was to have great understanding and communication. Mayor Worel asked if there was interest in using the plan from the other side of Bonanza Flat to keep cars from coming up. Fisher stated there was a state program, Guide the Growth, and she hoped to discuss Transit to Trails with other entities.

Council Member Rubell commented that at the last discussion, it was indicated a working group with Brighton Estates would be set up, but this had not happened yet. Fisher stated she had met with them twice and would meet with them again on June 22nd. She wanted to get feedback from Council on whether they wanted to move forward on changing the adaptive management plan. She also asked if Council wanted them to form a jurisdictional or technical stakeholder group. Deters stated he heard direction to follow the template on the next trail and finish the trail to Pine Canyon. He

was committed to meeting with that group and he would walk the trail with them as soon as the snow melted. Regarding access, Council Member Rubell indicated people at the Colorado Association of Ski Towns (CAST) meeting had similar experiences with trailhead problems and they used a vendor to reach solutions. They implemented a pay program to access the trail. He asked if those things could be looked at as well. Fisher stated that could be part of the consideration as the plan was reviewed. It was difficult because the land was in Wasatch County and getting parking under control was the first issue. Council Member Gerber stated there were discussions on trail permits, and it seemed permits would be more effort than benefit. She knew the area was being overused and she thought it would be good to look at paid parking or taking a shuttle. Fisher stated they were planning on offering a permit to use one of the trails, and noted there was interest in having parking permits as well. Council Member Gerber suggested having parking permits on peak weekends at a minimum.

Council Member Doilney was concerned with the level of management put up there. He knew there was overuse and it needed to be looked at, but he felt some of the oversight didn't make sense. Council Member Toly thought the rangers and tickets had been very helpful in the past year. The parking rails also helped. She suggested monitoring it for another year and pushing Transit to Trails or trying microtransit to get people to the trails. She noted more enforcement would mean hiring more rangers. Council Member Rubell stated planning needed to start this year for future management. Council Member Toly didn't want to charge residents to use Bonanza Flat. Council Member Rubell agreed but thought others should contribute. He asked to hear from experts on the feasibility of charging. Council Member Dickey supported having management conversations for managing trail capacity and parking. Council Member Gerber thought some kind of additional management would be valuable for residents as well. Council Member Doilney indicated this would be a snowball effect in that they would start the process and it would become more complicated as time went on. Staff would be required to enforce a lot of land.

Fisher summarized they would look at what other communities were doing and have an effective chart of use. Deters added they would provide additional management options. Matt Dias noted they should begin to have stakeholder meetings. Fisher asked if Council wanted jurisdictional and technical stakeholder groups and noted it was a little premature since they hadn't collected the data. Council Member Toly stated Fisher couldn't explore the trails with Brighton Estates residents and make a trail plan since there was still so much snow. But that was different than having a technical stakeholder group. Council Member Gerber suggested taking a hike with the Greater Park City Concerned Citizens group to increase understanding, but she wanted it to be clear that it wasn't the technical or jurisdictional groups. Mayor Worel directed Fisher not to form groups at this time.

Discuss a Relaunch of the Microtransit Pilot Program:

Sarah Pearce, Deputy City Manager, Alex Roy, Senior Transportation Planner, and Joe Martin and Krista Glotzbach, Via, the contractor for High Valley Transit (HVT), were present for this item. Pearce reviewed the last discussion on microtransit and noted Council recommended coming back with costs for a summer program. Martin suggested having a longer pilot, noting Via didn't run service for a shorter period than six months. It would also give them more time to analyze the program. The proposal would run through the middle of April 2024. They would break down the service into peak periods and non-peak periods. He indicated if demand decreased, they could pull drivers off the road. The service would start Sunday, July 2nd, and run through April 13, 2024. Martin explained the benefit of having one app, and he recommended using the HVT app. He was willing to customize the service to Park City's needs. Regarding the app, he stated the City's fixed-routes could be on there as well as microtransit.

Roy reviewed Council requested goals on what microtransit should achieve. He displayed six proposed goals, including Citywide access to public transit, increase transit ridership by connecting riders to fixed routes, provide free door-to-door service Citywide, reduce parking demand, provide transit to neighborhoods without fixed route service, supplement peak demand service by providing microtransit in the winter only, and cost efficiency. Roy also wanted to tie the goals into the larger transportation goals which included prioritizing transit, reducing traffic congestion, and protecting residential neighborhoods.

Council Member Dickey favored the service starting in July. It would give the City a sense of summer demand and the data would help the City know if it would be feasible to have microtransit in-house. Council Member Toly was glad parameters for Park City could be different than for Summit County. She hoped to get this service to the trails.

Council Member Rubell wanted to have microtransit go to RFP eventually. Regarding goal proposals, he didn't want free door-to-door service, but he agreed it should go to trails. He supported Citywide access to transit, and felt reduced parking demand was good too. He wanted extended hours with microtransit that would prop up transit in the shoulder seasons when service hours were reduced. He was in favor of continuing the service with HVT as long as it could be customized to Park City. Council Member Doilney agreed and hoped the City could learn from data collected in the summer. He thought learning would continue the more the service was used. He supported an RFP eventually but thought more data was needed.

Council Member Gerber favored Citywide access but not door-to-door service. She noted Aspen had a free service within a limited area and a subsidized service outside the area. It encouraged people to get out of their cars. She requested data on single occupancy use. She wanted to learn from this to see if the Purple line could be increased to every 15 minutes. Council Member Toly stated a concern was that hotel guests were using microtransit instead of the hotel shuttles. She hoped that could be tracked. Martin stated currently there was not a field to know if users were tourists or

residents, but he thought that field could be added. He noted rider surveys could also collect that information. Council Member Dickey thought that would be a good configuration change. Council Member Toly was in favor of continuing the program.

Caroline Rodriguez, HVT, added they could work with the City team to determine what a threshold could be to determine who was going to that destination until the app could be updated. Roy asked about the timing of issuing the RFP. Council Member Rubell stated staff could determine when they would be able to implement the service and then issue the RFP in coordination with that date.

REGULAR MEETING

I. ROLL CALL

Attendee Name	Status
Mayor Nann Worel Council Member Ryan Dickey Council Member Max Doilney Council Member Becca Gerber Council Member Jeremy Rubell Council Member Tana Toly Matt Dias, City Manager Margaret Plane, City Attorney Michelle Kellogg, City Recorder	**Present**
None	**Excused**

II. APPOINTMENTS

1. Appointment of Terri Smith and Kara Beal and Reappointment of Sam Osselaer, Pam Bingham, and Lara Carlton to the Park City Public Art Advisory Board (PAAB) with Terms Expiring June, 30, 2026:

Jenny Diersen, PAAB Staff Liaison, stated they received 13 applications for the board. She thanked Jennifer Gardner and David Nicholas for their service on the board.

Council Member Gerber moved to appoint Terri Smith and Kara Beal and Reappoint Sam Osselaer, Pam Bingham, and Lara Carlton to the Park City Public Art Advisory Board with Terms Expiring June, 30, 2026. Council Member Doilney seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

III. COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF

Council Questions and Comments:
Mayor Worel noted a toddler was almost hit by an e-bike on a trail and she thought this was not uncommon. She asked for a discussion on the e-bike policy. The Council agreed to have a future discussion on this matter.

Staff Communications Reports:

1. FY 2023 Fraud Risk Assessment:
Council Member Rubell asked for a discussion on an internal audit in the City since the City dealt with $300-$500 million per year on average. He thought it would help evolve the function of the City and be transparent to the community. Council Member Toly wanted to know how much the audit would cost. Council Member Gerber asked if the City did an internal budget audit annually, to which Matt Dias affirmed. Council Member Rubell stated the City did an external audit with a third-party auditor. He asked that the benefits of an internal audit versus an external audit should be part of the discussion. The Council members favored having a discussion.

2. April 2023 Budget Monitoring Report:
Council Member Rubell appreciated the percentage variances being included in the report.

3. Bonanza Park Temporary Parking:
Council Member Rubell stated there were a lot of parking uses proposed and an area for 85 spaces for general use, and he wanted to know what the strategy was. Matt Dias stated there was a lot of infrastructure, redevelopment, and a waterline project in the area. There was also private redevelopment in the area. While the projects were occurring, those needs could be accommodated. Council Member Rubell asked if this was a pilot to see how it would work as a central parking location. Dias replied the data would be taken into analysis and noted it would be nice to have managed parking. Council Member Rubell thought it would be great to consider the area as a staging area for the microtransit service.

IV. PUBLIC INPUT (ANY MATTER OF CITY BUSINESS NOT SCHEDULED ON THE AGENDA)

Mayor Worel opened the meeting for any who wished to speak or submit comments on items not on the agenda.

Carrie Dennis, 84098, asked Council to vote for the arts district. She was a Kimball Art Center (KAC) board member and indicated it was a passion for her family. She was grateful for everything KAC did for her family and stated the district was essential for vibrancy in the community. It touched every demographic.

Sean Parker stated bollards were rated. The Upper Main Street project included bollards and he was concerned the contractor would choose the cheapest one. He also noted security was an issue with this project because there was a big hole to the east of the bollards. He thought the project was poorly managed and thought it should be cancelled.

John Kenworthy 84060 thanked the Council and especially Mayor Worel for their trust in him as a Planning Commissioner. He stated being in public service took a toll on folks. He apologized to Council Members Doilney and Gerber if he crossed the line. He read a quote that kindness and love are the only things that are eternal.

Taylor R. Lee worked in 84060 and lived in 84098, related daycare concerns and noted her friend's daycare costs were doubling. She knew this was an issue for the community. If she didn't have childcare, she couldn't have her business in town. If solutions could not be arrived at, there would be negative consequences.

Michelle Crittenden updated Council on Community Cares about Kids. She worked in healthcare and wanted to continue working in her field. It was impossible to live and work here if daycare was not accessible.

Joe Cronley eComment "I wanted to give you some input as you prepare to make a decision on recreation projects funding and bonding. I am an active hockey player. I play in the Silver League at the Park City Ice Arena (PCIA). My son JB is 14 years old and plays hockey in the Park City Ice Miners organization. He has played in this organization for the past 10 years. Needless to say, we know the PCIA and the ice schedule quite well. The community is in need (I won't say dire) of more ice for hockey, figure skating, curling, birthday parties, and other activities and events. The current ice sheet is programmed from 6am to 11:59pm nearly daily. I actually believe the necessary solution is another indoor rink, but I know that another indoor ice sheet is not what the Recreation Advisory Board (RAB) is recommending. Given the options that the RAB has put forward, I encourage you to choose Scenario A, B, or C. All of these options include construction of a new outdoor covered, refrigerated ice rink funded by a General Obligation (GO) bond that would increase annual property taxes by a very reasonable and manageable amount. Additionally, an outdoor rink would give tourists another fun, outdoor activity to choose from when they have had enough skiing. Options A, B, or C would be a step in the right direction."

Mayor Worel closed the public input portion of the meeting indicated the Council allocated $1 million for childcare and the details on how that would be spent would be forthcoming.

V. CONSIDERATION OF MINUTES

1. Consideration to Approve the City Council Meeting Minutes from May 25, 2023:

Council Member Gerber moved to approve the City Council meeting minutes from May 25, 2023. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

VI. CONSENT AGENDA

1. Request to Authorize a Construction Agreement, in a Form Approved by the City Attorney, with Hidden Peak Electric Co., Inc. Not to Exceed $178,950.00 to Install Two 150 kW ABB Bus Chargers, Six ABB Power Dispensers, and One Precast Concrete Vault at the Transit Bus Barn at 1053 Iron Horse Drive:

Council Member Rubell moved to approve the Consent Agenda. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

VII. OLD BUSINESS

1. Deer Valley Development Company Petition for the City to Vacate Portions of Right-Of-Way on Deer Valley Drive West and South, and to Dedicate Doe Pass Road to the City, as Part of the Snow Park Village Base Area MPD and Subdivision Application. No Action Will Be Taken:

Alex Ananth, Senior Planner, presented this item and summarized the MPD application and amendments. She distributed a table summarizing the details of the amendments throughout the years. She noted the eighth amendment in 2001 changed the Deer Valley (DV) MPD to what it looked like today. The 12th amendment gave density by combining a couple parcels. She explained a vacation of right-of-way (ROW) was a discretionary act and required findings of good cause and that neither public interest nor any person would be materially inured by the vacation.

Todd Bennett, Hannah Tyler, and Wade Budge, DV, were present for this item. Bennett stated his team took great care to deliver an exceptional development for their guests and more. The plan would improve transportation, grow affordable housing and address other community priorities. They would improve the integration of the Snow Park area and make it a benefit to the community. It would have a park and a childcare center. Tyler gave additional detail on how they would deliver substantial community benefits. They would create a shared mobility lane, have multi-use pathways, and increase rider safety by constructing a transit hub. They would also improve guest and public access.

There would be direct access to the mountain transportation network, streamlined parking and an at-grade drop-off zone. All these efforts were to reduce car trips. They would create a transit-first infrastructure with the transit hub, the gondola connection to Silver Lake Village, and would have transit agenda collaboration with PCMC and High Valley Transit (HVT). She stated affordable housing was a priority for DV. They would develop over 200 employee beds and would utilize the Affordable Master Planned Development process for this project. The project would be within a half mile of essential services. DV recognized there were other issues in the community, one of which was childcare so they would expand their childcare program and preschool to increase the overall capacity. They would also develop a one-acre park near the DV ponds. Another community benefit was that DV would replace the public utilities as part of the project. Tyler summarized the development balanced the needs of the community as well as those of the resort.

Budge stated the way to unlock the previously mentioned benefits was the ROW vacation. The plan included elements of the General Plan. Council needed to weigh the policy. He noted if the vacation was approved, it would be conditioned on the Planning Commission approving the MPD. He stated there were now multiple ways to arrive at the resort. The code states good cause needed to be met and state law defined that as showing a legally sufficient reason. Budge stated the other standard was that the decision to vacate would not cause material harm. Harm was interpreted as denying an abutting landowner access to their property. The vacation provided access and would also have safer traffic movements, more drop-off points, and better programming and use of DV East and DV West. He noted that currently there was not a multi-modal center. Without the proposed plan, there was no room for a multi-modal center. They met the legal standards for Park City and the state. He stated having a village was preferred over having stand-alone condos.

Jeremy Searle, Wall Consultant Group, indicated they performed a traffic study for this proposal. He displayed trip generation from Snow Park traffic as well as anticipated trips with the proposed development. He indicated DV proposed 2,236 parking stalls which would increase trips by 7%. DV proposed several traffic mitigation measures, including a signal at the Y, a new left turn deceleration and acceleration lane, reducing parking demand by implementing paid parking, creating a transit hub, a new signal at Doe Pass Road and DV East, creating shared mixed lanes, and having a transportation demand management plan (TDM). Searle thought those plans would decrease trip generations. Of the concerns presented by WCG, DV addressed and solved all those concerns. He recommended the following: having a regular TDM meeting schedule, implementing a monitoring system, establishing clear goals that could be tracked and measured, being flexible to try new methods, considering paid parking and reconsidering the parking reduction with offsite mitigations, and spacing of driveways and access widths.

Council Member Dickey asked if the gondola to Silver Lake would run winter and summer. Tyler indicated it would be in operation when the other lifts were running.

Council Member Dickey asked when the childcare would be expanded. Tyler stated that would happen in Phase Two. Council Member Toly asked if it would be a public gondola with a fee. Tyler stated the Planning Commission requested a free gondola but a DV pass would be required. Council Member Toly asked if the park would have amenities for children, to which Tyler affirmed.

Council Member Rubell stated the Bonanza housing plan was not serviced by Transit at this time, but discussions could take place regarding that. He indicated it would be great to have that area redeveloped and asked that DV work with the Transportation team regarding a potential service to the area. He also asked for impact data, such as employee generation and beds delivered. Those questions were answered in a previous memo but it was stated there was opportunity to address it when it moved to final design. Council Member Rubell asked when those questions would be answered. Budge stated those answers were getting to the Planning Commission and would continue as information was decided on. Council Member Rubell indicated the Council was asked to consider those answers for the ROW, but they didn't participate in Planning Commission meeting, so they couldn't take a wholistic view. Searle indicated there were concerns with the pickup area and DV collected data previously on average wait times. They applied the data to the current model and it showed there would be queuing but it would not go to the access or the parking garage

Council Member Rubell asked if some of the driveway alignments could be addressed. Searle stated that was about access spacing along Doe Pass and that could be refined, but it would not affect the operations of the drop off. Council Member Rubell asked if the model considered all the residential developments and hotels off DV East, ensured they would still have access, and that there wouldn't be problems with emergency vehicles. Searle stated it would not impact the driveways along that road. Council Member Rubell asked how far the mitigation for traffic backup would extend. Searle stated the City was looking at options to improve. John Robertson, City Engineer, indicated there were issues below DV that were not DV's responsibility. He was working with UDOT and looking at a bus rapid transit (BRT). The standard way of addressing congestion was to add lanes, but that was not an option for Park City. They were working on getting people on Transit to get cars off roads.

Council Member Gerber asked if dedicating the ROW would prohibit the DV gondola connection to Old Town. Tyler stated the gondola connection would be in line with a City connection, but could not happen without the vacation. Council Member Toly asked what incentives DV was considering for patrons who carpooled and also asked if efforts were being made to deter visitors from renting cars. Bennett stated they had incentives to get employees to use carpools and other modes of transportation. He thought there could be options for deterring guests from renting vehicles. Tyler stated there was a DV fleet available to guests.

Mayor Worel opened the public hearing.

Matt Nagie indicated there were other options to decrease traffic, but those were in the future. He stated the best way to reduce traffic now was to reduce the parking stalls. He felt increasing the occupancy in each vehicle would not reduce the number of vehicles.

Wes Richards, Oaks HOA President, reviewed the changes in the City over the years, and one change was increased congestion. He represented the Protect the Loop group which included 18 HOAs. He wanted to maintain the world-class resort experience. He quoted members of the Planning Commission.

Carol Chenevert stated this development was expanding and asserted there was a need for workforce housing and it should be located onsite. She thought vacating a viable ROW to improve a business was not the obligation of the taxpayers or the Council. All the benefits noted were benefits for the business and guests and not necessarily benefits for the community. Her group surveyed the community and links were sent to the HOAs and neighborhoods.

Kim Tessitore, Powder Run HOA President, stated Lower Deer Valley had a traffic problem and they sought solutions. They worked with DV and found they were working to the best of their ability to improve safety for all who go to the mountain. She stated there was no way to get to the mountain during peak days from her neighborhood and the proposed plan would now give them access. She thought it was important for Council to hear both sides of the issue.

Melyssa Davidson, Legal Counsel for Lakeside 84060, stated the Protect the Loop group members and survey respondents were not all residents. She indicated Deer Valley was already a world class resort. It was also a driver to the traffic problem. The General Plan dictates DV should maintain its status. The Lakeside community did not hear anything from DV during this process and they would be impacted. She wanted Council to look at the benefits and she thought those benefits were only to the resort and not the community as a whole.

Maureen Murtaugh asked that future hearings allow the public to address their concerns and that they might have access to give presentations like the applicant had. There were direct access impacts. She noted the walking paths were not as wide as Park City had requested and there were drop off conflicts, bike lane safety issues, etc. These were some of flaws with the plan.

Allison Keenen 84060 stated some flaws in the plan included the proposed transit hub. Big buses ran to and from DV empty. The transit hub would require skiers to walk further. The shared mobility lanes didn't run continuously around the loop. The après experience was too costly for many residents. Last year, 30 HOAs aligned to support the DV original entitlements. Now they aligned to propose an alternative solution with conditions that balanced community concerns with DV's desire to maximize profits. This would resolve injuries and would consider all of Park City.

Scott Greenberg stated the plan would ask for expanded on-demand shuttle services. He proposed terminating all buses at the Old Town Transit Center and relying on micro-vehicles with ski carriers. Fixed routes would service Silver Lake and Empire. This would save time for buses and increase efficiency. Their plan would require undergrounding part of the loop.

Angela Moschetta 84060 stated eliminating buses would eliminate the need for a transit hub. Microtransit could serve the area. The neighboring HOAs supported bike and walking paths. This would be a net zero solution. She knew DV needed year-round guests and she proposed this form of transportation, saying this would be a tangible community benefit. She proposed a traffic study, new site surveys, and onsite workforce housing.

Nathan Rafferty, Ski Utah President and CEO, supported the DV proposed development plan. He noted a huge part of state and local revenue came from this area. There was deliberate planning for the resort, and the benefits included improved transportation, housing, and community amenities. He thought there was no better example of a community partner than DV. He hoped Council would approve the proposal.

Chuck Haggerty, Solamere HOA, stated they listened to hours of Alterra presentations, but the public got three minutes of public comment. The public asked for a Plan B, but they were never given a Plan B. Making DV a three-lane road was a safety issue. The Police Department could not monitor the speeds unless they parked on the ROW. This was a huge liability for the City. He noted the park was swampland that could not be developed. They wanted to work with the City staff and Alterra for solutions and that did not happen.

John Kenworthy 84060, supported the ROW vacation. He read many traffic studies and he hadn't seen one that didn't work. There were two ways to reduce traffic. One was to hire AVOs and the other was to expand the portals. The underpass at Deer Crest was completed and was less than eight minutes from Richardson Flat. He thought parking spaces could be added to the Richardson Flat Park and Ride and a shuttle could go from there to DV via Deer Crest. This was also an easier access for those coming from the Wasatch Back. He also suggested the Old Town Lift and Silver Lake gondolas could be locations for ski school dropoffs. DV had been a great partner for over 40 years, and they would do what it took to make things work.

Becky Robertson 84060 Fawngrove Condos, stated her complex was opposed to the new development. The negative traffic impact was winter and summer. She stated nobody knew what traffic would look like in the future so predictions could not be made. The road widening project would impact Fawngrove as well. She felt the existing ROW was adequate without easements. She wanted to maintain a good relationship with DV but that required compromise.

Tanner Blackburn, Deer Crest Master Association, indicated his team dealt with the gondola during the ski season. They shared common space with DV including ski trails. From experience, DV made every effort to be good partners. Deer Crest communicated regularly with them and their feedback was well received by DV. They supported the proposed development.

Brad Olch 84060 stated everyone was in the City, directly or indirectly, because of the ski industry. He thought the proposed plan would benefit the community. The traffic problem could be reduced by using Richardson Flat as a transportation center. The gondola going to Silver Lake could also go downtown or to the transportation center, which would be great, and losing it would be a mistake. He reviewed all the projects the City invested in while he was mayor and noted the community was opposed at the time. Now, everyone loved them. He supported this project.

Ed Parigian 84060 stated the project looked good from a high level. Most of the benefits were required by the Planning Commission anyway. When the plan was looked at more closely, it would affect real people. There would be more cars and more congestion. He hoped a deal could be reached.

Tyler Mugford, St. Regis General Manager, supported the proposed development. The DV plan addressed concerns that everyone was talking about.

Jennifer Wesselhof, Chamber of Commerce President and CEO, stated the Chamber led a sustainable tourism plan and this development would embody the sustainable plan. It aligned with the City's transit plan as well. It also included gathering areas wanted by residents. Competition for tourism was real and this development would be a world class offering. Visitors contributed heavily to the economy. Success for DV meant success for Park City. She asked for Council to support the project.

Jody Whitesides 84060 stated at one time, the DV resort was open space and now the area was over-developed. This project was all about money. The assumption that traffic outside the area was not due to DV was wrong. There was a better way to make the resort world class and that was by including all the residents in the decision making.

Bob Dillon indicated he other residents worked with Stein Eriksen 20 years ago to ensure the development would not negatively impact the residents. Regarding the DV proposal, he stated the benefits would be there without the road vacation. He asked if the gondola would be lit at night and if they would be filled with liquored up people. Council needed to consider whether the City needed a beach and a gondola running year-round and at night.

Joanna Williams, 84060 Hidden Meadows HOA member, stated they were not against some development at DV. But the ROW vacation would be a mistake and would negatively impact residents of Lower Deer Valley. She thought the plan would hinder

access for emergency vehicles. She didn't support a circulation plan that would impair access to her home. She proposed building employee housing at Richardson Flat so they could take the bus to the resort. Her HOA supported Protect the Loop group.

Catherine Cimos 84060 thanked DV for the thoughtful design and community benefits. They missed the target on the main community benefit, which was traffic. She recalled when Zions National Park implemented the shuttle service and she felt that was an example of transit success. She suggested having a shuttle service from Richardson Flat to DV.

Krista Mathews 84098 supported Alterra's plan. They looked at the laws and went above and beyond in offering amenities of community value. She stated customer expectations were constantly changing. Many resorts offered the après experience and she felt that would change traffic patterns. She thought they proved good cause. They also offered benefits that addressed other local priorities, such as affordable housing and childcare.

John Phillips 84060 expressed his support for DV's application. He concurred with Commissioner Kenworthy and former Mayor Olch. He was on the Commission when the application came in and the current presentation had many revisions. He thought this plan would provide a world class ski resort and would be a benefit to the community. There would always be traffic problems. This plan would not fix everything, but it would be an improvement. He thought the plan would set up future solutions as well.

Deb Rentfrow stated there was no consideration for traffic mitigation below the Y. Traffic at Bonanza and DV was bad. The traffic analysis referenced intercept lots. She thought any intercept lots should be funded by DV. She referred to the budget discussion today, and a proposed GO bond. She suggested DV donate to the recreation facilities as a trade for the ROW. She also thought it was a threat to say there would be a condo village if the plan was not approved.

Laurel Barry, President of In the Trees, strongly urged Council to accept the alternative plan proposed by Protect the Loop. It addressed many issues with which residents had voiced their concern.

Mayor Worel closed the public hearing.

Council Member Dickey stated this plan would be evaluated for good cause and material harm and impacts. The ROW had value, but the plan did not meet good cause on its own. He stated there needed to be a dialog with DV and to take the comments from the residents and negotiate a win-win with the resort and the residents. He thought there needed to be a sizable impact for the City to give up its ROW. He wanted to put the compromise back through the public process. Council Member Toly agreed. Council Member Gerber stated this was a good direction to take. She hoped for a broader

conversation on traffic on Deer Valley Drive. She supported the suggestion made by Council Member Dickey.

Council Member Doilney heard from the public that the City needed to work with DV. There needed to be negotiation and a transparent process for moving forward and figuring out the ROW vacation. Council Member Rubell agreed in general. He didn't like the assertion that a condo village would be built if the plan was not approved. He thought the plan would be good for the community. He stated the key was community benefit. Public safety was also a priority.

Mayor Worel summarized that Council wanted to enter into discussions with DV to explore traffic and infrastructure options that were beyond what the current proposal was. The goal was to find agreement and good cause for the ROW vacation. When discussions were completed, they would come back for public input. Council Member Rubell added there were comments on injury. He asked that a legal opinion be given for people to understand what "material injury" meant.

Bennett stated they were open to having discussions with Council and to serve the City the best way possible. Mayor Worel indicated she and two Council members would be in on those discussions as well as key staff. She asked if Council was willing to step away as the appeal authority if necessary. Council Member Rubell asked for a summary of the Planning Commission discussion on that. Margaret Plane indicated they forwarded a positive recommendation to consider a code amendment that would remove Council as the appeal authority for MPDs and CUPs. Staff suggested using an appeal panel, appointed for three-year terms. Council Member Rubell wanted to wait on this application until the Council approved the code change and then apply it to this application as well. Plane stated the current discussions could make it so Council would be unable to sit as the appeal authority. Council Member Doilney wanted to eliminate any potential impropriety. There was consideration to be had on this deal. For this item, he did not want to sit as the appeal authority if DV was entering into discussions with the City. Council Member Gerber agreed with Council Member Doilney. She wanted to make it clear Council didn't want to be the appeal authority on this application. Council Members Dickey and Toly supported the global change of not having appeal authority.

2. Consideration to Authorize the City Manager to Execute a Construction Contract Amendment with Geneva Rock in a Form Approved by the City Attorney Not to Exceed $577,282 for a Total Contract Amount of $2,727,646 for Rossi Hill Roadway Improvements:

John Robertson, City Engineer, presented this item and reviewed that there was a contingency up to 10% of the project to fund change orders. For this contract, the contingency was $250,000 and the change order exceeded that number. Waterlines were discovered and they needed to be moved. Also, neighbors had stormwater issues and the drain was moved. Weather-related conditions were also problematic. The crew

needed to stabilize soils as well. He noted the project was under the estimated budget even with the addendum.

Mayor Worel asked if the problems were from having bad waterline information, to which Robertson affirmed. He added there were underground streams that made the soil unstable as well.

Mayor Worel opened the public input. No comments were given. Mayor Worel closed the public input.

Council Member Rubell stated the City needed to get a handle on these construction projects. He wanted to see a table of the projects with schedules and amendments.

Council Member Rubell moved to authorize the City Manager to execute a construction contract amendment with Geneva Rock in a form approved by the City Attorney Not to exceed $577,282 for a total contract amount of $2,727,646 for Rossi Hill roadway improvements. Council Member Doilney seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

3. Consideration to Approve the 2023 Level Five Special Event Permit for the Park City Kimball Arts Festival (PCKAF) Supplemental Plan:

Jenny Diersen and Chris Phinney, Special Events, and Hillary Gilson, Kimball Art Center (KAC), presented this item. Diersen indicated one major change was that Richardson Flat would be utilized with more frequent routes during the festival. There would also be transit from the high school, Park City Mountain, and Deer Valley Resort. The current fee estimate was approximately $172,000. Anything over that amount would be paid for by KAF.

Gilson reviewed programming updates, including an expanded Local's Night to include all Main Street employees, highlighting local and emerging artists by putting banners on the booths, having three new "Best in Show" awards, having live screen-printing during the festival, and having a design contest for Utah-based artists. They would also increase the number of student art murals from three to four. Gilson explained the material changes, including signage on both sides of the Main Street bridge, moving artist and volunteer lounges to Treasure Mountain Inn, using the City stage, and having Carl Malone Ford and Chevy as a sponsor. There would be a bike valet and all landfill waste would be recorded.

Mayor Worel opened the public hearing.

Betsy Wallace 84060, Former Sundance Film Festival Managing Director, stated she supported Arts Fest and asserted this event brought in visitors from around the world. The operations were well-run and they worked well with staff.

Mayor Worel closed the public hearing.

Council Member Rubell had a hard time with the car sponsorship. The City subsidized the event and promoted it as a community identifying event. The City had sign ordinances and had specific ordinances regarding chain stores, but the event was going to put a lot of cars with ads on them on the street. He hoped this could be thought about in the future.

Council Member Rubell moved to approve the 2023 Level Five Special Event Permit for the Park City Kimball Arts Festival Supplemental Plan. Council Member Dickey seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

VIII. NEW BUSINESS

1. Consider the Appeal of the Planning Commission's Denial of the Washington School House Conditional Use Permit (CUP) for a Minor Hotel, Located at 543 Park Avenue:

Margaret Plane reminded Council they were now a quasi-judicial body and not a legislative body. This role was different because they were applying specific facts to existing policy. They would review De Novo – as if there was no previous decision. She read from the code on appeal authority. The appellant would have to prove the land use authority erred. The Council would have to determine the correctness of the land use authority's interpretation and application of the plain meaning of the land use regulations. They would favor a land use application unless the land use regulation plainly restricts the land use application.

Mayor Worel asked if any Council member had conflicts of interest, and nobody had conflicts.

Lillian Zollinger, Planner, gave a history of the site and stated the building was in disrepair in the 1980s. A Conditional Use Permit (CUP) was applied for, and the building was permitted for a bed and breakfast. Virgil Lund, Planner, stated a lap pool was approved in 2010. Conditions prohibited public assemblies. Guest and employee parking was prohibited on Woodside Avenue or Park Avenue. The conditions carried over in 2015 when a CUP was requested to make the garage a laundry room. In 2020, the applicant applied to be a minor hotel. A minor hotel would include a parking reduction of one space, an increase from 30 guests to 60 people, which would include

guests, non-guests, residents, and staff. The applicant proposed small gatherings held inside from 8:00 a.m.-10:00 p.m. and the applicant provided a noise management plan. They provided a plan to provide an extra parking space that could be accessed from Woodside Avenue. They provided a parking management plan for mitigation. The CUP was denied by the Planning Commission on June 8, 2022. Zollinger stated the applicant was appealing the denial. She reviewed the Planning Commission criteria used to determine the denial.

Wade Budge and Thomas Holt represented the appellant. Budge stated this was a great business and it provided a great service. By attaining approval, the business could maintain the level of service expected. He stated the business was not requesting anything that was not allowed. Code maintained that a minor hotel was allowed in the district. They had a world-class kitchen but only guests could eat there. They only sought to accommodate guests of guests. If the hotel was not full, guests of guests could eat there. A noise and traffic plan was prepared. Guests of guests and employees could not park there at mealtimes. The reason they pursued the request for a minor hotel was because it was allowed. There were conditions where a CUP could be denied, but the state ombudsman stated this application denial was unjustified.

Zollinger read the Planning Commission's Finding of Facts: Finding of Fact Nine stated small gatherings of private events are not allowed in the HR-1 Zone. The Planning Commission was concerned about the detrimental effects on the surrounding residential neighborhood.

Lund reviewed Finding of Fact 10: the request to use the site for private events, and to allow the use of the dining facilities by non-guests, and to increase the use from 30-60 guests for dining was not compatible with the surrounding structures. The Planning Commission found the vehicle impacts could not be sufficiently mitigated. The applicant argued there was no evidence apart from adverse public comment to justify the Planning Commission's findings that the proposed use would create incompatible impacts on the residential streets and a public nuisance.

Zollinger discussed Finding of Fact 11: The applicant requested a parking reduction from 12 to 11 spaces to protect vegetation and the vegetative buffer between the building and neighboring properties. The Planning Commission found the parking reduction could not be mitigated because there would be increased street traffic. The proposed additional parking space would require a permit the applicant currently didn't have. Although the applicant provided a parking study that showed sufficient parking, staff learned they had obtained 40-50 temporary parking permits every six months which indicated the parking need exceeded the capacity.

Lund explained Finding of Fact 13: the reliance on public parking facilities as a mitigation strategy was unreasonable. The Planning Commission found this

unreasonable because the increase of non-guests required mitigation such as parking facilities then the minor hotel use would need more than 11 parking spaces.

Zollinger addressed the Ombudsman Advisory Opinion points, and read the Planning Commission reviewed the proposal as an expansion of a non-conforming use and not a stand-alone CUP. They determined incompatibility with the surrounding structures was insufficient, and they did not have sufficient evidence that the detrimental effects would not be mitigated. The findings made were inappropriately tied to the erroneous review as an expansion. She indicated the Council could deny the appeal, grant the appeal, remand the appeal to the Planning Commission for further evaluation, or continue the item to a date certain and request additional information.

Mayor Worel opened the public hearing.

John Plunkett 84060 stated he represented 28 neighbors and they believed the Planning Commission was correct in denying the application. The owner was in California and had other hotels. They invested in this property and they needed to abide by the current conditions. The expanded dining for 50 could not be mitigated. In addition to dining, they requested extended hours from 8:00 a.m.-10:00 p.m. which would open it for breakfast, lunch and dinner. He asked for a denial and thought the change would be harmful to the neighborhood.

Kirsten Ehrica 84060 stated the Washington School House Inn (WSH) was a great neighbor, but the owners bought in a residential area and their request would negatively impact her home. Even though WSH did a great job with the renovation, the residents had made renovations to their homes and they did not want impacts that would decrease the value of their homes. She requested that Council deny the appeal.

Clayton McNeel, 84060 indicated the existing business was compatible with the residential area. He thought the Planning Commission was correct in denying the request that would double the capacity of guests visiting daily. If the CUP was approved, the surrounding neighborhood would be negatively impacted. It would also be a dangerous precedent for the town.

Michael Kirby requested that Council deny the appeal. There was no shortage of restaurants and wedding venues in the City, but there was a shortage of livable neighborhoods.

Jody Whitesides 84060 indicated he walked past the WSH many times and it was so busy. He could not imagine expanding it and encouraged the denial of the appeal.

Deb Rentfrow stated the Planning Commission did not review the application as a non-conforming request. The staff reports clearly indicated it was a new CUP being requested. She agreed with staff that the parking study was flawed. The Planning

Commission did their job and took into account the previous conditions from the existing CUPs. She asked that Council uphold the Planning Commission's findings and deny the appeal.

Scott Sabey eComment "Public Comment In an effort to stifle the neighbors living around the Washington School House bed and breakfast, WSH has grossly overstated the holdings in the cases of Ralph L. Wadsworth Const. v. West Jordan City and Davis Cty. v. Clearfield. WSH effectively argues that the cases require planning commissions to entirely ignore all public comment unless city staff independently investigates and substantiates each and every statement. Such an interpretation would place an impossible burden on local government and the public, and that is not what the cases hold. Such an interpretation would deny the voting public any voice and would eviscerate the critical public comment and information gathering process, essentially requiring residents to submit notarized affidavits before their input could be considered. That is clearly not the law. Actually, the cited cases simply state that mere "vague reservations" expressed by the public are insufficient evidence to support a denial. That is not the nature of these neighbors' comments. The public comment on the WSH CUP application consisted of substantial and substantive input and evidence based on first-hand experience of neighbors who know the actual impact of living in close proximity to WSH as it currently operates—even without the double capacity and expansive uses that it now seeks. The Staff Report evidences that the neighbors' comments constitute substantial, compelling evidence that have more than adequately supported the Planning Commission's denial of the application. WSH did not rebut any of those comments during the application process or even in its submission to the Ombudsman. Instead, WSH made bald statements that there was no evidence in the record and wrongly dismissed the entire public participation process by conveniently labeling everything it didn't like with the label of "public clamor"."

Mayor Worel closed the public hearing.

Budge stated they were not seeking a private event area. They only wanted to expand the interior use for guests of guests. He read LMC 15-15 Hotel/Motel and stated they were not opening a restaurant. He also addressed the parking issue. There was enough space to conform to the parking requirement by disrupting the vegetation and they could go through that process. Another option was that the Engineer could approve two compact parking spaces in front of the building. He stated they would combine the adjoining lot so it would never be a building lot if this use was approved. He indicated there could be increased parking, but they were currently overparked. The State Ombudsman had four trained attorneys who looked at this and made their findings. Also, there was nothing in the record refuting the traffic study. He asserted they no longer got temporary parking permits, and that time period was irrelevant. He also stated recent changes to state law was that only properties adversely affected could give public comment, and only Mrs. Ehrica was an affected party who gave a comment.

Mayor Worel reviewed the options for Council consideration. Council Member Gerber asked to continue the item so more information could be obtained on the temporary parking permits and how they were used. Council Members Dickey, Toly, and Doilney supported continuing to a date certain. Council Member Rubell preferred to remand it back to Planning Commission. Council Member Gerber asked if remanding it to the Planning Commission meant that Council wanted them to mitigate it or could the Planning Commission just deny it again. Mark Harrington, Senior Attorney, stated it depended on what Council decided. It could be remanded for a process reason or a finding of error, or if Council disagreed with the decision. Council would need to define the reasons for remanding. Council Member Dickey stated there were several issues and he wasn't clear if Planning Commission erred. He preferred that it come back to Council.

Council Member Dickey moved to continue the appeal of the Planning Commission's denial of the Washington School House Conditional Use Permit for a minor hotel, located at 543 Park Avenue to July 13, 2023. Council Member Doilney seconded the motion.

RESULT: CONTINUED TO JULY 13, 2023
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

2. Consideration to Approve Ordinance 2023-28, an Ordinance Approving the 1120 Empire Avenue Plat Amendment, Located at 1120 Empire Avenue, Park City, Utah:
Virgil Lund, Planner, stated the plat amendment would remove an interior lot line and a side lot line. The duplex was a non-conforming use but had been maintained continuously. He indicated the nonconformities were addressed and there was good cause for the plat amendment. Any future development would need to comply with the off-street parking requirements of providing four spaces.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Dickey moved to approve Ordinance 2023-28, an ordinance approving the 1120 Empire Avenue Plat Amendment, located at 1120 Empire Avenue, Park City, Utah. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

3. Consideration to Continue an Ordinance Approving the North Norfolk Plat Amendment, located at 1325 Empire Avenue and Parcel SA-200, Park City, Utah:
Spencer Cawley, Planner II, stated Planning Commission asked to continue the item.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Doilney moved to continue an ordinance approving the North Norfolk Plat Amendment, located at 1325 Empire Avenue and Parcel SA-200, Park City, Utah to a date uncertain. Council Member Toly seconded the motion.

RESULT: CONTINUED TO A DATE UNCERTAIN
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

4. Consideration to Approve Ordinance No. 2023-29, An Ordinance Approving the Eagle Way Second Amended Plat Amendment, Located at 1460 Eagle Way, Park City, Utah:

Spencer Cawley, Planner II, presented this item and stated the amendment proposed to extend the lot by combining the lot behind it. The proposed plat complied with the zone and with the sensitive land overlay criteria. The Conditions of Approval (COA) mitigated vegetation loss, and development on the Estates Zones parcel would require additional sensitive lands analysis.

Council Member Dickey asked where the access to the Estates lot was to which Cawley indicated there was an access easement from Eagle Way. Council Member Gerber asked what the benefit of combining the parcels was. Cawley stated the benefit was to change the meets and bound parcel description a subdivision lot.

Mayor Worel asked if the existing house was the only structure on the property. Cawley stated there were plans for an extension to the house but there were no plans for additional buildings at this time, but other structures were allowed. Mayor Worel asked if the structure counted as a structure on the Estate lot, to which Cawley said it did not.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Rubell moved to approve Ordinance No. 2023-29, an ordinance approving the Eagle Way Second Amended Plat Amendment, located at 1460 Eagle Way, Park City, Utah. Council Member Doilney seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

5. Consideration to Approve Ordinance No. 2023-30, An Ordinance Amending Land Management Code Section 15-15-1 Definitions to Comply with Changes to State Code:

Jack Niedermeyer stated the code amendment would clarify the City followed state code on these issues.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Rubell moved to approve Ordinance No. 2023-30, an ordinance amending Land Management Code Section 15-15-1 Definitions to comply with changes to state code. Council Member Doilney seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

6. Request to Authorize a Contract with Gillig in a Form Approved by the City Attorney, Not to Exceed $16,500,000, for Fifteen 2023 Gillig Electric Buses, Four 150 kW ABB Depot Chargers, Twelve ABB Power Dispensers, and One 300 kW Overhead Charger:

Kim Fjeldsted, Transit Manager, stated this bus purchase had been worked on for 3.5 years. The original request was for 14 buses, and then Park City added another bus. The City's portion of the cost was $2.9 million and High Valley Transit (HVT) would be helping with that amount. The HVT buses had already arrived and the City was waiting for one bus.

Council Member Rubell asked how many electric and nonelectric buses the City had. It was indicated the City had 20 electric buses and 16 diesel buses. Council Member Rubell asked about the 60% inflationary increase. Fjeldsted indicated Park City selected more expensive bus options than HVT.

Mayor Worel opened the public input. No comments were given. Mayor Worel closed the public input.

Council Member Rubell moved authorize a contract with Gillig in a form approved by the City Attorney, not to exceed $16,500,000, for fifteen 2023 Gillig electric buses, four 150 kW ABB depot chargers, twelve ABB power dispensers, and one 300 kW overhead charger. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Doilney, Gerber, Rubell, and Toly

IX. ADJOURNMENT

With no further business, the meeting was adjourned.

Michelle Kellogg, City Recorder

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Community Development
Item Type: Staff Report
Agenda Section: OLD BUSINESS

Subject:
Consideration to Approve a Ground Lease, in a Form Approved by the City Attorney's Office, with JF ENGINEHOUSE DEVELOPER, LLC., to Create 99 Units of Affordable Rental Housing on City-Owned Property Located at 1875 Homestake Road
(A) Public Input (B) Action

Suggested Action:

Attachments:
Engine House Affordable Housing Project Ground Lease Staff Report
Exhibit A: Development Agreement
Exhibit B: Parking Management Plan
Exhibit C: Homestake Affordable Housing Ground Lease Agreement

City Council Staff Report

Subject: Ground Lease for 1875 Homestake Road
Author: Jason Glidden, Affordable Housing Manager
Department: Housing
Date: July 13, 2023
Type of Item: Administrative

Purpose

Review, conduct a public hearing, and consider approving a ground lease, in a form approved by the City Attorney's Office, with JF ENGINEHOUSE DEVELOPER, LLC (an affiliate of J. Fisher) to create 99 units of affordable rental housing on City-owned property at 1875 Homestake Road (Property).

Executive Summary

After several years of operating as a developer (Snow Creek Cottages, The Retreat, and Woodside Park Phase 1) to create 40 new housing units, PCMC pivoted its housing development strategy to Public-Private Partnerships (PPPs) as the preferred method. For background, PPPs can provide several benefits:

- **Efficient use of resources**: The private sector brings expertise, innovation, and efficiency in project management, operations, and service delivery. By leveraging the strengths of both sectors, PPPs can enhance productivity and cost-effectiveness.
- **Risk sharing**: PPPs distribute risks between the public and private sectors.
- **Access to private sector expertise**: Private sector partners often have specialized knowledge, technical expertise, and experience in delivering complex projects or services.
- **Innovation and quality improvement**: The profit motive in the private sector can incentivize innovation and the delivery of high-quality services.
- **Accelerated project delivery**: PPPs can expedite the delivery of projects by leveraging private sector resources and efficiency.
- **Long-term value for money**: Private partners often bear responsibilities for maintaining and operating the infrastructure or service over an extended period, ensuring a focus on long-term performance and sustainability.

On December 9, 2021, the City Council approved (Staff Report, Minutes) an MOU with J. Fisher to create a PPP and define Project goals and responsibilities of each party. The MOU offered assurances to both parties, provided minimal financial commitments, and was intended to steer the Partnership toward a final Development Agreement and long-term ground lease to produce affordable rental units.

As the Project progressed in design, an amendment to the MOU was approved (Staff Report, Minutes) to replace the Reimbursement Clause with an Option To Lease (OTL). The OTL provided J. Fisher with additional confidence to expend resources, fund the

design process, and continue the rigorous Project entitlement process. The OTL amendment also provided J. Fisher with sufficient interest in the land necessary to secure initial Project capital and financing.

On October 26, 2022, after several work sessions and public hearings, the Planning Commission unanimously approved the Homestake AMPD application. The Project contemplates a four-story, 180,000 SF secure building with 128 underground and 12 surface parking stalls. Unlike many affordable housing developments, the Project met or exceeded the City's newly adopted AMPD Code. In other words, the Project requested no variances commonly sought to incentivize the delivery of affordable housing (parking, setbacks, density, height, etc.).

After Planning Commission approval, J. Fisher submitted a Development Agreement to the Planning Commission, ratified on April 12, 2023. (The Development Agreement is included as Exhibit A.) In addition to Planning Commission approval, J. Fisher received its initial financing: Federal low-income tax credits, State of Utah Private Activity Bonds, Intermountain Housing Loan Funds, and Olene Walker Housing Loan Funds. Using the State of Utah's financial tools and mechanisms has garnered considerable positive interest in the Homestake public-private partnership, including inquiries from other cities, towns, housing authorities, housing developers, Utah Legislators, and more.

Concurrently, the City retained outside legal counsel (Ballard Spahr) to assist our ground lease drafting and negotiations. Ballard Spahr has experience negotiating hundreds of ground leases (PPPs, affordable housing, etc.) throughout the U.S. In addition, the City reached out to several other municipalities using PPPs and longer-term ground leases to produce affordable housing. Armed with this additional information, the Housing and City Attorney's Office, and City Council Housing Liaisons worked to draft the initial ground lease terms and conditions.

If a ground lease is approved, the Engine House will provide 99 permanently deed-restricted affordable rental units to those earning not more than 60% of the Area Median Income (AMI). An additional 24 units will rent at market rates to help subsidize and underwrite the Engine House's overall affordability.

Historical Background

- 2016: City Council passes Resolution HA 01-2016, establishing a goal to create 800 new affordable units by 2026.
- 2017: PCMC buys land at 1875 Homestake Road to advance the City's housing and transportation needs.
- 2019: Council identifies public/private partnerships as a critical strategy to help accelerate affordable housing progress.
- 2020: PCMC forms PPP Task Force to explore the components necessary to promote the creation of affordable housing by private developers.
- February 11, 2021: (Staff Report, Minutes) City Council directs Requests for Qualifications from developers interested in developing affordable housing on the Homestake parking lot.
- December 9, 2021: (Staff Report, Minutes) Council approves an MOU with JFCRM in response to RFQ.
- January 27, 2022: (Staff Report, Minutes) PCMC executes a professional services contract with Specific Performance, Inc to structure and negotiate a PPP and to advance the affordable housing development.
- February 17, 2022: Update to Council.
- March 17, April 3, 2022: Housing Work Sessions.
- April 28, 2022: (Staff Report, Audio) Council holds a Work Session to review proposed Homestake massing studies and project information.
- July 27, 2022: Planning Commission Work Session.
- August 24, 2022: Planning Commission site visit and public hearing.
- September 28, 2022: Planning Commission Public Hearing.
- October 26th, 2022: (Staff Report, Audio) Planning Commission Public Hearing and Approval.
- March 9th, 2023: (Staff Report, Audio) Council held a Work Session to receive a project update.
- April 12th, 2023: (Staff Report, Audio) Planning Commission Ratification of Development Agreement

- June 22nd, 2023: (Staff Report, Audio) Council held a Work Session to review and discuss the terms of the ground lease for 1875 Homestake Drive

Analysis

Approved Project Design

Housing Creation - The Engine House will deliver 123 total rental housing units, with 99 (80%) units achieving average affordability to those making 60% of AMI and the remaining 24 units at market rates. The 2021 Housing Needs Assessment supports the type and need of proposed housing:

Unit Mix	Count	SF
1 Bedroom	28	650
2 Bedroom	88	880
3 Bedroom	7	1,100
Total	**123**	**103,340**

Height and Open Space - The Engine House fully complies with the AMPD code, which sets a maximum height of 45 feet, with permitted exceptions for elevators and mechanical equipment. The Project includes a 10-foot step back from the face of the building, meeting the zone's maximum height allowance, reducing shadow lines, and decreasing visual massing. Also, by placing most of the parking underground, the Project accommodates 29% open space, exceeding the 20% requirement.

Electromagnetic Fields - The Project's proximity to the Rocky Mountain Power (RMP) Substation raised questions and concerns regarding electromagnetic fields (EMF). J. Fisher invested significant time and energy researching EMFs and provided responsive design considerations. The EMFs generated from the RMP power lines are non-ionizing and classified as extremely low-frequency (ELF-EMFs). There is a general scientific consensus that non-ionizing ELF-EMFs are not shown to cause adverse human health outcomes.

Despite the non-ionizing classification, J. Fisher commissioned additional EMF readings to respond to Planning Commission and Council concerns. The most recent report includes site-specific readings, proposed design considerations, and other information and research on EMFs.

J. Fisher and the Housing Team believe the additional information and expert analysis is satisfactory and addresses the constructive questions and concerns regarding EMFs. Despite including outside expert analysis, professional reports, and design considerations, we understand and appreciate conscious objectors remain.

Project Parking - The Engine House's parking plan was the subject of several rigorous conversations at the Planning Commission. The AMPD code allows substantial parking reductions for affordable housing projects close to transit, jobs, schools, services, and amenities. Under the AMPD Code, the Project could have requested as few as 77 parking spaces. As a result of public and neighborhood feedback, no reductions were requested.

Instead, the Project exceeded the LMC required parking (15-3-6(A)) and did not seek the parking reductions encouraged in the AMPD code (15-6.1-9(E)). As a result, the Project will have 140 parking stalls – 128 underground and 12 surface.

During the Planning Commission discussions, the Project shared data on reduced parking in affordable housing developments collected from Mountainlands Community Housing. The data shows car ownership is a significant financial barrier to those seeking affordable housing, and nearby Mountainlands' developments have low car ownership rates. To support this observation, Mountainlands provided parking data from several affordable developments with parking utilization ratios of less than 1:1 per unit.

The Project also proposed a comprehensive parking management system, including a secure underground facility, on-site property management and maintenance, and smart parking technology. For example, every affordable or market-rate unit will have one dedicated underground parking stall. Surface stalls will accommodate employee/on-site property management, visitor parking, and pick-up and drop-off.

The Project also provides indoor secured bike storage and bike and car share facilities on multiple transit routes to encourage and support a less auto-dependent future resident. The LMC 15-3-11 requires conduit to install 20 electric vehicle charging stations and two new electric vehicle charging stations immediately. The first two stations will meet ADA standards.

Total EngineHouse Parking in Approved Plan	**140**
EngineHouse Underground Parking	128
EngineHouse Surface Parking	12
LMC Parking Requirement	127.5
AMPD Parking Reduction not requested	*77*

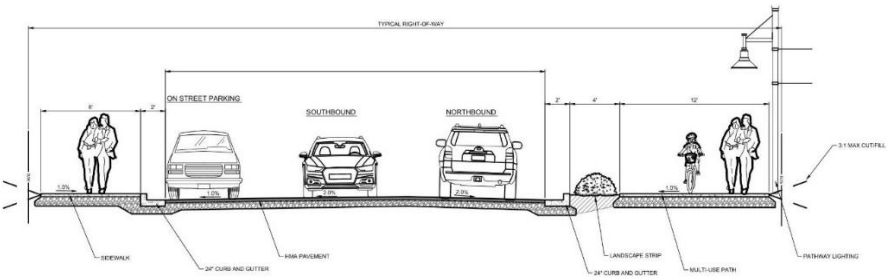
The secured underground parking garage will include a controlled-resident access system monitored by a 24/7 professional security management firm. The Project's Parking Management Plan consists of the following (Exhibit B):

1. A high-speed remote-controlled security gate at the entrance to the parking structure;
2. Security camera installations in the parking structure for remote monitoring 24/7 by a property management company;
3. Regularly scheduled security patrol services to monitor the property and parking structure;
4. Residential parking permits for authorized vehicles;
5. Towing contract;
6. Numbered parking stalls – residents will be granted one dedicated underground parking stall;
7. Two parking spaces are reserved for property managers; and
8. Regular garage sweeping, cleaning, and maintenance.

In addition to the Parking Plan, the City's Parking Services Division is already implementing a compatible and comprehensive on-street timed and permit parking program for Homestake Road and the surrounding area. Like most of Park City, the historical ability to allow unregulated on-street parking near commercial and residential areas is no longer feasible. The new on-street parking program will replicate aspects of the Old Town parking program, including:

- Resident and visitor parking permits;
- Timed on-street parking;
- Street cleaning; and
- Regular patrols by the Parking Services Division.

Parking Services is implementing the new parking program before the Homestake Road reconstruction project, scheduled summer of 2024. Like any new parking program, ongoing evaluation and adjustments will be necessary to balance the sometimes-competing interests for unregulated parking with neighborhood quality of life and small business compatibility. The Bonanza Small Area planning process also includes an area parking needs assessment.



Proposed Terms of Ground Lease

Term – The lease term was not explicitly contemplated in the original MOU but referenced the length of affordability of the Project, a minimum of 50 years, or the length of the lease,

whichever was longer. After extensive consideration, we recommend a 65-year lease, with three automatic extensions, unless Tenant/Developer affirmatively opts out:

- Two 11-year extensions; and
- One 12-year extension.

The full term with all potential extensions is 99 years. Based on feedback from the other communities and after consultation with Ballard Spahr, the 99-year potential is reasonable and consistent with other affordable public-private partnerships. The City of Boise, for example, and Salt Lake City recently entered into ground leases for 75 and 99 years, respectively.

The property's land use restriction agreement ("LURA") is a 50-year deed restriction with UHC. The tax credit investors require a minimum of 65-year initial term to accommodate the initial 50-year LURA and a 15-year tail to allow refinancing. Any future syndication of tax credits for renovation will require a new 50-year LURA at the time of syndication. By providing a ground lease of 99 years, the City allows syndications to occur between years 16-49. Without ground lease extensions of up to 99 years, the Project would not be eligible for syndication due to the limitations of the leasehold interest timeframe.

Annual Lease Payment – Under Utah Code § 10-8-2, a formal analysis of the benefits received by PCMC in exchange for the benefit provided to the Developer is required and was approved by City Council on June 22, 2023. Based on the analysis, a below-market ground lease of annual payments of $1 per year for the City-owned Property in exchange for the delivery of 99 units of affordable rental housing is an appropriate use of City resources.

Because the Engine House will provide opportunities for housing units at 60% of AMI, constructed at a sustainability EUI rating of 28, the costs to the City of providing below-market lease terms are justified by the tangible and intangible benefits to the City. On June 22, 2023 (Staff Report), the City Council approved a Resolution adopting the required 10-8-2 Public Benefits Analysis for a below-market rental rate for this lease.

Property Improvements – The MOU required J. Fisher to optimize allowable density on the site while designing a project to meet all LMC code requirements. Thus, the ground lease includes a list of required site improvements that both parties commit to, such as utilities, number of units, parking spaces, and residential amenities. Therefore, each party's Property improvement requirements are encapsulated within the ground lease or as an incorporated exhibit.

Below is a list of proposed Property site improvements and responsibilities as outlined in the proposed ground lease:

1875 Homestake Road Improvements		
J. Fisher		**Park City Municipal**
• Develop 123 Total Units • 99 affordable units		• Access to Water - Waterline upgrade • Update Homestake Road

• 128 underground parking spaces • 12 surface parking spaces • Bike storage for 50 bikes • 15 bike racks on the property • 2 Electric Vehicle Charging Stations • Conduit for 50 Electronic Vehicle Charging Stations • Space prep for Bikeshare • Gate Accessible Parking Technology • 12-foot concrete wall along the property line next to the substation • Sewer line extension		• Recycle Center Relocation • Sewer line easement • Contaminated Soil Remediation

Rental Rates – The rental rate proposal committed affordable rental rates at 60% of the AMI, consistent with what the City requested in its RFQ. The following chart shows the proposed rental rates at 60% AMI:

Detailed Unit Mix & Rent			
Unit Type	**Count**	**Avg. SF**	**AMI Rent**
1 Bed Affordable	23	650	$1,504.00
1 Bed Market	5	650	$2,400.00
2 Bed Affordable	71	880	$1,806.00
2 Bed Market	17	880	$3,000.00
3 Bed Affordable	5	1100	$2,085.00
3 Bed Market	2	1100	$4,000.00
Total/Average	**123**	**840**	**60%**
*Based on 2022 HUD AMI levels for Summit County			

The proposed affordability levels are consistent with some of the standards we have seen in other affordable housing developments utilizing Low-Income Tax Credits (LIHTC). Projects in Boise and Ketchum, ID, are similar. For example, other PPPs' affordability levels generally require rents at or below 80% AMI, and our PPP goes even further.

Sustainability – To support the City's Sustainability efforts, the Project is designed to minimize energy use intensity (EUI). Working with the Sustainability Department, an aggressive EUI Project goal was established. The lower the EUI score, the more energy efficient the building is expected to perform. The average EUI score of multifamily developments generally ranges between 40-50 EUI.

As designed, the Project has an estimated EUI of 28.

Soil Remediation - As part of the MOU, the City agreed to remediate existing environmental issues on the Property. Soil remediation must be completed before a ground lease can be finalized. In addition, removing the berms around the Property is necessary for the Homestake Road redesign project scheduled for the summer 2024.

Samples were taken from various locations to represent potential building footings and parking structure. An XRF analyzer was used to take field screenings every 2.5'. In addition, the other ten samples were taken from various locations every 6" to a depth of 2'. The XRF analyzer screened all soil samples for 11 Priority Metals (including lead and arsenic). Using the 25 XRF samples, 15 additional samples were selected for quantitative analysis at a certified lab.

Seven samples exhibited a lead concentration above PCMC's "Landscaping and Maintenance of Soil Cover" ordinance. As a result, our outside soil remediation consultant, Stantec, deemed all other lab and XRF samples below 2.5' to represent typical background lead concentrations. Aside from lead and arsenic, no other metal concentrations in any soil sample exceeded risk levels for residential land use.
Using the sampling report, the City retained Stantec to propose a comprehensive Soil Mitigation Plan. Among other strategies, we are scraping 3' of soil from approximately 38,000 sqft of the Property (see Figure 4 below).

Figure 4

Once soil excavation is complete, 20 confirmation samples will be taken to verify that contaminated soils are removed. The cost to remove the known contaminated soil is estimated at $800K. The City Council approved a contract for soil remediation on June 22, 2023 (Staff Report), and work is expected to complete by the end of July.

Construction and Temporary Parking Plan - We are proactively implementing a Temporary and Construction parking plan to balance the sometimes-competing interests of existing parking demands in the area. We relocated 40 spaces leased to the Kimball Art Center to continue to support their occupancy permit. These spaces only encumbered a small portion of the Homestake lot, and the lease allows the City to relocate for construction or development.

The area just east of Munchkin Road, currently an unregulated City-owned surface parking lot, is accommodating the 40 KAC stalls and additional public parking. The KAC is supportive, and we continue to mitigate operational impacts, support construction parking, and provide temporary overflow parking options.

As part of the proposed Development Agreement, J. Fisher drafted a comprehensive Construction Mitigation Plan under review by the City's Building Department. The Temporary Parking Plan will be included in J. Fisher's CMP and shared with City Council, nearby property owners, and small businesses.

Project Operations

Project Management & Security - Though outside the Planning Commission's code-specific authority, concerns were raised regarding Project occupancy, safety, and security. J. Fisher has extensive experience providing quality, safe, and secure affordable housing in other jurisdictions, such as other projects, the Moda Union in Midvale (206 affordable units), Moda Glenwood in Millcreek (176 affordable units), and Moda Meadowbrook in Salt Lake City (145 affordable units).

As a result of the concerns, the Developer commits to a full-time on-site property manager for management/leasing operations and daily maintenance/facilities. J. Fisher manages its entire housing portfolio using professional property management firms. In addition to on-site management, the Developer will utilize a 24/7 security monitoring system and on-call security for after-hours concerns. In addition, property access is controlled using electronic key fob systems and software, which track utilization and those coming and going.

Finally, long-term leases are required at the Project, and short-term or nightly rentals are prohibited. Unlike other market-rate and affordable housing developments in Park City, lease and occupancy provisions will be monitored and managed by a professional property management firm and audited by various regulatory agencies (Utah Housing Corporation, capital partners, and Park City Municipal Corporation).

Project Occupancy - The Developer's mandate and fiduciary responsibility to PCMC is to maximize the community benefit and affordability. When PCMC solicited bids for a

partner, a key component was experience and the ability to maximize the number of affordable units. The Planning Commission approved 99 deed-restricted affordable rental units and 24 market-rate units, serving 123 households. This translates into 225 bedrooms.

While occupants per bedroom vary, Federal regulations limit the number of residents occupying the Project. Occupancy tends to vary depending on household demographics but ultimately is regulated and capped. Under Federal regulations, the maximum number of residents is 2 per bedroom, with one permitted exception per unit (exceptions include foster children, in-house healthcare providers, etc.).

J. Fisher's affordable housing portfolio, including over 1,000 affordable units in other locations, averages 1.4 residents per bedroom. J. Fisher anticipates 300-350 residents. By comparison, Mountainlands indicates that Park City experiences lower than average occupancy, sometimes as low as one resident per bedroom.

Homestake	Unit Count	Bedroom Count	If Avg Occupancy in JF Portfolio (1.4 per bedroom)	If All Households Meet 2 per bedroom	If All Household Meeting 2 per bedroom and permitted exceptions	Occupants Allowable Per Building Code
One bedroom	28	28	39.2	56	84	112
Two bedroom	88	176	246.4	352	440	440
Three bedroom	7	21	29.4	42	49	42
Total	**123**	**225**	**315**	**450**	**573**	**594**

Project Financials

City Financing Contribution - We evaluated various affordable housing delivery strategies and continue to believe PPPs are the most efficient financial strategy from a per-unit cost perspective. PPPs also allow the City to participate in multiple projects simultaneously compared to a for-sale model, where the City's capital is locked up for the term of a construction project, and sales must be conducted to receive funds for future projects.

A hypothetical strategy exercise yielded an analysis indicating that PPPs can create affordable housing units ranging from $60,000-$125,000 cost-per-unit to the City, depending on specific project conditions. At approximately ~$100k per unit when factoring land costs, the Engine House project falls well within the expected band of per-unit cost of an affordable housing unit in Park City.

PC Funding Contributions	
Soil Remediation	$ 800,000.00
Impact Fee Waivers	$1,824,459.00
Land Lease	$5,800,000.00
Total Contribution	**$8,424,459.00**
$/ Affordable Unit	**$ 85,095.55**

Right of First Offer – If J. Fisher seeks to sell the Engine House, the City negotiated a right of first offer to purchase (at a stated price set by J. Fisher). If the City passes on the offer to purchase, J. Fisher can sell to an approved owner at or above the stated price and financing terms offered to the City.

As negotiated, J. Fisher is limited to 6 months to enter into a purchase agreement and 12 months to complete the transaction. Otherwise, the process will reoccur, providing the City with another right of first offer. If the purchase price is lower than the original offer price or the financing terms change, the City would again have the right of first offer to purchase the Engine House.

The right of first offer is consistent with other projects and additionally qualified as reasonable and consistent by Ballard Spahr.

Permitted Transfers – Under this provision, J. Fisher has the right to refinance the Engine House at any point. For example, this might include the right to re-syndicate additional tax credits to fund major property upgrades when needed. Re-syndicating would apply new UHC and LIHTC requirements to the development, including extending the Land Use Restrictive Agreement (LURA), a deed restriction that sets affordability levels, and qualified renters on the affordable units.

For other types of Permitted Transfers (i.e. sale to a third party), we propose a “Qualified Transferee” concept that identifies objective standards for the transferee. These include experience, financial capacity, past practices (i.e., no criminal conduct, no lawsuits against the City), specific plans for capital improvements, and other appropriate standards for operators of affordable multi-family developments. This section was drafted by Ballard Spahr and is consistent with other PPPs.

We also proposed a list of prohibited transferees that identifies specific parties (also identified by Ballard Spahr) excluded from future transfer discussions based on past poor reputations and practices. If a transferee was presented that does not meet the criteria negotiated, that transferee is required to seek City Council approval before a transfer could occur.

As a result of the prohibited list and ability to necessitate City approval, we recommend the terms negotiated for Permitted Transfers as acceptable.

Project Schedule
AMPD/CUP Application Submittal – June 2022 – **COMPLETE**

Application for Low-Income Tax Credit – July 2022 – **COMPLETE**
Planning Commission Approval of AMPD – October 2022 – **COMPLETE**
Planning Commission Ratification of Development Agreement – **COMPLETE**
Finalize Ground Lease – July 2023
Site Remediation Commences – **IN PROGRESS**
Close on Financing – August 2023
Start Construction – August 2023
Complete Construction – December 2024

Attachments

Exhibit A – Development Agreement
Exhibit B – Parking Management Plan
Exhibit C – Ground Lease – 1875 Homestake Road

WHEN RECORDED, MAIL TO:
City Recorder
Park City Municipal Corporation
P.O. Box 1480
Park City, Utah 84060

DEVELOPMENT AGREEMENT
FOR THE HOMESTAKE AFFORDABLE MASTER PLANNED DEVELOPMENT (AMPD),
LOCATED AT 1875 HOMESTAKE ROAD, PARK CITY,
SUMMIT COUNTY, UTAH

This Development Agreement (this "**Agreement**") is entered into as of this _____ day of _____, 2023 by **JF EngineHouse Developer, LLC**, a Utah limited liability company ("**Developer**"), as the developer of certain real property located in Park City, Summit County, Utah, on which Developer proposes the development of a project known as the Homestake Affordable Master Planned Development, and by Park City Municipal Corporation, a municipality and political subdivision of the State of Utah ("**Park City**"), by and through its City Council.

R E C I T A L S

A. Developer is the private development partner of Park City-owned land comprised of a 1.86-acre Lot in the General Commercial Zoning District located at 1875 Homestake Road in Park City, Summit County, Utah, the legal description of which is attached hereto as Exhibit A, and incorporated herein by this reference (the "**Property**"), for which Developer has obtained Affordable Master Planned Development approval, pursuant to Application Number PL-22-05288, and Conditional Use Permit approval pursuant to Application Number PL-22-05300, for the development known as Homestake Affordable Master Planned Development (the "**Project**"), as more fully described in and subject to the Findings of Fact, Conclusions of Law, and Conditions of Approval adopted by the Planning Commission on October 26, 2022, and as set forth in the Approval Letter from Park City dated December 23, 2022, a copy of which is attached hereto as Exhibit B and incorporated herein by this reference (collectively referred to herein as the "**AMPD and CUP Approval Letter**").

B. Whereas the Developer subsequently provided an additional report titled "Electromagnetic Fields Report and Additional Information in relation to Homestake Affordable Housing Site" as Exhibit C to the March 9, 2023, City Council Staff Report.

C. The AMPD and CUP Approval Letter requires that Park City and Developer shall execute a Lease Agreement pertaining to the Property (the "**Ground Lease**") between Park City, as the Landlord, and Developer, as the Tenant.

D. Park City requires development agreements under the requirements of the Park City Land Management Code ("**LMC**") for all Master Planned Developments.

E. Developer is willing to design and develop the Project in a manner that is in harmony with and intended to promote the long-range policies, goals and objectives of the Park City General Plan, and to address other issues as more fully set forth below.

F. Park City, acting pursuant to its authority under Utah Code Ann. Section 10-9a-101, *et seq*., and in furtherance of its land use policies, goals, objectives, ordinances, resolutions, and regulations, has made certain determinations with respect to the proposed Project, and, in the exercise of its legislative discretion, has elected to approve this Agreement.

Now, therefore, in consideration of the mutual covenants, conditions, and considerations as more fully set forth below, Developer and Park City hereby agree as follows:

1. Property

The Homestake Affordable Master Planned Development Property (AMPD) is a 1.86-acre Lot in the General Commercial Zoning District at 1875 Homestake Road in the Bonanza Park neighborhood, which the General Plan identifies as a mixed-use neighborhood where locals live and work.

2. Project Conditions

2.1 The AMPD and CUP Approval Letter dated December 23, 2022, as approved by the Planning Commission on October 26, 2022, is attached hereto as Exhibit B, and is incorporated herein as the Project, subject to any changes detailed herein. Developer hereby agrees to fulfill in good faith all conditions of approval set forth in the AMPD and CUP Approval Letter.

2.2 In connection with Developer's application to Park City for Affordable Master Planned Development approval and Conditional Use Permit approval for the Project, Developer submitted to the Planning Commission certain reports, plans and drawings. Attached to this Agreement and incorporated herein by this reference are copies of the following reports, plans and drawings that were submitted by Developer to Park City:

Exhibit C – Parking Management Plan

Exhibit D – Hales Engineering Traffic Impact Study

Exhibit E – Snow Storage Plan

Exhibit F – Limited Soil Sampling Investigation Summary Report

Exhibit G – Mine Hazards Report

Exhibit H – Above-Ground Historic Structures Review

Exhibit I – Existing Conditions Survey

Exhibit J – Updated Architectural Exhibits, dated October 14, 2022

Exhibit K – Building Height

2.3 As required by Finding of Fact 39 on page 12 of the AMPD and CUP Approval Letter, Developer obtained an updated EMF Survey on December 13, 2022, attached hereto as Attachment 1 to Exhibit B, AMPD and CUP Approval Letter.

2.4 Unless waived by the City Council or reimbursed to Developer by Park City in accordance with applicable criteria, Developer and its successors agree to pay the then current impact fees imposed and as uniformly established by the Park City Municipal Code at the time of permit application, whether or not state statutes regarding such fees are amended in the future. Any such future amendments to state statutes regarding such fees shall not affect any impact fee waiver or impact fee reimbursement obligations of Park City approved by the City Council.

2.5 Developer and any successors agree that the following are required to be entered into and approved by Park City prior to the issuance of any building permits for the Project: (a) a construction mitigation plan, (b) utility plans, (c) a storm water run-off and drainage plan, and (d) a water efficient landscape and irrigation plan showing storm water facilities and snow storage areas. The performance by Developer of its obligation as the Tenant under the Ground Lease shall constitute the performance by Developer of an affordable housing plan approved by Park City with respect to the Project.

2.6 Developer shall be responsible for compliance with all requirements and conditions of the Snyderville Basin Water Reclamation District prior to the issuance of any building permits for the Project.

2.7 The Ground Lease shall describe the disclosures that have been made by Park City to Developer regarding the environmental condition of the Property and regarding Park City's and Developer's obligations pertaining to environmental remediation, covenants and environmental indemnity with respect to the Property. Developer with respect to its obligations, and Park City, with respect to its obligations, shall comply with all such covenants and obligations pertaining to environmental issues as shall be set forth in the Ground Lease.

3. Developer and Park City Obligations.

Developer shall fulfill the Conditions of Approval in Exhibit B. Unless otherwise specified in the Ground Lease, if the City does not proceed and complete the improvements contemplated in Paragraph 17 of Exhibit B, then Developer and the City shall file an amendment to the AMPD to address Circulation, Trails and Traffic Mitigation.

4. Vested Rights and Reserved Legislative Powers

4.1 Vested Rights. Subject to the provisions of this Agreement, Developer shall have the right to develop and construct the Project in accordance with the uses, densities, intensities, and general configuration of development approved by this Agreement, subject to compliance by Developer with the other applicable ordinances and regulations of Park City.

4.2 Reserved Legislative Powers. Developer acknowledges that Park City is restricted in its authority to limit its police power by contract and that the limitations, reservations and exceptions set forth herein are intended to reserve to Park City all of its police power that cannot be so limited. Notwithstanding the retained power of Park City to enact such legislation under the

police powers, such legislation shall only be applied to modify the existing land use and zoning regulations which are applicable to the Project under the terms of this Agreement based upon policies, facts and circumstances meeting the compelling, countervailing public interest exception to the vested rights doctrine in the State of Utah. Any such proposed legislative changes affecting the Project and the terms and conditions of this Agreement applicable to the Project shall be of general application to all development activity in Park City; and, unless Park City declares an emergency, Developer shall be entitled to the required notice and an opportunity to be heard with respect to any such proposed change and its applicability to the Project under the compelling, countervailing public interest exception to the vested rights doctrine.

5. Successors and Assigns

5.1 Binding Effect. This Agreement shall be binding on the successors and assigns of Developer in the ownership or development of any portion of the Project.

5.2 Assignment. Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without assigning the rights as well as the responsibilities under this Agreement and without the prior written consent of Park City, which consent shall not be unreasonably withheld. Any such request for assignment may be made by letter addressed to Park City, and the prior written consent of Park City may also be evidenced by letter from Park City to Developer or its successors or assigns. This restriction on assignment is not intended to prohibit or impede the sale or sublease of parcels of fully or partially improved or unimproved land within the Project by Developer prior to construction of buildings or improvements on the parcels, with Developer retaining all rights and responsibilities under this Agreement.

6. Phasing and Form of Ownership

6.1 Project Phasing. The Project shall be constructed in a single phase. Consequently, there is no need for a Project phasing plan.

6.2 Form of Ownership Anticipated for the Project. The Project will consist of up to 123-units, and 80% of the units are proposed to be deed restricted for affordable housing, and 20% of the units are proposed to be market rate, in accordance with the terms of the Ground Lease.

7. Water

Developer acknowledges that water development fees will be collected by Park City in the same manner and in the same comparative amounts as with other developments within the municipal boundaries and that impact fees so collected will not be refunded to Developer or to individual building permit applicants developing within the Project. Any impact fee waiver or adjustment shall be separately considered by the appropriate official(s) in accordance with the applicable criteria.

8. Affordable Housing

As required by the Conditions of Approval numbers 26-27 of the AMPD and CUP Approval Letter, an Affordable Housing Plan for the Project, as set forth in the Ground Lease,

shall be approved by the Park City Housing Authority prior to the execution of the Ground Lease and prior to the issuance of any building permits for units within the Project, and deed restrictions pertaining to the Affordable Housing Plan shall be recorded. As required by Park City Land Management Code Section 15-6.1-13, as a condition precedent to receiving a certificate of occupancy for any market rate unit within the Project, Park City shall be provided with proof of compliance with the approved Affordable Housing Plan and the AMPD and CUP Approval Letter. Additionally, Developer shall be obligated to submit to Park City an annual compliance report, as amended from time to time by Park City or its designee, verifying compliance by Developer with its obligations under the Ground Lease.

9. Physical Mine Hazards

9.1 Developer caused to be prepared a certain mine hazards report (the "Mine Hazards Report"), copies of which are attached hereto as Exhibit G. The Mine Hazards Report reveals that there are no features which meet the definition of a mine hazard per the Municipal Code of Park City Section 11-20-2. Park City and Developer shall comply with their respective obligations as shall be set forth in the Ground Lease.

9.2 AMPD and CUP Approval Letter Condition of Approval 23 requires Developer to comply with federal and state regulations, as well as with Municipal Code of Park City Chapter 11-15 Park City Landscaping And Maintenance Of Soil Cover and to work with Park City's Environmental Regulatory Program Manager to ensure compliance prior to building permit issuance.

10. Historic Structures

During Park City's mining era, 1875 Homestake Road was an old railroad yard and stockyard. On July 5, 2022, Commonwealth Heritage Group completed the Above-Ground Historic Structures Review for the Property at 1875 Homestake Road in Park City, Summit County, Utah report, attached hereto as Exhibit H. The report provides research and assessment within the Project area regarding buildings, structures, objects, or sites designated or eligible for designation on the National Register of Historic Places, including review of literature at the Utah State Historic Preservation Office. The report concludes that historic and aerial imagery indicates above-ground resources were constructed after 1975 and that "[n]o effects on historic above-ground properties are anticipated as a result of the proposed Project activities."

11. General Terms and Conditions

11.1 Term of Agreement. Construction, as defined by the International Building Code, is required to commence within two (2) years of the date of execution of this Agreement. After construction commences, the Homestake Affordable Master Planned Development and this Agreement shall continue in force and effect until all obligations hereto have been satisfied. The Affordable Master Planned Development approval and Conditional Use Permit approval for the Project, as set forth in the AMPD and CUP Approval Letter, shall remain valid so long as construction is proceeding in accordance with the terms of this Agreement and the Ground Lease.

11.2 Agreement to Run With the Land. This Agreement shall be recorded against the Property, as described in Exhibit A attached hereto, and shall be deemed to run with the land and

shall be binding on all successors and assigns of Developer in the ownership or development of any portion of the Property.

11.3 No Joint Venture, Partnership or Third Party Rights. This Agreement does not create any joint venture, partnership, undertaking or business arrangement between the parties hereto, nor any rights or benefits to third parties.

11.4 Integration. This Agreement contains the entire agreement with respect to the subject matter hereof and integrates all prior conversations, discussions or understandings of whatever kind or nature and may only be modified by a subsequent writing duly executed by the parties hereto.

11.5 Severability. If any part or provision of this Agreement shall be determined to be unconstitutional, invalid or unenforceable by a court of competent jurisdiction, then such a decision shall not affect any other part or provision of this Agreement, except that specific provision determined to be unconstitutional, invalid or unenforceable. If any condition, covenant or other provision of this Agreement shall be deemed invalid due its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

11.6 Attorneys' Fees. If this Agreement or any of the Exhibits hereto are breached, the party at fault agrees to pay the attorneys' fees and all costs of enforcement of the non-breaching party.

11.7 Minor Administrative Modification. Minor administrative modification may occur to the AMPD and CUP Approval Letter and/or to the Affordable Master Planned Development approval or to the Conditional Use Permit approval without revision of this Agreement. A minor modification to an approved Affordable Master Planned Development is a modification that satisfies the definition of a "minor modification" as set forth in Section 15-6.1-5E.1 of the LMC.

12. Notices

All notices required to be given hereunder shall be in writing and shall be addressed as follows, or as either party may subsequently designate by written notice to the other. All notices shall be delivered by electronic mail (e-mail), by certified or registered U.S. Mail, postage prepaid, return receipt requested, by a recognized overnight delivery service which maintains delivery records, or by hand-delivery and shall be deemed effective: (i) if sent by email, when sent, provided the sender does not receive a message of non-delivery, and provided that the email is sent with an automatic response of receipt or the receiver acknowledges receipt of the email or the sender sends, concurrently with the email a conforming copy thereof deposited for delivery by the U.S. Postal Service; (ii) five (5) calendar days after deposit with the U.S. Postal, Service, (iii) one (1) calendar day after deposit with a recognized overnight delivery service; or (iv) upon receipt by hand-delivery:

Developer:

JF EngineHouse Developer, LLC
1216 West Legacy Crossing Blvd., Suite 150
Centerville, UT 84014
Attention: Ryan Davis
Email: ryan.davis@jfisherco.com

To Park City:

Park City Municipal Corporation
445 Marsac Avenue
P.O. Box 1480
Park City, UT 84060
Attn: City Attorney

Email: _____

The rest of this page is left intentionally blank.

13. <u>List of Exhibits</u>

Exhibit A – Legal Description

Exhibit B – AMPD and CUP Final Action Letter

Exhibit C – Parking Management Plan

Exhibit D – Hales Engineering Traffic Impact Study

Exhibit E – Snow Storage Plan

Exhibit F – Limited Soil Sampling Investigation Summary Report

Exhibit G – Mine Hazards Report

Exhibit H – Above-Ground Historic Structures Review

Exhibit I – Existing Conditions Survey

Exhibit J – Updated Architectural Exhibits, dated October 14, 2022

Exhibit K – Building Height

The rest of this page is left intentionally blank.

IN WITNESS WHEREOF, this Agreement has been executed by Developer by persons duly authorized to execute the same and by the City of Park City, acting by and through its City Council as of the ___ day of _____, 2023.

PARK CITY MUNICIPAL CORPORATION

By: _____
Mayor

ATTEST:

By: _____
City Recorder

APPROVED AS TO FORM:

_____
Margaret Plane, City Attorney

DEVELOPER:

JF ENGINEHOUSE DEVELOPER, LLC,
a Utah limited liability company

By: JF DEVELOPMENT GROUP, LLC,
a Utah limited liability company
Its: Manager

By: J. FISHER COMPANIES, LLC,
a Utah limited liability company
Its: Manager

By: _____
Name: Owen Fisher
Title: Manager

STATE OF UTAH)
ss.
COUNTY OF _____)

On this ____ day of _____, 2023, personally appeared before me Owen Fisher, whose identity is personally known to me/proved to me on the basis of satisfactory evidence and who by me duly sworn/affirmed, did say that he executed the foregoing Agreement in his capacity as the Manager of J. Fisher Companies, LLC, a Utah limited liability company, which is the Manager of JF Development Group, LLC, a Utah limited liability company, which is the Manager of JF EngineHouse Developer, LLC, a Utah limited liability company.

_____
Notary Public
Residing at: _____

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

Lot B, THE YARD SUBDIVISION – FIRST AMENDED, according to the official plat recorded April 28, 2017, as Entry No. 1068309 in the Summit County Recorder's Office.

EXHIBIT B

AMPD AND CUP APPROVAL LETTER

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Planning Department

December 23, 2022

Park City Municipal Corporation
J Fisher Companies
1875 Homestake Drive

CC: Peter Tomai and Rory Murphy

NOTICE OF PLANNING COMMISSION ACTION

Description

Address:	1875 Homestake Road
Zoning District:	General Commercial
Application:	Affordable Master Planned Development (AMPD) Multi-Unit Dwelling Conditional Use Permit (CUP)
Project Number:	PL-22-05288 and PL-22-05300
Action:	APPROVED WITH CONDITIONS (See Below)
Date of Final Action:	October 26, 2022
Project Summary:	The Applicant proposes a 123-unit Affordable Master Planned Development (AMPD) and Multi-Unit Dwelling Conditional Use Permit (CUP) at 1875 Homestake Road on a 1.86-acre Lot in the General Commercial Zoning District and Bonanza Park Neighborhood on a 1.86-acre lot. 80% of the units are proposed to be deed restricted for affordable housing and 20% of the units are proposed to be market rate.

Action Taken

On October 26, 2022, the Planning Commission conducted a public hearing and approved the Homestake AMPD and CUP according to the following findings of fact, conclusions of law, and conditions of approval:

Findings of Fact

1. 1875 Homestake Road is the triangular-shaped Lot B of The Yard Subdivision – First Amended, a 1.86-acre Lot in the General Commercial Zoning District.

2. 1875 Homestake Road is in the Bonanza Park neighborhood, which the General Plan identifies as a mixed-use neighborhood where locals live and work. According to the General Plan, "[t]he overriding goal for this neighborhood is to create new housing opportunities while maintaining the existing affordable housing units." The General Plan also encourages Multi-Unit Dwellings to direct higher density to this area to provide life-cycle housing opportunities, including starter and step-down housing.
3. The Applicant proposes a 123-unit Multi-Unit Dwelling with 80% deed-restricted affordable units and 20% market-rate units as follows:

Unit Type	Affordable	Market Rate	Total
One Bedroom	23	5	28
Two Bedroom	71	17	88
Three Bedroom	5	2	7
TOTAL	**99**	**24**	**123**

Affordable Master Planned Development

4. On February 25, 2021, the City Council adopted Ordinance No. 2021-10, enacting a new Land Management Code (LMC) Chapter to establish Affordable Master Planned Developments (AMPDs) to incentivize the development of affordable housing through increased height, and reduced setbacks, height, and parking.
5. The purpose of AMPDs is to:

    a. Incentivize public, private, and public-private development of Affordable Units for the workforce of Park City;
    b. Create developments that include market-rate and Affordable Units and increase housing opportunities that are affordable to a wide range of incomes;
    c. Increase Building Height and Density and decrease parking requirements for Affordable Units if impacts to the community are mitigated;
    d. Ensure neighborhood Compatibility; and
    e. Encourage mixed-use, walkable, and sustainable development and redevelopment that provides innovative and energy-efficient design, including innovative alternatives to reduce impacts of the automobile on the community.

6. **Affordability –** AMPDs must contain at least ten Residential Unit Equivalents (RUEs) (20,000 square feet). AMPDs must contain at least 50% of the RUEs as deed-restricted affordable units. The Applicant proposes 80% affordable units and 20% market-rate units with 82,270 square feet (41.1 RUEs) for affordable units and 20,210 square feet (10.1 RUEs) for market rate.
7. **Interior Amenities –** Affordable units may differ from market-rate units with regard to interior amenities and Gross Floor Area provided that:
    a. These differences, excluding differences related to size, are not apparent in the general exterior appearances of the market-rate units within the AMPD.
    b. These differences do not include insulation, windows, heating systems, and other features related to the energy efficiency of the AMPD.
8. **Setbacks –** The LMC defines Setback as "[a] line parallel to a Property Line (or a Right-of-Way, platted Street, existing curb or edge of a Street, whichever line may extend furthest into the lot) at a distance established by the Zoning District. Between this line and the corresponding Property Line, no Structure or portion thereof shall be permitted, erected, constructed, or placed unless specifically allowed by the Zoning District". For properties two acres or less, the minimum Setback around the exterior of an AMPD is the zone-required Setback. The Setback requirements for the General Commercial Zoning District are outlined in LMC § 15-2.18-3 as follows:
    - Front Setback: 20 feet minimum for all Buildings and Uses, Setback may be reduced to 10 feet, provided all on-Site parking is at the rear of the property or underground
    - Rear Setback: 10 feet minimum
    - Side Setback: 10 feet minimum
9. Because of the Lot's unusual configuration, the Planning Director issued a determination for the Lot's Setbacks on March 16, 2022, pursuant to LMC § 15-4-17 *Setback Requirements for Unusual Lot Configurations*. The determination letter states:
    a. *The six unique property lines that make up Lot B of The Yard Subdivision – First Amended fronts both Homestake Road on the west and the platted Munchkin Road Right-of-Way dedication on the north creating an unusual triangular-shaped Lot configuration… "[d]evelopment on Corner Lots shall have two (2) front Setbacks, unless otherwise an exception by this Code. The Rear Yard will be the side of the Property opposite the driveway*

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Access from the Street. If it is not clear which boundary should border the Rear Yard, the Planning Director may specify which is the Rear Yard."

10. The Applicant is not requesting a reduction to the required Setbacks.
11. **Building Height –** AMPD Building Height must comply with the underlying Zoning District for the perimeter Building Façade planes. The Building Height for the General Commercial Zoning District is 35 feet from Existing Grade. LMC § 15-6.18(A) establishes a Building Height increase to 45 feet from Existing Grade for AMPDs when the following criteria are met:
    a. **Stepback –** The Building includes a ten-foot stepback on all perimeter Building Façade planes from the underlying Zoning District Building Height to the 45-foot Building Height. The Applicant achieves the 10-foot stepback and proposes roof overhangs into this stepback.
    b. **Infrastructure –** Infrastructure is in place or can be updated to meet the increased demand. The Park City Water Department verified infrastructure is planned to be updated to accommodate the 45-foot Building Height. The Water Department will be replacing and upsizing the line in Homestake Road to connect it to a higher-pressure zone near Kearns Boulevard, with construction beginning in 2023. On September 1, 2022, the Snyderville Basin Water Reclamation District (SBWRD) submitted a letter stating SBWRD can provide wastewater service to the project.
    c. **Façade Variation –** The Building complies with the Building Façade variation requirements. LMC § 15-15-1 defines Building Façade as, "[t]he exterior of a Building located above ground and generally visible from public points-of-view." AMPDs that exceed 120 feet in length on any Façade must provide a prominent shift in the mass of the Building at least for each 120-foot interval, resulting in a change in function or scale reflected through façade alignment of Building Height variation for at least 15 horizontal feet. The proposed Building Façades exceeds 120 feet in length and achieves variation in façade for at least 15 horizontal feet.
12. **Building Height Exceptions –** LMC § 15-6.1-8(B) outlines when AMPD Building Height may exceed 45 feet:
    a. Antennas, chimneys, flues, vents, and similar Structures may extend up to five feet (5') above the highest point of the Building to comply with International Building Code requirements.
    b. Water towers, mechanical equipment, and Solar Energy Systems, when enclosed or Screened, may extend up to five feet above the 45-foot Building Height. The Applicant's mechanical equipment is 45.5 feet above Final Grade.
    c. Elevator Penthouses may extend up to eight feet above the 45-foot Building Height. The Elevator Penthouse is 51.5 feet above Final Grade.

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13. The Applicant's fog analysis and Roof Over Existing Topography exhibits dated September 2, 2022 and attached to the October 26, 2022 staff report as Exhibit F demonstrate compliance with Building Height regulations from Existing Grade. Final building plans shall substantially comply with the September 2, 2022 fog analysis and Roof Over Existing Topography exhibits.
14. **Site Planning –** The Homestake AMPD clusters the Multi-Unit Dwelling in a V shape that opens to Homestake Road. The Multi-Unit Dwelling is clustered along the Substation property line and the Ironhorse Commercial Park Subdivision. The current use is a paved parking lot. There is Significant Vegetation along Homestake Road, which is in the public right-of-way and will be removed with Homestake Road is extended with a 12-foot multi-use path for pedestrians and cyclists. The Applicant proposes new landscaping for the public plaza area.
15. **Grading –** The existing use is a paved parking area on a relatively flat lot. The proposed parking is in an underground parking area, which will require large retaining structures. However, the final project will achieve a similar Final Grade to Existing Grade.
16. **Open Space –** LMC § 15-6.1-10(A) requires 20% Open Space and "On-Site amenities, such as playgrounds, trails, recreation facilities, bus shelters, and significant landscaping are encouraged. Open Space may not be used for Streets, roads, or Parking Areas." LMC § 15-15-1 defines *Open Space, Landscaped* as "Landscaped Areas, which may include local government facilities, necessary public improvements, and playground equipment, recreation amenities, public landscaped and hard-scaped plazas, and public pedestrian amenities, but excluding Buildings or Structures."
    The Homestake AMPD is on a 1.86-acre lot, totaling 80,846 square feet. The landscaped Open Space area includes maple, Colorado spruce, and spring snow crabapple trees with shrubs and a grass/play area. The Homestake AMPD also proposes a public hardscaped plaza area with raised planters, achieving 29.5% open space for the site.
17. **Trails and Multi-Modal Pathways –** Road, pathway, and sidewalk improvements and connectivity are budgeted and planned for the Bonanza Park area, including:
    a. **Homestake Road –** Improvements to Homestake Road, including the addition of a 12-foot multi-use pedestrian and bike pathway, are budgeted and approved. Construction is planned to begin in the spring of 2024.

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b. **Woodbine Way –** Improvements to Woodbine Way include converting it to a one-way southbound road and constructing sidewalks and on-street parking. Construction is budgeted and approved and is scheduled to begin in the spring of 2025.
c. **Munchkin Road –** The expansion of Munchkin Road across what is now the Recycle Utah Center is budgeted and approved and is scheduled to being in the spring of 2025, improving pedestrian and bicyclist east-west connectivity.
d. **Snow Creek Tunnel –** The Walking and Biking Liaison Committee (WALC) recommended a grade-separated active transportation facility to accommodate pedestrian and bicyclist north-south crossing from the Snow Creek neighborhood across Kearns Boulevard into the Bonanza Park neighborhood. In 2021, the City Council directed staff to conduct a feasibility study of a potential project. On May 12, 2022, the City Council reviewed options that include an underpass or and favored an underpass. Funds for the project were allocated in FY23 and the project is slated to being in the spring of 2025.

These improvements will enhance local access to the Rail Trail, Poison Creek Trail, and pathways and trails that run north of S.R. 248 alongside the east and west of S.R. 224.

18. **Internal Circulation –** In addition to pedestrian, bicyclist, and vehicle circulation improvements outlined above for the Bonanza Park neighborhood, the Homestake AMPD is centrally located in the Bonanza Park neighborhood and the project proposes enhanced pedestrian and bicyclist connectivity in an area with many transit options.
19. **Landscaping –** Because of the existing conditions of the property, there is very little Significant Vegetation. The LMC defines Significant Vegetation as “large trees six inches in diameter or greater measured four and one-half feet above the ground, groves of smaller trees, or clumps of oak and maple covering an Area 50 square feet or more measured at the drip line.” Currently, mature trees line the public Right-of-Way along Homestake Road. These trees will be removed when the City expands Homestake Road with a 12-foot multi-use pathway. The Applicant proposes to introduce new vegetation onto the site and provides open space beyond what is required in the code, achieving 29.6% open space.
20. **Lighting –** Outdoor lighting must be fully shielded with bulbs that are 3,000 degrees Kelvin or less.

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21. **Sensitive Land Compliance –** 1875 Homestake Road is not in the Sensitive Land Overlay. The site is not on a steep slope, near a Ridge Line Area, near wetlands or streams, or within a wildlife protection area.
22. **Child Care –** The Homestake AMPD is in the General Commercial Zoning District and Child Care Centers, defined in LMC § 15-15-1 as a structure or building, including outside play areas, used for the provision of childcare for more than four children for less than 24 hours per day, meeting all State requirements for childcare that is not also the primary residence of the care provider, is an allowed use.
23. **Incorporates Best Planning Practices for Sustainable Development –** The City's adopted ambitious climate and energy targets are to be net-zero carbon and running on 100% renewable electricity by 2022 for municipal operations and by 2030 community-wide. As a result, the Applicant worked with the Sustainability Department regarding net-zero development standards. The Applicant proposes the strategies outlined in their September 6, 2022, Sustainability Report, including:
    a. Walkability and multi-modal connectivity to basic life amenities supported through bike storage, electric bicycle stations
    b. Electric Vehicle Charging Stations for residents
    c. Building orientation to maximize passive solar strategies with the majority of units and building facades oriented primarily in the north-south direction with passive heating in the cooler months and shade in the warmer months
    d. Building design that meets the International Energy Conservation Code (IECC) 2021 standards, which exceed adopted energy codes in Utah.
24. **Addresses and Mitigates Physical Mine Hazards –** LMC § 15-6.1-11(L) requires AMPD Applicants to submit a map and list of all known Physical Mine Hazards on the property and a Physical Mine Hazard mitigation plan. Municipal Code of Park City Section 11-20-2(G) defines Physical Mine Hazards as "any open mine shaft, mine tunnel, horizontal opening, adit, or other mine related opening that extends more than five feet into the ground. The following are not Physical Mine Hazards:
    a. above ground structures;
    b. vertical opening where the Chief Building Official has made a written determination that due to the physical characteristics of an opening it does not present a potential health or safety concern; or
    c. sites previously the object of mitigation so long as mitigation has not failed."

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On June 8, 2022, Blue Ledge Consulting, LLC completed the *Mine Hazards on Homestake Affordable Housing Site* report. The report concludes "there are no features which meet the definition of a mine hazard as per Section 11-20-2. However, the abundance of mill tailings in the Prospector subdivision do warrant further study of the Homestake parcel and mitigation if proven to be required. Lead and other metals can prove to be hazardous if exposures occur under the right circumstances."

25. **Addresses and Mitigates Historic Mine Waste –** LMC § 15-6.1-11(M) requires AMPD Applicants with projects in the Park City Soils Ordinance Boundary to submit a soil remediation mitigation plan, indicating areas of hazardous soils and proposed methods of remediation and/or removal subject to the requirements and regulations of Municipal Code of Park City Chapter 11-15. Municipal Code of Park City Section 11-15-1 identifies the Soils Ordinance Boundary for Park City that establishes additional requirements for landscaping and topsoil. 1875 Homestake Drive is in the Soils Ordinance Boundary and the project includes construction of an underground parking garage. Municipal Code of Park City Chapter 11-15 outlines requirements regarding disposal or removal of area soil, dust control, topsoil coverage, and landscaping.
On September 13, 2022, Stantec completed a *Limited Soil Sampling Investigation Summary Report for Homestake Parcel*. The report found lead concentrations in excess of the City's Soil Ordinance in seven of 17 testing sites, which will require management and disposal by a facility permitted by the Utah Department of Environmental Quality.
26. **Addresses Historic Structures and Sites on the Property –** During Park City's mining era, 1875 Homestake Road was an old railroad yard and stockyard. On July 5, 2022, Commonwealth Heritage Group completed the *Above-Ground Historic Structures Review for the Property at 1875 Homestake Road in Park City, Summit County, Utah* report (Exhibit J). The report provides research and assessment within the project area regarding buildings, structures, objects, or sites designated or eligible for designation on the National Register of Historic Places, including review of literature at the Utah State Historic Preservation Office. The report concludes that historic aerial imagery indicates above-ground resources were constructed after 1975 and "[n]o effects on historic above-ground properties are anticipated as a result of the proposed Project activities."
27. **Addresses and Mitigates Traffic –** On August 16, 2022, the Applicant submitted a Traffic Impact Study (TIS) prepared by Hales Engineering ("Hales

Study"). The City hired Wall Consultant Group (WCG) to review and provide input to Hales on the study. Hales Engineering worked to update the TIS to address WCG and City input and submitted an updated TIS. WCG submitted a Technical Memorandum stating the updated TIS addressed WCG's comments ("WCG Memo"). The Hales Study recommends the following mitigations:

- **Munchkin Road Expansion** – extending Munchkin to connect Bonanza Drive and Homestake Road is budgeted and planned. This extension will mitigate significant queuing and delays.
- **Homestake Road/Park Avenue** – restrict to right-in right-out only and reroute traffic to new Munchkin Road connection between Homestake Road and Bonanza Drive.

28. The Hales Study recommends the following Transportation Management Strategies:
    a. Car-sharing program with two dedicated car share parking spaces
    b. 15 visitor bicycle stalls
    c. An additional 30 covered and secured parking for bikes beyond what is otherwise required
    d. Charging for e-bikes
    e. Bike maintenance room
    f. On-site e-bike station
29. **General Plan Review –** 1875 Homestake Road is in the Bonanza Park neighborhood, which the General Plan identifies as a mixed-use neighborhood where locals live and work. According to the General Plan, "[t]he overriding goal for this neighborhood is to create new housing opportunities while maintaining the existing affordable housing units." The General Plan also encourages multifamily residential uses to direct higher density to this area to provide life-cycle housing opportunities, including starter and step-down housing.
    The location of the mixed-income Multi-Unit Dwelling will provide long-term rental units in the Bonanza Park neighborhood with many amenities within walking and biking distance, including a grocery store, a pharmacy, and restaurants, cafes, and bars. The project is within ¼ mile of several transit stops that provide service to Old Town and the resort areas. Additionally, the Poison Creek Trail provides a paved pathway separated from vehicle traffic that connects the Bonanza Park neighborhood to Old Town.

Conditional Use Permit

30. **Size and location of the Site –** The Homestake AMPD is proposed to be located on a 1.86-acre site. This lot size is smaller than adjacent properties. The

property to the north, 1251 Kearns Boulevard, is 2.31 acres. The Homestake Condos to the west are on a 3.2-acre lot. The Claimjumper Condos to the west are on a 3.2-acre lot. The Ironhorse Park Commercial Subdivision is 2.2 acres. The Substation parcel is 0.84 acres.
The General Plan encourages multifamily residential uses to the Bonanza Park neighborhood to direct higher density to this area to provide life-cycle housing opportunities, including starter and step-down housing. The location of the Homestake AMPD is within ¼ mile of several transit stops, and within walking distance to a grocery store, pharmacy, and restaurants and services. Additionally, the site provides access to the nearby Rail Trail and Poison Creek Trail. Improvements to Homestake and Munchkin Roads will establish better connectivity in the area

31. **Location and amount of off-Street parking –** LMC § 15-6.1-9 requires an AMPD to comply with LMC Chapter 15-3, *Off-Street Parking*, unless the Planning Commission grants reduced parking based on a parking and traffic study and parking demand mitigation. The Applicant proposes satisfying parking demands on site and does not request reduced parking. LMC § 15-3-6(A) requires parking for Multi-Unit Dwellings based on unit square footage as follows:

Unit Size	Required Parking	Proposed Project	Project Requirement
Less than 1,000 SF	1 per Unit	116	116
1,000 SF – 2,000 SF	1.5 per Unit	7	11
2,000 SF or greater	2 per Unit	0	0
			TOTAL 127

32. The project proposes 140 parking spaces with 128 underground and 12 at grade. LMC § 15-3-11 requires conduit for future installation of 20 Electric Vehicle Charging Stations, and two Electric Vehicle Charging Station installations with the first being a dual-port that meets ADA standards.

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33. The Applicant submitted a Parking Management Plan for the Homestake AMPD and proposes the following:
    a. A high-speed remote-controlled gate at the entrance to the parking structure
    b. Camera installations in the parking structure for remote monitoring 24/7 by the management company
    c. Security patrol service to patrol the property and parking structure
    d. Use of parking permits/stickers for all vehicles authorized to park in the parking structure; cars without stickers will be towed at the owner's expense
    e. Numbered parking stalls – residents will be granted at least one parking space in the parking structure
    f. Two parking spaces will be reserved for property management
    g. The annual operating budget will include an allowance to sweep and clean the parking area on a semi-annual basis
34. **Fencing, Screening, and landscaping to separate the Use from adjoining Uses –** The Applicant proposes installing an 8- to 10-foot-high wall and art installation to separate the AMPD and the Substation. No fencing is proposed on the southern property line or along Homestake Road. Screening is proposed for rooftop mechanical equipment.
35. **Building mass, bulk, and orientation, and the location of Buildings on the Site; including orientation to Buildings on adjoining Lots –** AMPDs exceed the building mass and bulk of other properties to incentivize the development of affordable housing. The AMPD code requires a 10-foot stepback on all building perimeters to decrease the impact of height on adjacent properties.
36. **Physical design and Compatibility with surrounding Structures in mass, scale, style, design, and architectural detailing –** Bonanza Park area is in the General Commercial Zoning District, which allows for Building Height up to 35 feet from Existing Grade. To incentivize development of affordable units, the AMPD code allows Applicants to achieve a 45-foot Building Height if certain criteria are met. The adjacent properties are not built to the 35-foot allowance in the General Commercial Zoning District and most properties contain one to two-story developments. However, as the area is redeveloped and density and Building Height is maximized on adjacent properties, the Homestake AMPD, while achieving a total of 45 feet, will be more aligned with future developments that achieve the 35-foot height.
37. **Noise, vibration, odors, steam, or other mechanical factors that might affect people and Property Off-Site –** The plans as submitted do not indicate issues of vibration, odors, steam, or other mechanical factors that might affect

people and Property Off-site. Most mechanical equipment will be located on the rooftop. This equipment is required to be screened to avoid noise or vibration.

38. **Expected Ownership and management of the project as primary residences, Condominiums, time interval Ownership, Nightly Rental, or commercial tenancies, how the form of Ownership affects taxing entities –** No condominium plat for individual unit ownership is proposed for the AMPD and the units are planned to be long-term rentals. LMC § 15-6.1-2(D) prohibits Nightly Rentals and Timeshares for market-rate and affordable units within an AMPD.

Additional Considerations

39. **Substation –** On August 23, 2022, EMF Utah, LLC, completed a Magnetic Field Survey completed by Brent Rotondi, EMF Specialist. EMF Utah, LLC took ground-level measurements for the locations indicated as A, B, and C, and then took ground-level measurements and measurements at ten, twenty, and thirty feet above ground for locations D, E, F, G, H, I, J, K, and L. The survey provides measurements in milligauss per location ranging from 13.1 to less than one, as well as readings in volts per meter, ranging from 6 to 449. The survey description notes that the survey readings are a snapshot in time and are not predictive of what the readings will be at any point in the future or indicative of what the readings were in the past, and also that they make no claims regarding the health and safety of a survey site based on EMF levels measured. They advise clients to read health and safety documentation provided by federal, state, county, and city environmental safety divisions, along with third-party environmental and technical organizations before making a determination regarding the health and safety risk of the survey site. In addition to the survey, the Applicant submitted a document from and the National Cancer Institute *Electromagnetic Fields and Cancer* and an Iowa State University *Electromagnetic Fields Factsheet*. The Applicant revised the survey and submitted a baseline summary showing electric and magnetic measurements for each identified point of measurement, including the distances on October 28, 2022. The Applicant submitted a revised and updated EMF survey on December 13, 2022.
The Applicant proposes modifications to the wall along the Substation property with the possibility of an art installation to separate the uses. The Applicant proposes a board-form concrete wall with a minimum height of 8 feet with a

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mural that could include painted scenes ranging from one with mountains and forests, to abstract art, to an interpretive industrial look, to a historical train.

Public Notice

40. The Applicant conduct outreach and that the Applicant host neighborhood meetings prior to applying for an Affordable Master Planned Development. Between February 2022 and June 2022, the Applicant held outreach meetings with public.
41. On August 8, 2022, staff mailed courtesy notices to property owners within 300 feet of the Site. On August 10, 2022, staff posted physical notice to the site. The *Park Record* published notice on August 10, 2022. Staff published notice to the City Website and the Utah Public Notice website on August 19, 2022.
42. Staff mailed additional courtesy notices to surrounding property owners on October 10, 2022 and posted updated notices to the property on October 11, 2022.

Public Meetings

43. On July 27, 2022, the Planning Commission held a work session for an initial, high-level review of the Applicant's project.
44. On August 24, 2022, the Planning Commission visited 1875 Homestake Drive to visualize the Homestake AMPD Building Footprint and Building Height, and to review future road improvements in the vicinity.
45. On September 28, 2022, the Planning Commission reviewed the project and conducted a public hearing.
46. On October 26, 2022, the Planning Commission reviewed the project and conducted a public hearing.

Conclusions of Law

Conditional Use Permit

1. The Conditional Use Permit complies with the requirements of the Land Management Code, as conditioned.
2. The use will be compatible with surrounding structures in use, scale, mass, and circulation.
3. The effects of any differences in use or scale have been mitigated through careful planning.

Affordable Master Planned Development

4. Provides at least 50% Affordable Units;
5. Complies with requirements of the Land Management Code;
6. Meets the minimum requirements of this Chapter;
7. Provides meaningful Open Space for residents and the public;
8. Strengthens and enhances the resort character of Park City;
9. Compliments the natural features on the Site and preserves significant features or vegetation to the extent possible;
10. Meets the Sensitive Lands requirements of the Land Management Code and is designed to place Development on the most developable land and least visually obtrusive portions of the Site;
11. Promotes the Use of non-vehicular forms of transportation through design and by providing trail and pathway connections;
12. Was noticed and the Planning Commission held a public hearing in accordance with this Chapter;
13. Incorporates best planning practices for sustainable development, including water conservation measures and energy-efficient design and construction, per the Residential and Commercial Energy and Green Building program and codes adopted by the Park City Building Department in effect at the time of the Application, and includes Energy Star qualified products for appliances;
14. Addresses and mitigates Physical Mine Hazards according to accepted City regulations and policies;
15. Addresses and mitigates Historic Mine Waster and complies with the requirements of the Park City Soils Boundary Ordinance;
16. Addresses Historic Structures and Sites on the Property, according to accepted City regulations and policies, and any applicable Historic Preservation Plan;
17. Addresses and mitigates traffic;
18. Addresses and mitigates parking reductions and parking management.

Conditions of Approval

1. A Construction Mitigation Plan (CMP) shall be submitted and approved by the City for compliance with the Municipal Code, as a condition precedent to issuance of any grading or building permits. The CMP shall be updated as necessary to identify impacts and propose reasonable mitigation of these impacts on the site, neighborhood, and community due to construction of this project. The CMP shall include information about specific construction phasing, traffic, parking, service and delivery, stockpiling of materials and staging of work, work hours, noise control, temporary lighting, trash management and recycling,

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mud and dust control, construction signs, temporary road and/or trail closures, limits of disturbance, fencing, protection of existing vegetation, erosion control, storm-water management, and other items as may be required by the Building Department.

2. The immediate neighborhood and community at large shall be provided notice at least 24 hours in advance of construction work impacting private driveways, street closures, and interruption of utility service.
3. A storm-water run-off and drainage plan shall be submitted with the building plans and approved prior to issuance of any building permits. The plan shall follow Park City's Storm Water Management Plan and the project shall implement storm-water Best Management Practices. Post development drainage shall not exceed development drainage conditions and special consideration shall be made to protect any wetlands delineated on and adjacent to the site.
4. The project is over 1.0 acres and will be required to meet the requirements of Park City's municipal separate storm sewer system (MS4) storm-water program.
5. Final utility plans shall be submitted with the building permit.
6. Dry utility infrastructure must be located on the property and shown on the building plans prior to building permit issuance to ensure that utility companies verify the area provided for their facilities are viable and that exposed meters and boxes can be screened with landscaping.
7. Approval of this AMPD shall expire two years from the date of Development Agreement execution unless construction, as defined by the International Building Code, has commenced on the project.
8. The Park City Fire District requires the Applicant to install "no parking" signs for the fire line prior to issuance of any Certificate of Occupancy.
9. The final building plans shall comply with LMC § 15-5-5 *Architectural Design Guidelines*.
10. The Applicant shall submit roof overhang details showing compliance with the two-foot roof overhang within the 10-foot stepback for the project.
11. The applicant must submit a Line Extension Agreement (LEA) for the on-site and off-site sewer main line construction. All items required under the LEA must be completed prior to submitting a building permit. These include the following:
    a. SBWRD approval of the LEA
    b. Payment of required engineering services fees
    c. Granting of required easements
    d. SBWRD approval of on-site and off-site sewer main line construction drawings

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12. Building Façade Variation may not exceed 35 feet in Building Height and may not include architectural features or façade changes that encroach into the 10-foot stepback.
13. The Applicant shall provide a minimum of 800 square feet for internal and secure bike storage for approximately 50 bikes on site in the underground parking area. The internal and secure bike storage area shall provide charging available for e-bikes. The Applicant shall also provide a bike repair amenity space for residents. The Applicant shall install 15 outdoor bike racks for residents and guests. The bike racks must be medium security racks in which both the bike frame and wheels may be locked by the user. The spaces must be designed to prevent damage to the bike and to facilitate easy and secure storage without interference from or to adjacent bikes. Bike racks or lockers must be anchored and of solid construction, resistant to rust, corrosion, hammers, and saws. Bike racks must be compatible in design and function with the surrounding building and street furniture. Bike facilities must be located in convenient, highly-visible, active, well-lit areas and shall not interfere with pedestrian movements and snow storage.
14. The Applicant agrees to allow a Summit County Bike Share location on the site, subject to Park City Transportation Department and Engineering Department and Summit County approval.
15. The Applicant shall install high-speed remote-controlled gate at the entrance to the parking structure prior to any unit Certificate of Occupancy issuance.
16. Prior to any unit Certificate of Occupancy issuance, the Applicant shall install sufficient cameras in the underground parking structure for remote monitoring 24/7 by the management company.
17. The Applicant shall ensure daily security patrol service to patrol the property and parking structure.
18. The Applicant shall ensure use of parking permits/stickers for all vehicles authorized to park in the parking structure; cars without stickers will be towed at the owner's expense.
19. The Applicant shall number parking stalls. Each unit will be designated one underground parking space. The total number of vehicles granted a parking permit/sticker authorization to park in the underground parking structure shall not exceed the available number of underground stalls. Upon termination of a rental lease, tenants must turn in their parking permit.
20. Two parking spaces shall be reserved for property management.

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21. The annual operating budget for the project shall include an allowance to sweep and clean the parking area on a semi-annual basis.
22. Conduit for a minimum of 40% of the underground parking spaces for the future installation Electric Vehicle Charging Stations that meet the requirements of LMC § 15-3-11 shall be completed prior to Certificate of Occupancy issuance. Two Electric Vehicle Charging Station installations with the first being a dual-port that meets ADA standards shall be provided in the underground parking area for use by tenants prior to Certificate of Occupancy issuance.
23. The Applicant shall comply with federal and state regulations, as well as with Municipal Code of Park City Chapter 11-15 *Park City Landscaping And Maintenance Of Soil Cover* and shall work with the City's Environmental Regulatory Program Manager to ensure compliance prior to building permit issuance.
24. If project Construction, as defined by the International Building Code, does not commence within two years of Development Agreement execution.
25. The Applicant shall submit a draft Development Agreement to the Planning Department by April 26, 2023. The Development Agreement shall meet the requirements of LMC § 15-6.1-5, be reviewed and ratified by the Planning Commission, and be recorded with the county prior to building permit issuance.
26. The deed restrictions shall conform with the deed restriction requirements outlined in the Park City Affordable Housing Resolution in effect at the time of a complete Affordable Master Planned Development Application submission, or as otherwise determined by the Park City Housing Authority.
27. The deed restriction shall continue in full force and effect for a period not less than forty (40) years. Upon expiration of the initial forty (40) year term, or any subsequent term, the City shall have six (6) months in which to determine, based on an independent market study, that the Affordable Units within the Affordable Master Planned Development are no longer necessary to satisfy the affordable or workforce housing needs of the City. The City Council or its successor shall make the final determination of such continuing need, and if the City makes no such determination, the deed restrictions shall automatically renew for one or more additional consecutive ten (10) year terms.
28. The property owner of an affordable unit within the Homestake AMPD shall submit to the City an annual compliance report verifying deed restriction compliance.

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29. The Applicant will make two surface parking spaces available as part of a Transportation Demand Management strategy for a car-sharing service should such service become available in the area or for limited timed use for ride-sharing service parking.
30. The Applicant committed to the following:
    a. Walkability and multi-modal connectivity to basic life amenities supported through bike storage, electric bicycle stations
    b. Electric Vehicle Charging Stations for residents
    c. Building orientation to maximize passive solar strategies with the majority of units and building facades oriented primarily in the north-south direction with passive heating in the cooler months and shade in the warmer months
    d. Building design that meets the International Energy Conservation Code (IECC) 2021 standards, which exceed adopted energy codes in Utah.
31. Trash and recycling facilities shall be enclosed and fully shielded and shall comply with the requirements of LMC § 15-5-5 and 15-6.1-11. At the building permit stage, the Site plan shall include adequate Areas for trash and recycling containers and shall include an adequate circulation area for pick-up vehicles. Convenient pedestrian Access shall be provided within the Affordable Master Planned Development to the trash and recycling containers. No Site plan with a Commercial Development or Multi-Unit Dwelling shall be approved unless there is a mandatory recycling program, which may include Recycling Facilities for the Site. The Recycling Facilities shall be identified on the Site plan to accommodate for materials generated by the tenants, residents, users, operators, or owners of such Master Planned Development. Such Recycling Facilities shall include, but are not limited to, glass, paper, plastic, cans, cardboard or other household or commercially generated recyclable and scrap materials. Centralized trash and recycling containers shall be located in a completely enclosed Structure with a pedestrian door and a truck door or gate. The enclosed Structure shall be designed with materials that are compatible with the principal Structures in the Affordable Master Planned Development and shall be constructed of masonry, steel, or other substantial materials. The Structure shall be large enough to accommodate a trash container and at least two recycling containers to provide for the option of dual-stream recycling.
32. Service and delivery areas shall be kept separate from pedestrian areas.
33. The Applicant shall install a minimum 8--foot-high wall along the Substation and

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an art mural. The project area between the building façade and the wall shall include outdoor lighting that complies with the City's Dark Sky Code in LMC § 15-5-5(J).

34. Nightly Rentals, Fractional Ownership, and Timeshares are prohibited for market-rate and affordable units within an AMPD.

If you have questions or concerns regarding this Final Action Letter, please call 435-615-5060 or email planning@parkcity.org.

Sincerely,

DocuSigned by:
Sarah Hall
D45DB479C2AA42D...

Sarah Hall, Planning Commission Chair Pro Tem

CC: Spencer Cawley and Rebecca Ward, project planners

EMF UTAH, LLC

DECEMBER 13, 2022 - 1875 HOMESTAKE RD.

ELECTRIC FIELD SURVEY

SURVEY PERFORMED BY:

BRENT ROTONDI, EMRS,/BBEC

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ABOUT **EMF UTAH**

ABOUT EMF UTAH

Established in 2018, EMF UTAH is dedicated to helping Utahns measure and understand the sources of EMFs in their homes and places of business.

While we primarily service the state of Utah, we have performed EMF surveys in Oregon, Idaho, and California, as well.

Learn more about us at emfutah.com

MEASURING EQUIPMENT

The survey was performed with the Gigahertz Solutions - NFA1000 EMF meter.

More information can be found at gigahertz-solutions.com

SURVEY DESCRIPTION

EMF UTAH was contacted by Rory Murphy to perform a follow-up electric field survey of 48 specific points in the parking lot at 1875 Homestake Rd. The main concern of the client was the electrical power substation adjacent to the property's parking lot.

EMF UTAH took electric field measurements at twelve indicated distances from the the fence line closest to the electrical substation. These distances were measured and marked on the ground by the client.

In addition to ground level readings (with the assistance of an articulating boom lift), we took electric field readings from close approximations of 10', 20', and 30' heights above the twelve marked locations.

These heights were measured by a client representative assisting from the boom lift.

IMPORTANT

01 - These electric field survey readings are a snapshot in time and aren't predictive of what the readings will be at any point in the future or indicative of what the readings were in the past. These can and do change for a variety of reasons.

02 - EMF UTAH LLC and its employees make no claims regarding the health & safety (current, past or future) of a survey site based on EMF levels measured. Clients are advised to read the current health and safety documentation provided by federal, state, county and city environmental safety divisions, along with 3rd party environmental and technical organizations before making their own determination regarding the health and safety risk of the survey site.

ELECTRIC FIELD SURVEY OVERVIEW

The yellow numbers above indicate the two approximate areas where electric field testing occurred.

On pages 4 & 8 are two images that have letters in white and numbers marked in yellow.

The white markings indicate the approximate survey sites where measurements were taken. The yellow markings indicate the approximate distance from the fence line for each survey site.

As mentioned, the survey measurements were taken at close approximations of the following:

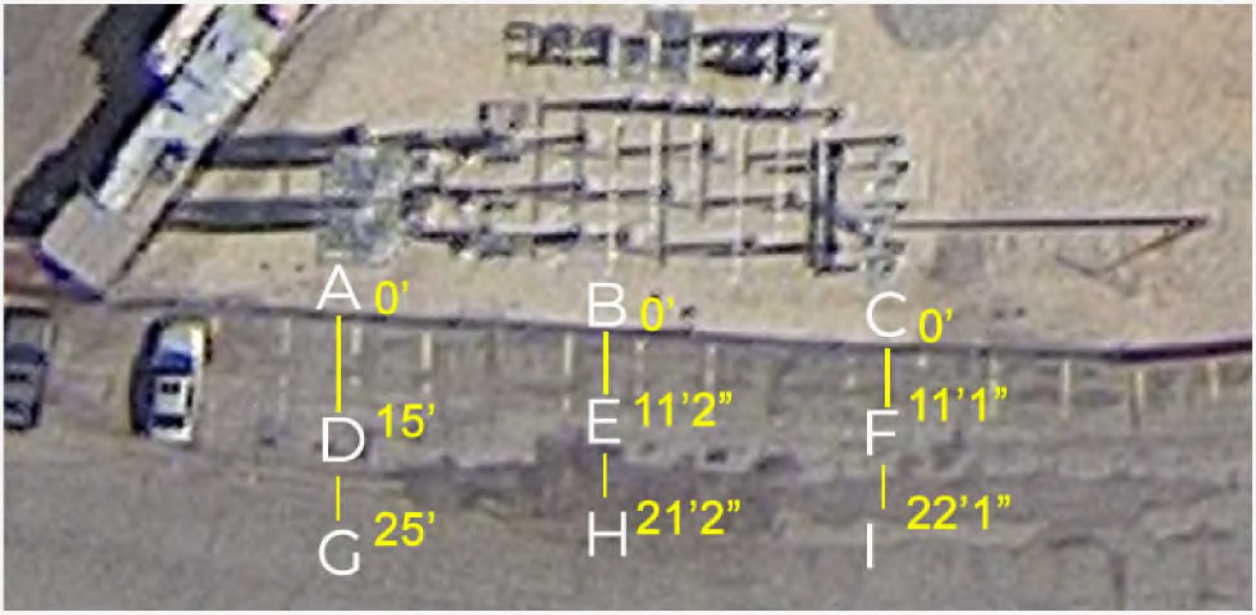
- Ground level
- 10' above ground
- 20' above ground
- 30' above ground

Locations J, K, and L had snow pack due to recent heavy snow and plowing. We did our best to estimate the elevations at these survey spots.

The heights of these elevated measurements were achieved with the assistance of a boom lift.

The following measurement data is presented for each survey location and for each available height.

All measurements are in volts per meter or v/m.



ELECTRIC FIELD SURVEY LOCATION #1

THESE ARE THE APPROXIMATE LOCATIONS OF THE FIRST 9 POINTS WHERE READINGS WERE TAKEN ON THE PROPERTY

LOCATION A

GROUND READINGS IN VOLTS PER METER	**47.2**
10' HIGH READINGS IN VOLTS PER METER	**414**
20' HIGH READINGS IN VOLTS PER METER	**531.7**
30' HIGH READINGS IN VOLTS PER METER	**267.1**

LOCATION B

GROUND READINGS IN VOLTS PER METER	**175.6**	
10' HIGH READINGS IN VOLTS PER METER	**1999 +**	METER LIMIT REACHED
20' HIGH READINGS IN VOLTS PER METER	**1999 +**	METER LIMIT REACHED
30' HIGH READINGS IN VOLTS PER METER	**1084**	

LOCATION C

GROUND READINGS IN VOLTS PER METER	**87.3**
10' HIGH READINGS IN VOLTS PER METER	**1007**
20' HIGH READINGS IN VOLTS PER METER	**1468**
30' HIGH READINGS IN VOLTS PER METER	**662**

LOCATION D

GROUND READINGS IN VOLTS PER METER	**130.6**
10' HIGH READINGS IN VOLTS PER METER	**249.1**
20' HIGH READINGS IN VOLTS PER METER	**348.3**
30' HIGH READINGS IN VOLTS PER METER	**259.4**

LOCATION E

GROUND READINGS IN VOLTS PER METER	**323.1**
10' HIGH READINGS IN VOLTS PER METER	**519**
20' HIGH READINGS IN VOLTS PER METER	**1045**
30' HIGH READINGS IN VOLTS PER METER	**849.2**

LOCATION F

GROUND READINGS IN VOLTS PER METER	**197.6**
10' HIGH READINGS IN VOLTS PER METER	**296.5**
20' HIGH READINGS IN VOLTS PER METER	**418.2**
30' HIGH READINGS IN VOLTS PER METER	**337.3**

LOCATION G

GROUND READINGS IN VOLTS PER METER	**81.2**
10' HIGH READINGS IN VOLTS PER METER	**85.6**
20' HIGH READINGS IN VOLTS PER METER	**107.3**
30' HIGH READINGS IN VOLTS PER METER	**58.3**

LOCATION H

GROUND READINGS IN VOLTS PER METER	**173.5**
10' HIGH READINGS IN VOLTS PER METER	**246.1**
20' HIGH READINGS IN VOLTS PER METER	**413.4**
30' HIGH READINGS IN VOLTS PER METER	**308.2**

LOCATION I

GROUND READINGS IN VOLTS PER METER	**117.3**
10' HIGH READINGS IN VOLTS PER METER	**204.3**
20' HIGH READINGS IN VOLTS PER METER	**419.7**
30' HIGH READINGS IN VOLTS PER METER	**76.2**

ELECTRIC FIELD SURVEY LOCATION #2

THESE ARE THE APPROXIMATE LOCATIONS OF THE FINAL 3 POINTS WHERE READINGS WERE TAKEN ON THE PROPERTY

LOCATION J	
GROUND READINGS IN VOLTS PER METER	**1.5**
10' HIGH READINGS IN VOLTS PER METER	**49.6**
20' HIGH READINGS IN VOLTS PER METER	**50.5**
30' HIGH READINGS IN VOLTS PER METER	**64.7**

LOCATION K

GROUND READINGS IN VOLTS PER METER	**11.3**
10' HIGH READINGS IN VOLTS PER METER	**27.2**
20' HIGH READINGS IN VOLTS PER METER	**39.3**
30' HIGH READINGS IN VOLTS PER METER	**42.1**

LOCATION L

GROUND READINGS IN VOLTS PER METER	**9.7**
10' HIGH READINGS IN VOLTS PER METER	**24.2**
20' HIGH READINGS IN VOLTS PER METER	**33.2**
30' HIGH READINGS IN VOLTS PER METER	**43.6**

EXHIBIT C

PARKING MANAGEMENT PLAN

OLIVE WEST

PARKING MANAGEMENT PLAN
HOMESTAKE – PARK CITY, UT

Based on the current concept plans for the Homestake property, we would propose implementing the following parking recommendations and management plan:

- Use of a high-speed remote-controlled gate at the entrance to the parking structure. This will control access to the parking garage and the property. This will also offer an additional level of security for residents and personal property.
    - We use a parking access control system that is Bluetooth enabled. This is allows the residents to use their phone to open the garage door. This also allows management to grant and revote parking privileges remotely.
- Use of strategically positioned cameras in the parking structure. This will allow for remote monitoring of the parking area 24/7 by the management company.
- Engagement of a courtesy / security patrol service to patrol the property and parking structure several times a night.
- Use of parking permits / stickers for all vehicles authorized to be parked in the parking structure. Cars without stickers will be towed at the owner's expense.
- All parking stalls will be numbered, and it is anticipated that all residents will be granted at least one parking space in the parking structure.
- It is also anticipated that the property management company will have two parking spaces dedicated for the property manager and staff.
- The annual operating budget will include an allowance to sweep and clean the parking area on a semi-annual basis.

1216 West Legacy Crossing Boulevard, Suite 300
Centerville, UT 84014

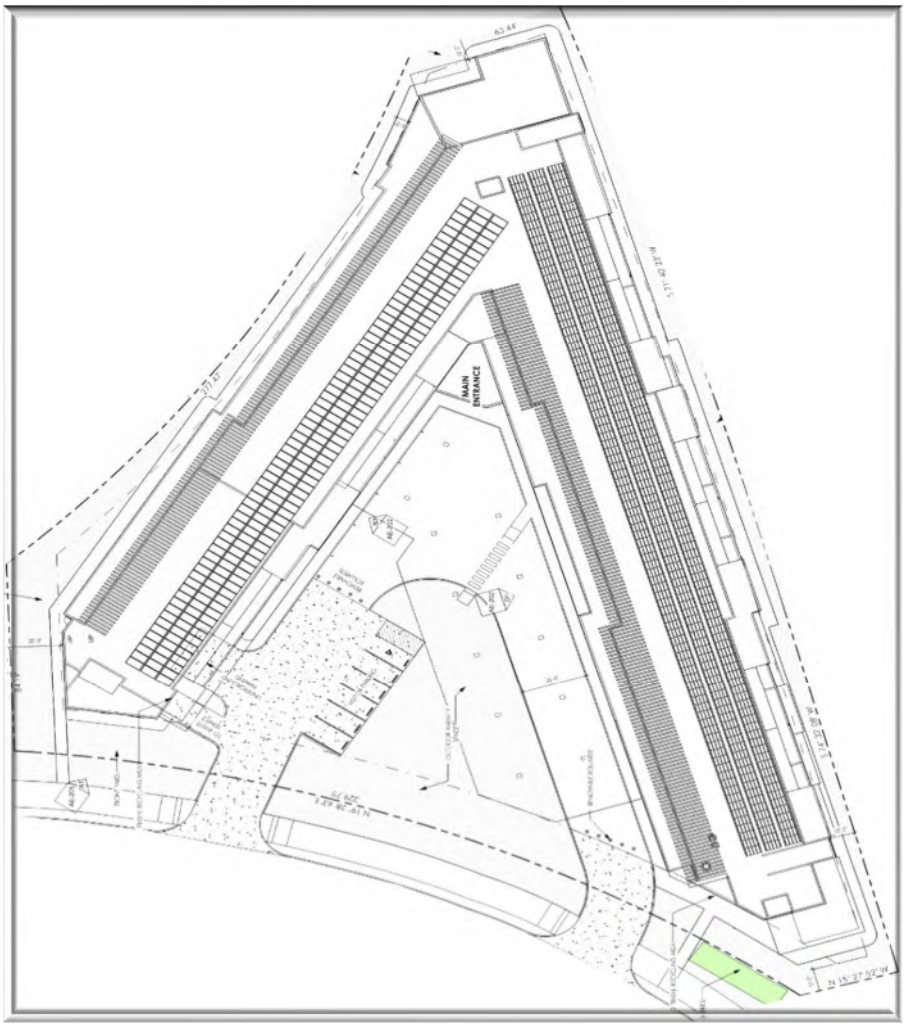
EXHIBIT D

HALES ENGINEERING TRAFFIC IMPACT STUDY

HALES ENGINEERING
innovative transportation solutions

Homestake

Traffic Impact Study



Park City, Utah

October 20, 2022

UT22-2234

LICENSED PROFESSIONAL ENGINEER
NO. 12335093
JOSHUA D. GIBBONS
10/20/2022
STATE OF UTAH

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Homestake development located in Park City, Utah. The Homestake development is located southeast of Homestake Road between Kearns Boulevard (SR-248) and Park Avenue (SR-224).

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2022), future (2027), and future (2040) conditions with and without the proposed project and to recommend mitigation measures as needed. The peak hour level of service (LOS) results are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2.

Table ES-1: Peak Hour Level of Service Results

	Intersection	Level of Service													
		Existing (2022)						Future (2027)				Future (2040)			
		Background				Plus Project		Background		Plus Project		Background		Plus Project	
		AM	AM MIT	PM	PM MIT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Bonanza Drive / Kearns Boulevard	C	C	B	C	C	C	C	D	D	D	E	F	E	F
2	Homestake Road / Kearns Boulevard	a	a	b	b	a	b	a	b	a	b	a	b	b	b
3	Kearns Boulevard / Park Avenue	B	B	B	B	B	B	B	C	B	B	B	C	B	C
4	Homestake Road / Park Avenue	b	a	f	e	a	e	a	e	a	e	a	f	a	e
5	Deer Valley Drive / Park Avenue	C	C	D	D	C	D	C	D	C	D	C	E	C	E
6	Project Access / Homestake Road	-	-	-	-	a	a	-	-	a	a	-	-	a	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)
2. BG = Background (without project traffic), PP = Plus Project (with project traffic), MIT = Mitigated Scenario

Source: Hales Engineering, October 2022

Table ES-2: Recommended Storage Length

	Intersection	Recommended Storage Lengths (feet)															
		Northbound				Southbound				Eastbound				Westbound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	Bonanza Drive / Kearns Boulevard	125	**200**	125	*	125	-	100	-	250	-	-	-	250	*	-	-
3	Kearns Boulevard / Park Avenue	-	-	50	**200**	200	**375**	-	-	-	-	-	-	250	-	-	-
5	Deer Valley Drive / Park Avenue	150	**250**	-	-	125	*	-	-	225	*	-	-	150	**200**	-	-

1. Storage lengths are based on 2040 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicable

* denotes a turn lane with signficant queues that far exceeds the current storage

Source: Hales Engineering, October 2022

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

The background and plus project assumptions, findings, and mitigations are listed below. All improvements listed are needed in a background conditions (without the addition of the project). *The project is anticipated to add minimal traffic to the roadway network and will not result in any further mitigations beyond the background improvements which are not associated with the project. The project related traffic will fit into the planned Homestake Roadway cross section.*

Project Conditions

- The development will consist of 123 units of multifamily residential
- The project is anticipated to generate approximately 505 weekday daily trips, including 40 trips in the morning peak hour, and 45 trips in the evening peak hour
- A 5% transit reduction and a 5% internal capture reduction were applied to align with surrounding land uses and the project's/Park City's commitment to travel demand management (TDM) strategies
- No additional auxiliary lanes are needed or recommended for the project access

2022	Background	Plus Project
Assumptions	• None	• 2022 background mitigations assumed with left-turn project trips being re-routed from Homestake Road / Park Avenue
Findings	• Poor LOS at: ○ Homestake Road / Park Avenue (PM) • Significant 95th percentile queues at: ○ Bonanza Drive / Kearns Boulevard (EB/NB) ○ Park Avenue / Kearns Boulevard (NB) ○ Deer Valley Drive / Park Avenue (WB)	• Poor LOS at: ○ Homestake Road / Park Avenue (PM) • Significant 95th percentile queues continue
Mitigations	• **Homestake Road / Park Avenue:** ○ Restrict to right-in right-out only and reroute traffic to new Munchkin Road connection between Homestake Road and Bonanza Drive	• None
2027	**Background**	**Plus Project**
Assumptions	• Previous mitigations	• Previous mitigations
Findings	• Poor LOS at: ○ Homestake Road / Park Avenue (PM) • Significant 95th percentile queues continue	• Poor LOS at: ○ Homestake Road / Park Avenue (PM) • Significant 95th percentile queues continue
2040	**Background**	**Plus Project**
Assumptions	• Previous mitigations	• Previous mitigations
Findings	• Poor LOS at: ○ Bonanza Drive / Kearns Blvd (AM/PM) ○ Homestake Road / Park Avenue (PM) ○ Deer Valley Drive / Park Avenue (PM) • Significant 95th percentile queues continue	• Poor LOS at: ○ Bonanza Drive / Kearns Blvd (AM/PM) ○ Homestake Road / Park Avenue (PM) ○ Deer Valley Drive / Park Avenue (PM) • Significant 95th percentile queues continue

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Homestake development located in Park City, Utah. The proposed project is located southeast of Homestake Road between Kearns Boulevard (SR-248) and Park Avenue (SR-224). Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2022), future (2027), and future (2040) conditions with and without the proposed project and to recommend mitigation measures as needed.

Figure 1: Vicinity map showing the project location in Park City, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Bonanza Drive & Monitor Drive / Kearns Boulevard (SR-248)
- Homestake Road / Kearns Boulevard (SR-248)
- Kearns Boulevard (SR-248) / Park Avenue (SR-224)
- Homestake Road / Park Avenue (SR-224)
- Deer Valley Drive (SR-224) & Empire Avenue / Park Avenue (SR-224)
- Project Accesses / Homestake Road

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix C. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2022) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Kearns Boulevard (SR-248) – is a state-maintained roadway (classified by UDOT access management standards as a "Community – Rural Importance" facility, or access category 7 roadway). The roadway has two travel lanes in each direction with a center two-way left-turn lane. As identified and controlled by UDOT, this roadway has minimum signalized intersection spacing of one-quarter mile (1,320 feet), minimum unsignalized street spacing of 300 feet, and minimum driveway spacing of 150 feet. The posted speed limit is 35 mph in the study area.

Park Avenue (SR-224) – is a state-maintained roadway (classified by UDOT access management standards as a "Community – Rural Importance" facility, or access category 7 roadway). The roadway has two travel lanes in each direction with a center two-way left-turn lane. As identified and controlled by UDOT, this roadway has minimum signalized intersection spacing of one-quarter mile (1,320 feet), minimum unsignalized street spacing of 300 feet, and minimum driveway spacing of 150 feet. The posted speed limit is 40 mph in the study area.

Homestake Road – is a city-maintained roadway that is not classified by the Park City Transportation Management Plan (2011) and is assumed to be a local road. There is one travel lane in each direction with no pavement markings and parking allowed on the northwest side of the roadway. The speed limit is 25mph through the study area.

C. Traffic Volumes

Saturday morning (8:00 to 10:00 a.m.) and evening (3:00 to 5:00 p.m.) peak period traffic counts were performed at the following intersections:

- Bonanza Drive & Monitor Drive / Kearns Boulevard (SR-248)
- Homestake Road / Kearns Boulevard (SR-248)
- Kearns Boulevard (SR-248) / Park Avenue (SR-224)
- Homestake Road / Park Avenue (SR-224)
- Deer Valley Drive (SR-224) & Empire Avenue / Park Avenue (SR-224)

The counts were performed on Saturday, January 29, 2022. The morning peak hour was determined to be between 8:45 and 9:45 a.m., and the evening peak hour was determined to be between 4:00 and 5:00 p.m. The evening peak hour volumes were approximately 64% higher than the morning peak hour volumes. Detailed count data are included in Appendix B.

Hales Engineering did not make seasonal adjustments to the observed traffic volumes. Monthly traffic volume data, obtained from nearby UDOT automatic traffic recorders (ATR) on SR-224 (ATR #605) and SR-248 (ATR #606) showed that in recent years, traffic volumes in January have been equal to approximately 105% of average traffic volumes. Therefore, the observed traffic volumes were left unadjusted.

The traffic counts were collected during the COVID-19 pandemic when traffic volumes may have been slightly reduced. According to the UDOT Automatic Traffic Signal Performance Measures (ATSPM) website and from previous collected counts at these intersections (pre-social distancing), the traffic volumes on January 29, 2022, were higher than pre-pandemic levels. Therefore, no adjustment was made.

Anticipated trip generation from the Yarrow project, located on the southeast corner of the Kearns Boulevard / Park Avenue intersection, were added onto background traffic volumes. Figure 2 shows the existing peak hour volumes as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Hales Engineering determined that the Homestake Road / Park Avenue intersection is currently operating at a poor level of service during the evening peak hour, as shown in Table 2.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: 600 feet (AM)
  - Northwest-bound: 750 feet (PM)
- Homestake Road / Park Avenue:
  - Westbound: 150 feet (PM)
- Deer Valley Drive / Park Avenue:
  - Southbound: 525 feet (PM)
  - Westbound: 900 feet (PM)

There is also 425 feet of queuing anticipated on the northbound approach for the HAWK signal near the Homestake Road / Park Avenue intersection during the evening peak hour, which negatively impacts the Homestake Road / Park Avenue intersection.

Park City Homestake TIS
Existing (2022) Background

Morning Peak Hour
Figure 2A

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06/07/2022

Park City Homestake TIS
Existing (2022) Background

Evening Peak Hour
Figure 2B

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801.766.4343
06/10/2022

Table 2: Existing (2022) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	C (23.4)	B (19.7)
Homestake Road / Kearns Boulevard	NB Stop	a (7.9) / NBL	b (10.5) / NBL
Kearns Boulevard / Park Avenue	Signal	B (11.7)	B (17.1)
Homestake Road / Park Avenue	WB Stop	b (14.3) / SBL	f (>50) / WBL
Deer Valley Drive / Park Avenue	Signal	C (21.9)	D (46.0)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

F. Mitigation Measures

To reduce the significant queuing and delays, the following mitigation measures are recommended:

- Per Park City, a future connection of Munchkin Road will be made between Homestake Road and Bonanza Drive. Along with this improvement, the Homestake Road / Park Avenue intersection would be limited to right-in / right-out movements only. Vehicles would then reroute to the new Munchkin Road intersection to turn south on Bonanza Drive.

There are no recommendations for the Bonanza Drive / Kearns Boulevard intersection. After discussions with the city, widening any of the roadways to incorporate dual left-turn lanes or channelized right-turn lanes is not a feasible option. Instead, the city would like to implement more robust travel demand reduction strategies in the city. These may include more transit ridership, better bike facilities, and car sharing. The travel demand reduction strategies being pursued by the project are discusses in the next chapter.

An analysis with these mitigation recommendations (including re-routing left-turns away from the Homestake Road / Park Avenue intersection) was analyzed and the LOS results are shown in Table 3. The mitigation measures change the calculated significant 95th percentile queue lengths as follows:

- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: 825 feet (AM)
  - Northwest-bound: 500 feet (PM)
- Homestake Road / Park Avenue:
  - Westbound: 75 feet (PM)
- Deer Valley Drive / Park Avenue:
  - Southbound: 500 feet (PM)
  - Westbound: 800 feet (PM)

As shown, the Homestake Road / Park Avenue intersection is still anticipated to operate at a poor LOS. This is primarily due to the westbound right-turn vehicles having to find acceptable gaps in the traffic stream as well as in between pedestrians crossing the signalized crosswalk near Homestake Road. The average delay is much lower than the previous left-turn delay, however. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2022) conditions.

Table 3: Existing (2022) Background Peak Hour LOS (Mitigated)

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	C (29.3)	C (24.6)
Homestake Road / Kearns Boulevard	NB Stop	a (8.0) / NBL	b (10.8) / NBL
Kearns Boulevard / Park Avenue	Signal	B (11.2)	B (18.4)
Homestake Road / Park Avenue	WB Stop	a (6.8) / WBR	e (43.3) / WBR
Deer Valley Drive / Park Avenue	Signal	C (23.6)	D (46.0)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed Homestake development is located southeast of Homestake Road between Kearns Boulevard (SR-248) and Park Avenue (SR-224). The development will consist of a multifamily housing structure containing 123 units. A concept plan for the proposed development is provided in Appendix A.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. Since there is minimal Saturday data available, weekday data was used to remain conservative in the analysis. Due to the proximity to grocery stores, dining establishments, other retail, and the bus/shuttle/electric bike station 1,000 feet to the west, a 5% internal capture reduction and a 5% transit reduction was applied. These reductions align with Park City's goals of travel demand reductions and multimodal emphasis. The resulting trip generation for the proposed project is included in Table 4.

The total trip generation for the development is as follows:

- Daily Trips: 505
- Morning Peak Hour Trips: 40
- Evening Peak Hour Trips: 45

Table 4: Trip Generation

Trip Generation Park City - Homestake Avengers												
Land Use[1]	# of Units	Unit Type	Trip Generation					Reductions		New Trips		
			Total	% In	% Out	In	Out	Internal Capture	Transit	In	Out	Total
Weekday Daily												
Multifamily Housing (Mid-Rise) (221)	123	DU	560	50%	50%	280	280	5%	5%	252	253	505
TOTAL			560			280	280			252	253	505
AM Peak Hour												
Multifamily Housing (Mid-Rise) (221)	123	DU	44	23%	77%	10	34	5%	5%	9	31	40
TOTAL			44			10	34			9	31	40
PM Peak Hour												
Multifamily Housing (Mid-Rise) (221)	123	DU	50	61%	39%	31	19	5%	5%	28	17	45
TOTAL			50			31	19			28	17	45

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, 2021.
SOURCE: Hales Engineering, June 2022

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. The resulting distribution of project generated trips is shown in Table 5.

Table 5: Trip Distribution

Direction	% To/From Project
North	30%
South	35%
East	35%

These trip distribution assumptions were used to assign the peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

E. Access

The proposed access for the site will be gained at the following locations (see also concept plan in Appendix A):

Homestake Road:

- The north access will be located opposite of the parking lot access on the west side of the street, which is approximately 460 feet south of the Homestake Road / Kearns Boulevard intersection. It will access the project on the east side of Homestake Road. It is anticipated that the access will be stop-controlled. The north access will be the primary entrance into the underground parking structure
- The south access will be located opposite of the Claim Jumper residential development access on the west side of the street, which is approximately 625 feet south of the Homestake Road / Kearns Boulevard intersection. The two accesses will be approximately 150 feet apart. The south access will enter the project on the east side of Homestake Road and is assumed to be emergency access only.

F. Auxiliary Lane Requirements

Deceleration (ingress) lanes are generally needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the City roadways in the study area. Based on these guidelines and the anticipated project traffic, no auxiliary lanes are recommended for the project access.

Park City Homestake TIS
Trip Assignment

Morning Peak Hour
Figure 3A

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Park City Homestake TIS
Trip Assignment

Evening Peak Hour
Figure 3B

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06/10/2022

G. Transportation Demand Management Strategies

Park City emphasizes the importance of transportation demand management strategies in the area in order to reduce vehicles on the road and encourage other modes of transportation. Other than those previously mentioned (proximity to transit stops and commercial areas), the following strategies are being implemented by the project to reduce travel demand:

- Car sharing program with two dedicated car share parking spaces
- Visitor bicycle stalls (15)
- An additional 30 covered and secured bike parking stalls above the requirement
    - Charging available for e-bikes
- Bike maintenance room
- On-site e-bike station

There are Park City plans to construct a multi-use path along Homestake Road and the future Munchkin Road connection in order to increase safety for multimodal transportation in the area.

IV. EXISTING (2022) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2022) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2022) background traffic volumes to predict turning movement volumes for existing (2022) plus project conditions. Due to the left-turn restriction at the Homestake Road / Park Avenue intersection, westbound left-turn vehicles assigned from the project were re-routed to the Munchkin Road connection to travel south on Bonanza Drive. Southbound left-turn vehicles assigned to the Homestake Road / Park Avenue intersection were re-routed to Kearns Boulevard. Existing (2022) plus project peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that the Homestake Road / Park Avenue intersections is anticipated to continue operating at a poor level of service during the evening peak hour, as shown in Table 6.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Homestake Road / Park Avenue:
  - Westbound: 100 feet (PM)
- Deer Valley Drive / Park Avenue:
  - Westbound: 775 feet (PM)
- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: 825 feet (AM)
  - Northwest-bound: 525 feet (PM)
- Kearns Boulevard / Park Avenue:
  - Northbound: 900 feet (PM)

E. Mitigation Measures

No further mitigation measures are recommended beyond those mentioned in the existing (2022) background conditions. Even with left-turn restrictions, the westbound right-turn movement at the Homestake Road / Park Avenue intersection will experience unacceptable delays during peak hours, though the magnitude of the delay is much less than the left-turn delay in existing conditions.

Park City Homestake Avengers TIS
Existing (2022) Plus Project

Morning Peak Hour
Figure 4A

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Park City Homestake Avengers TIS **Evening Peak Hour**
Existing (2022) Plus Project **Figure 4B**

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Table 6: Existing (2022) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	C (27.8)	C (24.7)
Homestake Road / Kearns Boulevard	NB Stop	a (9.1) / NBL	b (10.2) / NBL
Kearns Boulevard / Park Avenue	Signal	B (11.4)	B (18.4)
Homestake Road / Park Avenue	WB Stop	a (4.4) / NBR	e (38.9) / WBR
Deer Valley Drive / Park Avenue	Signal	C (24.0)	D (47.2)
Project Access / Homestake Road	WB Stop	a (4.8) / WBL	a (7.0) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

V. FUTURE (2027) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2027) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the Park City Transportation Management Plan (2011), there are no projects planned before 2027 in the study area. Therefore, no changes were made to the roadway network for the future (2027) analysis. Previous mitigations were assumed in this scenario.

C. Traffic Volumes

Hales Engineering obtained future (2027) forecasted volumes from the Summit/Wasatch County travel demand model. The travel demand model projects approximately a 0.75-1.25% annual growth rate for the area. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. Future (2027) peak hour turning movement volumes are shown in Figure 5.

D. Level of Service Analysis

Hales Engineering determined that the Homestake Road / Park Avenue intersection is anticipated to continue to operate at a poor level of service during the evening peak hour, as shown in Table 7. These results serve as a baseline condition for the impact analysis of the proposed development for future (2027) conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: 1,000 feet (PM)
  - Northwest-bound: >1,000 feet (PM)
- Kearns Boulevard / Park Avenue:
  - Northbound: >1,000 feet (PM)
- Deer Valley Drive / Park Avenue:
  - Westbound: 625 feet (PM)
  - Eastbound: 550 feet (PM)

Park City Homestake Avengers TIS **Morning Peak Hour**
Future (2027) Background **Figure 5A**

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Park City Homestake Avengers TIS **Evening Peak Hour**
Future (2027) Background **Figure 5B**

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Table 7: Future (2027) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	C (32.7)	D (44.8)
Homestake Road / Kearns Boulevard	NB Stop	a (8.5) / NBL	b (11.9) / NBL
Kearns Boulevard / Park Avenue	Signal	B (11.7)	C (20.3)
Homestake Road / Park Avenue	WB Stop	a (4.5) / WBR	e (49.7) / WBR
Deer Valley Drive / Park Avenue	Signal	C (23.7)	D (52.7)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

F. Mitigation Measures

No further mitigation measures are recommended to improve the Homestake Road / Park Avenue intersection. Vehicles will either be given courtesy gaps or will likely learn to reroute when undue delays and queues are observed. Even with left-turn restrictions, the westbound right-turn movement at the Homestake Road / Park Avenue intersection will experience unacceptable delays during peak hours, though the magnitude of the delay is much less than the left-turn delay in existing conditions.

VI. FUTURE (2027) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2027) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2027) background traffic volumes to predict turning movement volumes for future (2027) plus project conditions. Due to the left-turn restriction at the Homestake Road / Park Avenue intersection, westbound left-turn vehicles assigned from the project were re-routed to the Munchkin Road connection to travel south on Bonanza Drive. Southbound left-turn vehicles assigned to the Homestake Road / Park Avenue intersection were re-routed to Kearns Boulevard. Future (2027) plus project peak hour turning movement volumes are shown in Figure 6. Previous mitigations were assumed in this scenario.

C. Level of Service Analysis

Hales Engineering determined that the Homestake Road / Park Avenue intersection is anticipated to continue operating at a poor level of service during the peak hour in future (2027) plus project conditions, as shown in Table 8.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Deer Valley Drive / Park Avenue:
  - Southbound: 500 feet (PM)
  - Westbound: 650 feet (PM)
  - Eastbound: 650 feet (PM)
- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: >1,000 feet (AM & PM)
  - Northwest-bound: >1,000 feet (PM)
- Kearns Boulevard / Park Avenue:
  - Northbound: >1,000 feet (PM)

E. Mitigation Measures

No further mitigation measures are recommended above those already mentioned in previous chapters. Vehicles will be given courtesy gaps or learn to reroute if undue delays and queues are experienced from access points being blocked by downstream signal queues. Even with left-turn restrictions, the westbound right-turn movement at the Homestake Road / Park Avenue intersection will experience unacceptable delays during peak hours, though the magnitude of the delay is much less than the left-turn delay in existing conditions.

Park City Homestake Avengers TIS
Future (2027) Plus Project

Morning Peak Hour
Figure 6A

Hales Engineering
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10/12/2022

Park City Homestake Avengers TIS
Future (2027) Plus Project

Evening Peak Hour
Figure 6B

Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
10/12/2022

Table 8: Future (2027) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	D (36.6)	D (45.4)
Homestake Road / Kearns Boulevard	NB Stop	a (9.5) / NBL	b (10.5) / NBL
Kearns Boulevard / Park Avenue	Signal	B (11.7)	B (20.0)
Homestake Road / Park Avenue	WB Stop	a (7.5) / WBR	e (49.1) / WBR
Deer Valley Drive / Park Avenue	Signal	C (24.3)	D (54.3)
Project Access / Homestake Road	WB Stop	a (4.9) / WBL	a (8.2) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

VII. FUTURE (2040) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2040) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the Park City Transportation Management Plan (2011), there are no projects planned before 2040 in the study area. Therefore, no changes were made to the roadway network for the future (2040) analysis. Previous mitigations were assumed in this scenario.

C. Traffic Volumes

Hales Engineering obtained future (2040) forecasted volumes from the Summit/Wasatch County travel demand model. The travel demand model projects approximately a 0.75-1.25% annual growth rate for the area. Peak period turning movement counts were estimated using NCHRP 255 methodologies which utilize existing peak period turn volumes and future AWDT volumes to project the future turn volumes at the major intersections. Future (2040) background peak hour turning movement volumes are shown in Figure 7.

D. Level of Service Analysis

Hales Engineering determined that the Bonanza Drive / Kearns Boulevard, Homestake Road / Park Avenue, and Deer Valley Drive / Park Avenue intersections are anticipated to operate at a poor level of service during the evening peak hour, as shown in Table 9.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Deer Valley Drive / Park Avenue:
  - Northbound: 575 feet (PM)
  - Southbound: 575 feet (PM)
  - Westbound: >1,000 feet (PM)
  - Eastbound: >1,000 feet (PM)
- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: >1,000 feet (AM & PM)
  - Northwest-bound: >1,000 feet (PM)
- Kearns Boulevard / Park Avenue:
  - Northbound: >1,000 feet (PM)

Park City Homestake Avengers TIS **Morning Peak Hour**
Existing (2040) Background **Figure 7A**

Hales Engineering **801.766.4343**
1220 North 500 West Ste 202, Lehi, UT, 84043 **10/12/2022**

Park City Homestake Avengers TIS **Evening Peak Hour**
Future (2040) Background **Figure 7B**

Hales Engineering **801.766.4343**
1220 North 500 West Ste 202, Lehi, UT, 84043 **10/12/2022**

Table 9: Future (2040) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	E (77.3)	F (>80)
Homestake Road / Kearns Boulevard	NB Stop	a (7.6) / NBL	b (13.6) / NBL
Kearns Boulevard / Park Avenue	Signal	B (12.6)	C (27.7)
Homestake Road / Park Avenue	WB Stop	a (5.7) / WBR	f (>50) / WBR
Deer Valley Drive / Park Avenue	Signal	C (25.7)	E (63.9)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

F. Mitigation Measures

Park City favors innovative multimodal strategies to reduce travel demand. If these strategies are pursued and successful, the need for mitigations may be unnecessary. However, as projected in the travel demand model future traffic volumes are significant, and as such innovative mitigation measures will be needed to keep traffic flows moving in the area between Kearns Boulevard and Deer Valley Drive.

To accomplish this, the City may need to consider roadway widening to accommodate dual southbound left-turn lanes and a westbound channelized right-turn lane at Deer Valley Drive / Park Avenue. As an alternative to widening the roadway, it may be beneficial to pursue a one-way loop in the area along Deer Valley Drive, Bonanza Drive, Kearns Boulevard, and Park Avenue. No analysis was performed for these major mitigation measures as they are not part of current Park City goals.

Even with left-turn restrictions, the westbound right-turn movement at the Homestake Road / Park Avenue intersection will experience unacceptable delays during peak hours, though the magnitude of the delay is much less than the left-turn delay in existing conditions.

VIII. FUTURE (2040) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2040) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2040) background traffic volumes to predict turning movement volumes for future (2040) plus project conditions. Due to the left-turn restriction at the Homestake Road / Park Avenue intersection, westbound left-turn vehicles assigned from the project were re-routed to the Munchkin Road connection to travel south on Bonanza Drive. Southbound left-turn vehicles assigned to the Homestake Road / Park Avenue intersection were re-routed to Kearns Boulevard. Future (2040) plus project peak hour turning movement volumes are shown in Figure 8. Previous mitigations were assumed in this scenario.

C. Level of Service Analysis

Hales Engineering determined that the Bonanza Drive / Kearns Boulevard, Homestake Road / Park Avenue, and Deer Valley Drive / Park Avenue intersections are anticipated to continue operating at a poor level of service during the evening peak hour in future (2040) plus project conditions, as shown in Table 10.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths are summarized as follows:

- Deer Valley Drive / Park Avenue:
  - Northbound: 525 feet (PM)
  - Southbound: 550 feet (PM)
  - Westbound: >1,000 feet (PM)
  - Eastbound: >1,000 feet (PM)
- Bonanza Drive / Kearns Boulevard:
  - Southwest-bound: >1,000 feet (AM & PM)
  - Northwest-bound: >1,000 feet (PM)
- Kearns Boulevard / Park Avenue:
  - Northbound: >1,000 feet (PM)

Park City Homestake Avengers TIS
Future (2040) Plus Project

Morning Peak Hour
Figure 8A

Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
10/12/2022

Park City Homestake Avengers TIS
Future (2040) Plus Project

Evening Peak Hour
Figure 8B

Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
10/12/2022

Table 10: Future (2040) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Bonanza Drive / Kearns Boulevard	Signal	E (65.9)	F (>80)
Homestake Road / Kearns Boulevard	NB Stop	b (10.5) / NBL	b (13.3) / NBL
Kearns Boulevard / Park Avenue	Signal	B (12.6)	C (28.4)
Homestake Road / Park Avenue	WB Stop	a (5.3) / WBR	e (46.1) / WBR
Deer Valley Drive / Park Avenue	Signal	C (26.2)	E (65.2)
Project Access / Homestake Road	WB Stop	a (6.3) / WBL	a (7.2) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, October 2022

E. Mitigation Measures

No further mitigation measures are recommended for the Homestake Road / Park Avenue or Deer Valley Drive / Park Avenue intersections other than those listed in previous chapters. Vehicles will learn to reroute during peak times when undue delay or queues are experienced. Even with left-turn restrictions, the westbound right-turn movement at the Homestake Road / Park Avenue intersection will experience unacceptable delays during peak hours, though the magnitude of the delay is much less than the left-turn delay in existing conditions.

F. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the future (2040) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 11. Intersections shown include new intersections and existing intersections that have recommended storage length changes, either due to background growth or project generated traffic. Storage lengths for turn lanes with significant queueing were not included.

Table 11: Recommended Storage Lengths

	Intersection	Recommended Storage Lengths (feet)															
		Northbound				Southbound				Eastbound				Westbound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	Bonanza Drive / Kearns Boulevard	125	**200**	125	*	125	-	100	-	250	-	-	-	250	*	-	-
3	Kearns Boulevard / Park Avenue	-	-	50	**200**	200	**375**	-	-	-	-	-	-	250	-	-	-
5	Deer Valley Drive / Park Avenue	150	**250**	-	-	125	*	-	-	225	*	-	-	150	**200**	-	-

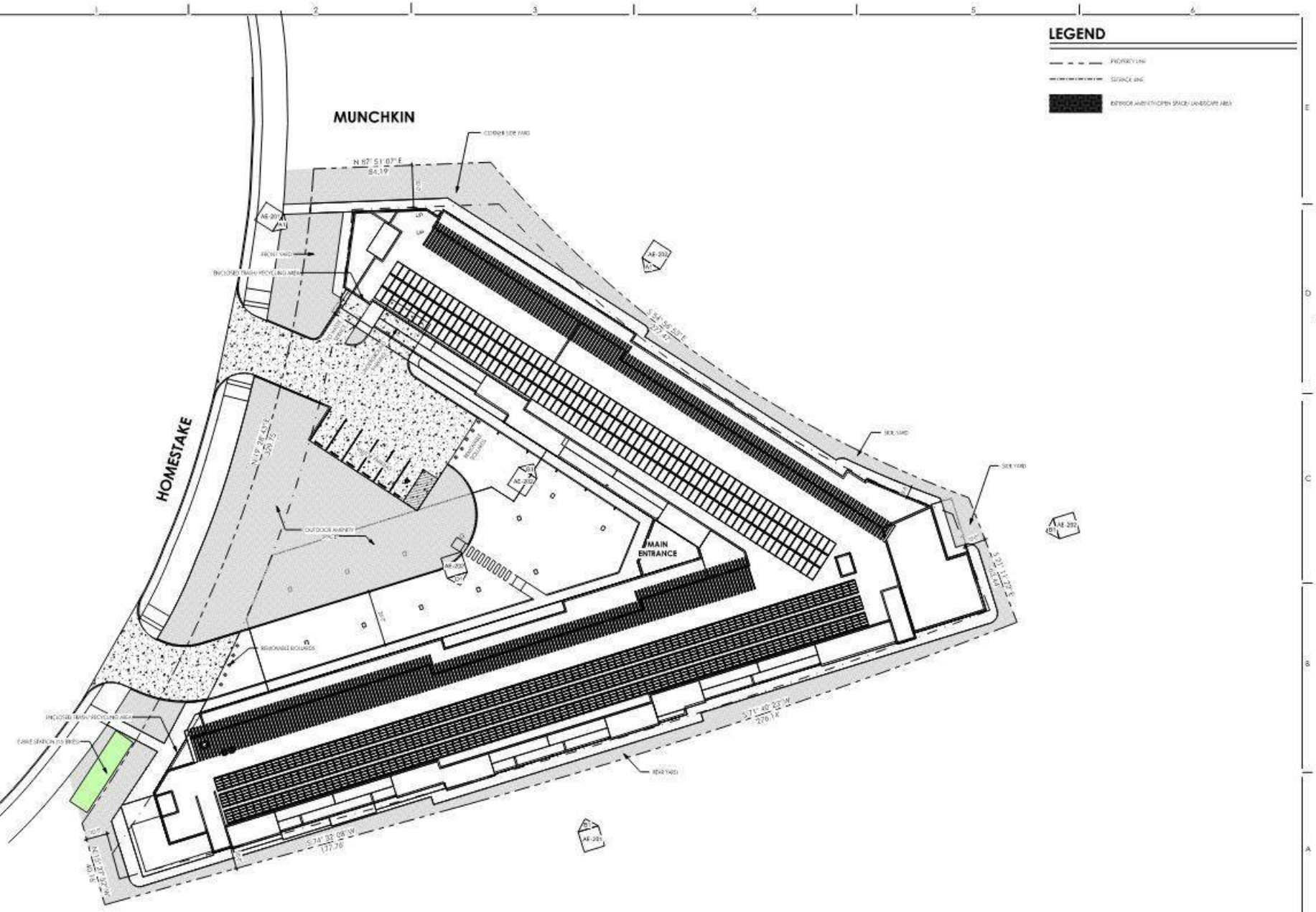
1. Storage lengths are based on 2040 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicable

* denotes a turn lane with signficant queues that far exceeds the current storage

Source: Hales Engineering, October 2022

APPENDIX A

Site Plan



A1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 20'-0"

WOW

PLANNING MPD/ CUP REVIEW ONLY NOT FOR CONST.

CIVIL: TAUSMAN
STRUCTURAL:
MECHANICAL: PYE INC
ELECTRICAL: PYE INC
LANDSCAPE: STRATOSCAPE
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210035
ISSUE DATE: 08.19.2022
MPD-CUP APPLICATION
REVISIONS

ARCHITECTURAL SITE PLAN

AS-101

COPYRIGHT WOW

APPENDIX B

Turning Movement Counts

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

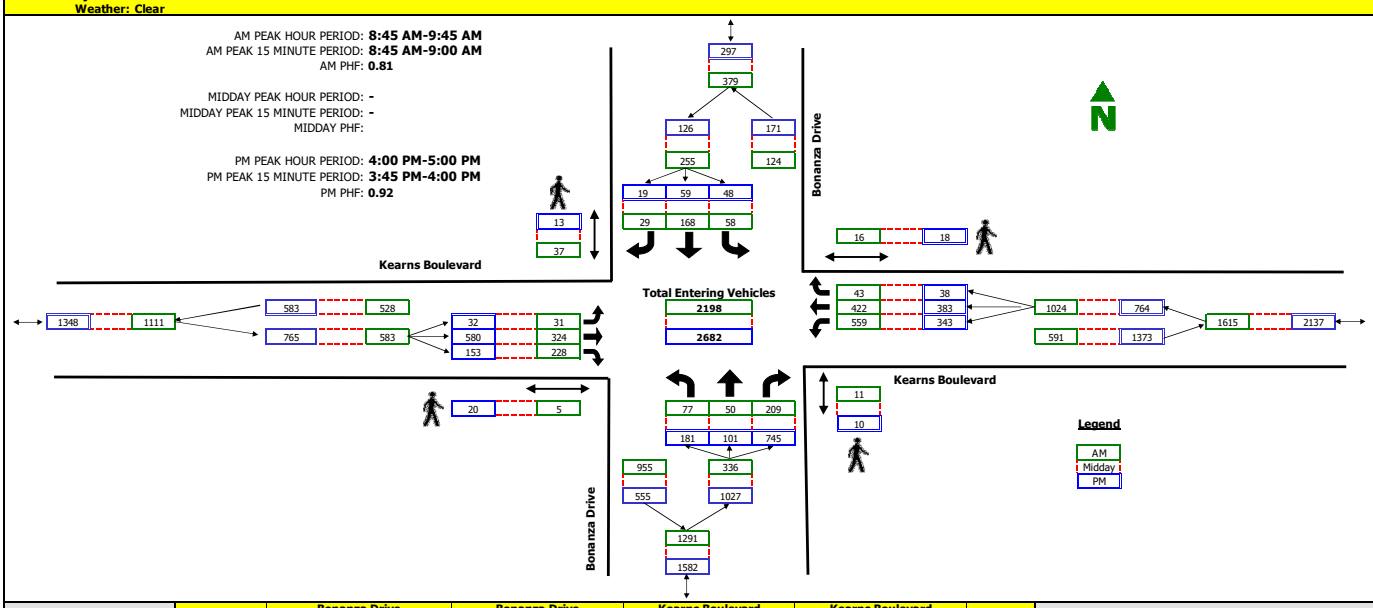
Intersection: Bonanza Drive / Kearns Boulevard
North/South: Bonanza Drive
East/West: Kearns Boulevard
Jurisdiction: Park City
Project Title: Yarrow
Project No: UT22-2092
Weather: Clear

Date: 1-29-22, Sat
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 606
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:45 AM-9:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:45 AM-9:00 AM**
AM PHF: **0.81**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:00 PM-5:00 PM**
PM PEAK 15 MINUTE PERIOD: **3:45 PM-4:00 PM**
PM PHF: **0.92**



RAW COUNT SUMMARIES	Bonanza Drive Northbound				Bonanza Drive Southbound				Kearns Boulevard Eastbound				Kearns Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
8:00 - 8:15	14	12	18	0	11	21	8	0	5	45	26	0	152	163	8	0	483
8:15 - 8:30	14	9	18	0	10	56	8	0	1	43	69	0	171	129	9	4	537
8:30 - 8:45	16	8	32	3	10	64	4	0	4	43	76	0	173	125	6	0	561
8:45 - 9:00	20	15	57	0	23	89	8	2	10	112	74	0	135	124	12	0	679
9:00 - 9:15	16	15	47	8	11	27	10	2	10	66	67	0	153	101	8	3	531
9:15 - 9:30	25	11	57	3	14	27	9	12	3	76	52	3	142	107	7	1	530
9:30 - 9:45	16	9	48	0	10	25	2	21	8	70	35	2	129	90	16	12	458
9:45 - 10:00	18	13	57	0	12	27	11	4	7	88	39	1	126	91	12	10	501
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
15:00 - 15:15	39	27	131	1	12	15	5	0	6	125	44	0	78	96	11	0	589
15:15 - 15:30	45	27	141	2	1	30	5	1	11	130	34	5	104	92	7	0	627
15:30 - 15:45	55	22	188	5	11	21	5	0	4	148	36	1	110	95	9	3	704
15:45 - 16:00	49	31	178	0	19	19	8	3	5	169	37	0	99	108	8	0	730
16:00 - 16:15	57	37	191	0	5	19	2	5	13	127	42	7	98	88	10	0	689
16:15 - 16:30	29	22	201	6	18	13	8	0	9	142	35	3	68	93	6	3	644
16:30 - 16:45	44	22	173	0	14	14	6	4	8	159	47	4	103	98	14	9	702
16:45 - 17:00	51	20	180	4	11	13	3	4	2	152	29	6	74	104	8	6	647

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

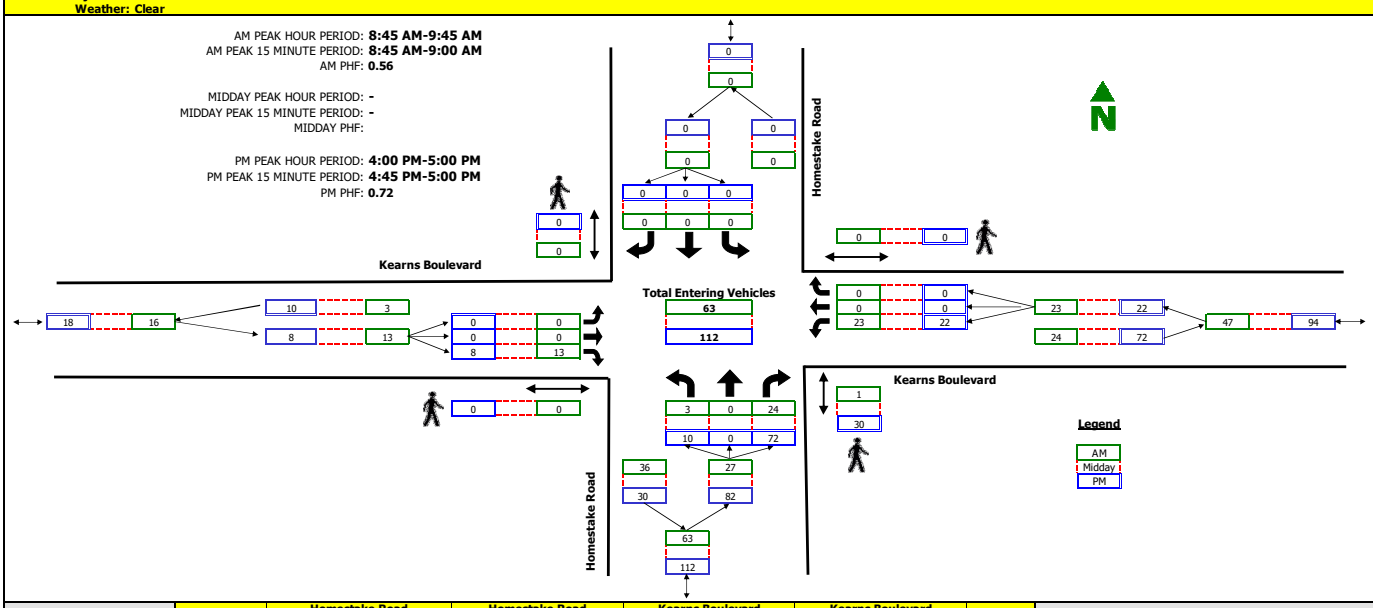
Intersection: Homestake Road / Kearns Boulevard
North/South: Homestake Road
East/West: Kearns Boulevard
Jurisdiction: Park City
Project Title: Yarrow
Project No: UT22-2092
Weather: Clear

Date: 1-29-22, Sat
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 606
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:45 AM-9:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:45 AM-9:00 AM**
AM PHF: **0.56**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:00 PM-5:00 PM**
PM PEAK 15 MINUTE PERIOD: **4:45 PM-5:00 PM**
PM PHF: **0.72**



RAW COUNT SUMMARIES	Homestake Road Northbound				Homestake Road Southbound				Kearns Boulevard Eastbound				Kearns Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
8:00 - 8:15	1	0	5	0	0	0	0	0	0	0	0	0	4	0	0	0	10
8:15 - 8:30	2	0	4	2	0	0	0	0	0	0	3	0	0	0	0	0	9
8:30 - 8:45	0	0	3	0	0	0	0	0	0	0	4	0	4	0	0	0	11
8:45 - 9:00	1	0	7	0	0	0	0	0	0	0	6	0	14	0	0	0	28
9:00 - 9:15	0	0	3	0	0	0	0	0	0	0	2	0	4	0	0	0	9
9:15 - 9:30	1	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	8
9:30 - 9:45	1	0	10	1	0	0	0	0	0	0	2	0	5	0	0	0	18
9:45 - 10:00	1	0	11	1	0	0	0	0	0	0	1	0	4	0	0	0	17
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
15:00 - 15:15	0	0	10	0	0	0	0	0	0	0	4	0	2	0	0	0	16
15:15 - 15:30	0	0	8	8	0	0	0	0	0	0	3	0	7	0	0	0	18
15:30 - 15:45	1	0	9	0	0	0	0	0	0	0	4	0	3	0	0	0	17
15:45 - 16:00	1	0	18	0	0	0	0	0	0	0	0	0	7	0	0	0	26
16:00 - 16:15	2	0	15	7	0	0	0	0	0	0	2	0	6	0	0	0	25
16:15 - 16:30	2	0	15	7	0	0	0	0	0	0	2	0	6	0	0	0	25
16:30 - 16:45	1	0	12	10	0	0	0	0	0	0	4	0	6	0	0	0	23
16:45 - 17:00	5	0	30	6	0	0	0	0	0	0	0	0	4	0	0	0	39

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

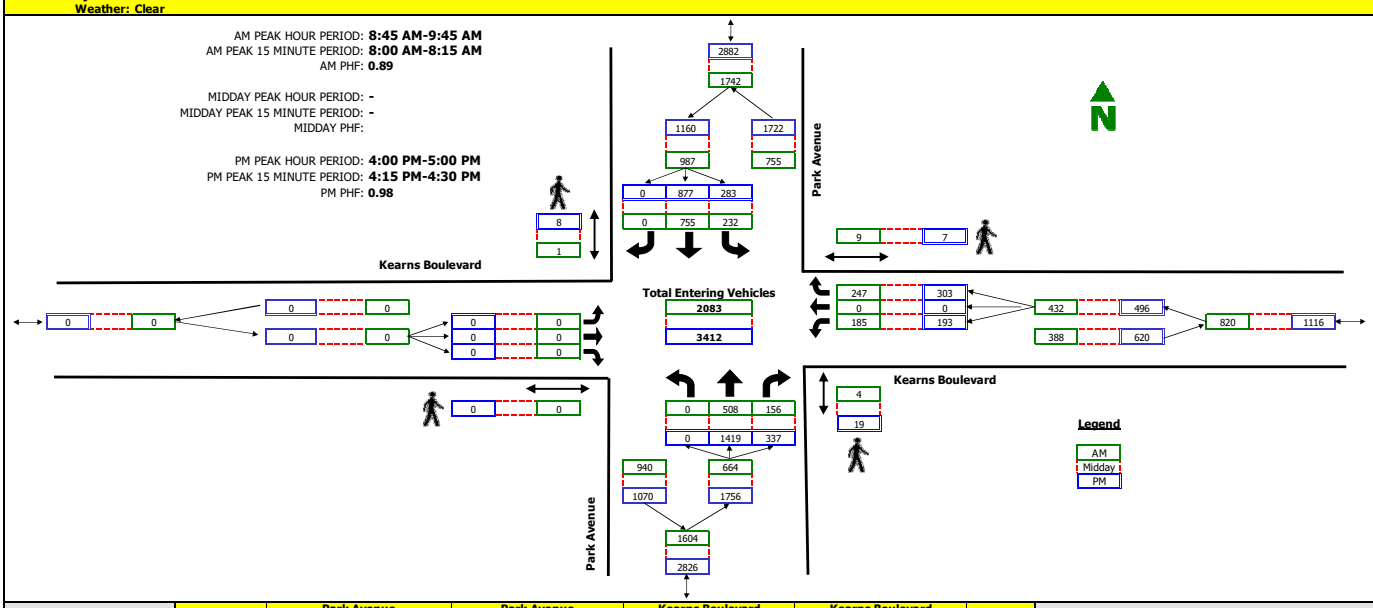
Intersection: Park Avenue / Kearns Boulevard
North/South: Park Avenue
East/West: Kearns Boulevard
Jurisdiction: Park City
Project Title: Yarrow
Project No: UT22-2092
Weather: Clear

Date: 1-29-22, Sat
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 605
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:45 AM-9:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:00 AM-8:15 AM**
AM PHF: **0.89**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:00 PM-5:00 PM**
PM PEAK 15 MINUTE PERIOD: **4:15 PM-4:30 PM**
PM PHF: **0.98**



RAW COUNT SUMMARIES	Park Avenue Northbound				Park Avenue Southbound				Kearns Boulevard Eastbound				Kearns Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
8:00 - 8:15	0	84	15	1	30	294	0	3	0	0	0	0	110	0	51	0	584
8:15 - 8:30	0	73	25	0	40	117	0	0	0	0	0	0	78	0	64	2	397
8:30 - 8:45	0	98	21	0	27	157	0	3	0	0	0	0	79	0	64	0	446
8:45 - 9:00	0	128	47	0	61	190	0	1	0	0	0	0	70	0	67	0	563
9:00 - 9:15	0	128	29	2	54	203	0	0	0	0	0	0	52	0	62	3	528
9:15 - 9:30	0	126	44	1	63	169	0	0	0	0	0	0	34	0	61	1	497
9:30 - 9:45	0	126	36	1	54	193	0	0	0	0	0	0	29	0	57	5	495
9:45 - 10:00	0	144	51	3	59	196	0	0	0	0	0	0	37	0	65	3	552
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
15:00 - 15:15	0	312	64	6	75	210	0	1	0	0	0	0	45	0	71	0	777
15:15 - 15:30	0	343	80	1	73	217	0	0	0	0	0	0	60	0	61	0	834
15:30 - 15:45	0	326	84	1	83	240	0	3	0	0	0	0	56	0	71	0	860
15:45 - 16:00	0	323	97	5	74	205	0	3	0	0	0	0	43	0	81	0	823
16:00 - 16:15	0	343	78	7	72	212	0	2	0	0	0	0	46	0	87	1	838
16:15 - 16:30	0	363	96	2	76	213	0	3	0	0	0	0	44	0	75	0	867
16:30 - 16:45	0	325	93	5	70	236	0	0	0	0	0	0	56	0	66	2	846
16:45 - 17:00	0	388	70	5	65	216	0	3	0	0	0	0	47	0	75	4	861

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

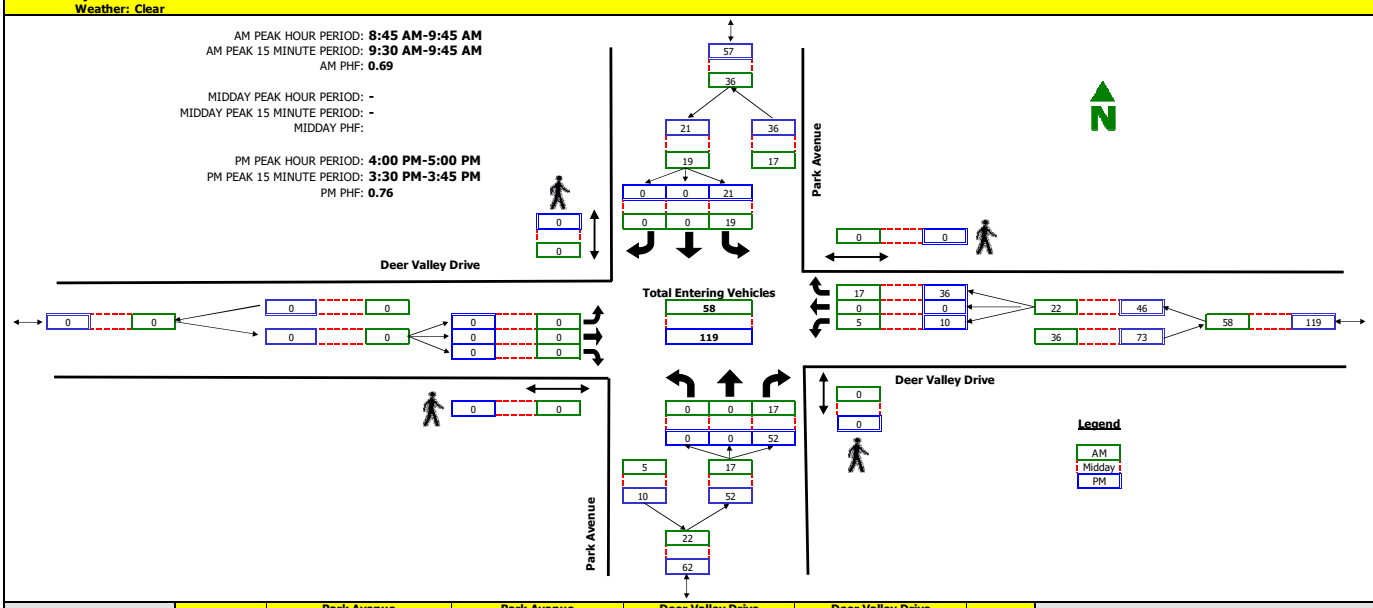
Intersection: Park Avenue / Deer Valley Drive
North/South: Park Avenue
East/West: Deer Valley Drive
Jurisdiction: Park City
Project Title: Yarrow
Project No: UT22-2092
Weather: Clear

Date: 1-29-22, Sat
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 605
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:45 AM-9:45 AM**
AM PEAK 15 MINUTE PERIOD: **9:30 AM-9:45 AM**
AM PHF: **0.69**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:00 PM-5:00 PM**
PM PEAK 15 MINUTE PERIOD: **3:30 PM-3:45 PM**
PM PHF: **0.76**



RAW COUNT SUMMARIES	Park Avenue Northbound				Park Avenue Southbound				Deer Valley Drive Eastbound				Deer Valley Drive Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
8:00 - 8:15	0	0	3	0	1	0	0	0	0	0	0	0	2	0	1	0	7
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 - 8:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	4	0	6
8:45 - 9:00	0	0	4	0	2	0	0	0	0	0	0	0	1	0	6	0	13
9:00 - 9:15	0	0	3	0	3	0	0	0	0	0	0	0	1	0	3	0	10
9:15 - 9:30	0	0	4	0	5	0	0	0	0	0	0	0	2	0	3	0	14
9:30 - 9:45	0	0	6	0	9	0	0	0	0	0	0	0	1	0	5	0	21
9:45 - 10:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
15:00 - 15:15	0	0	11	0	13	0	0	0	0	0	0	0	2	0	5	0	31
15:15 - 15:30	0	0	7	0	8	0	0	0	0	0	0	0	5	0	1	0	21
15:30 - 15:45	0	0	15	0	7	0	0	0	0	0	0	0	4	0	13	0	39
15:45 - 16:00	0	0	12	0	10	0	0	0	0	0	0	0	1	0	7	0	30
16:00 - 16:15	0	0	10	0	5	0	0	0	0	0	0	0	2	0	9	0	26
16:15 - 16:30	0	0	11	0	7	0	0	0	0	0	0	0	4	0	7	0	29
16:30 - 16:45	0	0	16	0	4	0	0	0	0	0	0	0	1	0	10	0	31
16:45 - 17:00	0	0	15	0	5	0	0	0	0	0	0	0	3	0	10	0	33

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

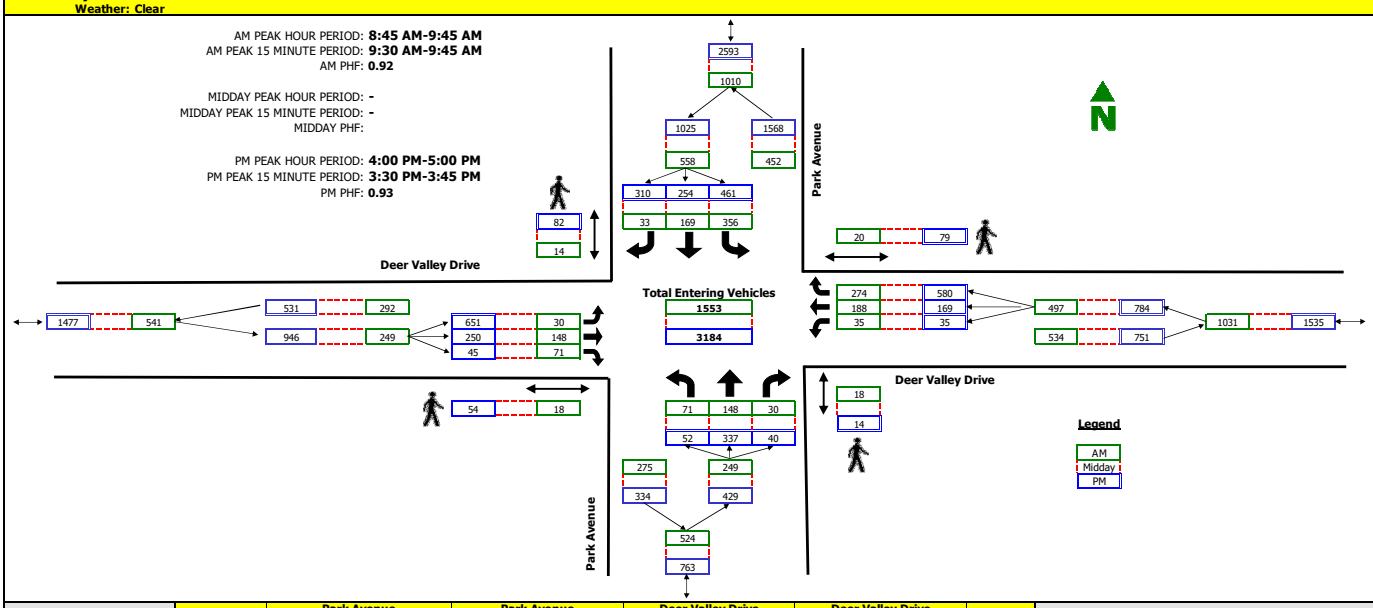
Intersection: Park Avenue / Deer Valley Drive
North/South: Park Avenue
East/West: Deer Valley Drive
Jurisdiction: Park City
Project Title: Yarrow
Project No: UT22-2092
Weather: Clear

Date: 1-29-22, Sat
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 605
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:45 AM-9:45 AM**
AM PEAK 15 MINUTE PERIOD: **9:30 AM-9:45 AM**
AM PHF: **0.92**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:00 PM-5:00 PM**
PM PEAK 15 MINUTE PERIOD: **3:30 PM-3:45 PM**
PM PHF: **0.93**



RAW COUNT SUMMARIES	Park Avenue Northbound				Park Avenue Southbound				Deer Valley Drive Eastbound				Deer Valley Drive Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
8:00 - 8:15	13	21	4	1	43	24	6	1	4	21	13	1	6	80	42	3	277
8:15 - 8:30	22	19	6	0	41	32	3	0	6	19	22	0	6	87	64	1	327
8:30 - 8:45	16	34	4	2	83	32	2	7	4	34	16	2	23	42	35	5	325
8:45 - 9:00	23	34	12	6	90	36	11	5	12	34	23	6	13	45	65	2	398
9:00 - 9:15	13	33	8	4	68	54	10	3	8	33	13	4	5	49	77	7	371
9:15 - 9:30	17	42	2	1	69	33	5	2	2	42	17	1	10	53	69	4	361
9:30 - 9:45	18	39	8	7	129	46	7	4	8	39	18	7	7	41	63	7	423
9:45 - 10:00	12	35	15	9	76	50	16	7	15	35	12	9	7	34	72	5	379
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
15:00 - 15:15	13	99	13	7	105	40	86	20	146	65	17	2	9	43	145	16	781
15:15 - 15:30	11	89	11	4	138	57	70	14	167	61	10	7	14	42	159	12	829
15:30 - 15:45	17	79	11	9	125	71	91	14	190	65	6	5	14	37	152	8	858
15:45 - 16:00	15	96	9	9	118	78	95	18	143	57	17	1	10	55	150	20	843
16:00 - 16:15	12	85	10	2	117	59	77	13	143	64	8	9	10	52	159	19	796
16:15 - 16:30	14	68	10	8	124	63	89	25	176	51	16	13	10	47	153	10	821
16:30 - 16:45	10	94	11	3	102	65	62	11	177	81	13	6	8	32	123	28	778
16:45 - 17:00	16	90	9	1	118	67	82	33	155	54	8	26	7	38	145	22	789

APPENDIX C

LOS Results

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	78	76	97	40.2	*D*
	T	50	50	100	27.8	*C*
	R	209	209	100	3.9	*A*
	Subtotal	337	335	99	15.7	*B*
SE	L	58	57	98	34.1	*C*
	T	168	160	95	32.3	*C*
	R	31	34	109	6.5	*A*
	Subtotal	257	251	98	29.2	*C*
NE	L	37	35	95	32.4	*C*
	T	340	330	97	33.0	*C*
	R	231	239	104	28.7	*C*
	Subtotal	608	604	99	31.3	*C*
SW	L	559	577	103	29.0	*C*
	T	422	424	100	8.7	*A*
	R	43	46	108	5.4	*A*
	Subtotal	1,024	1,047	102	19.7	*B*
Total		2,226	2,237	100	23.4	*C*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***3***	***2***	***67***	***7.9***	***A***
	R	24	25	104	5.2	*A*
	Subtotal	27	27	100	5.4	*A*
EB	T	548	543	99	0.4	*A*
	R	13	14	110	0.2	*A*
	Subtotal	561	557	99	0.4	*A*
WB	L	23	19	83	6.9	*A*
	T	544	549	101	1.9	*A*
	Subtotal	567	568	100	2.1	*A*
Total		1,155	1,152	100	1.3	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	515	508	99	17.2	*B*
	R	166	162	98	6.2	*A*
	Subtotal	681	670	98	14.5	*B*
SE	L	233	238	102	12.1	*B*
	T	884	872	99	5.4	*A*
	Subtotal	1,117	1,110	99	6.8	*A*
SW	L	220	215	98	36.5	*D*
	T	77	79	103	0.6	*A*
	R	250	256	102	7.5	*A*
	Subtotal	547	550	101	17.8	*B*
Total		2,346	2,330	99	11.7	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	642	635	99	2.0	*A*
	R	24	23	96	2.0	*A*
	Subtotal	666	658	99	2.0	*A*
SB	***L***	***19***	***18***	***96***	***14.3***	***B***
	T	1,104	1,087	98	4.1	*A*
	Subtotal	1,123	1,105	98	4.3	*A*
WB	L	15	14	95	9.5	*A*
	R	17	15	90	4.5	*A*
	Subtotal	32	29	91	6.9	*A*
Total		1,821	1,792	98	3.5	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	56	58	103	28.4	C
	T	141	139	99	29.5	C
	R	41	43	106	10.8	B
	Subtotal	238	240	101	25.9	C
SB	L	489	476	97	30.4	C
	T	294	289	98	15.9	B
	R	336	338	101	4.3	A
	Subtotal	1,119	1,103	99	18.6	B
EB	L	300	292	97	33.5	C
	T	172	171	99	23.9	C
	R	36	37	102	16.5	B
	Subtotal	508	500	98	29.0	C
WB	L	34	31	91	40.7	D
	T	232	228	98	32.1	C
	R	225	225	100	5.4	A
	Subtotal	491	484	99	20.2	C
Total		2,357	2,327	99	21.9	C

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	184	185	100	31.3	C
	T	101	102	101	26.6	C
	R	745	740	99	21.5	C
	Subtotal	1,030	1,027	100	23.8	C
SE	L	48	47	97	37.2	D
	T	59	59	100	27.8	C
	R	25	24	95	6.0	A
	Subtotal	132	130	98	27.2	C
NE	L	36	34	94	21.2	C
	T	658	649	99	18.8	B
	R	155	155	100	17.6	B
	Subtotal	849	838	99	18.7	B
SW	L	343	346	101	22.6	C
	T	394	388	99	7.3	A
	R	38	39	102	5.0	A
	Subtotal	775	773	100	14.0	B
Total		2,788	2,768	99	19.7	B

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***9***	***90***	***10.5***	***B***
	R	72	70	97	7.2	A
	Subtotal	82	79	96	7.6	A
EB	T	777	768	99	0.4	A
	R	8	8	100	0.1	A
	Subtotal	785	776	99	0.4	A
WB	L	22	21	95	7.5	A
	T	610	607	100	1.8	A
	Subtotal	632	628	99	2.0	A
Total		1,500	1,483	99	1.5	A

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,428	1,428	100	17.2	*B*
	R	350	355	101	13.4	*B*
	Subtotal	1,778	1,783	100	16.4	*B*
SE	L	301	294	98	35.5	*D*
	T	861	873	101	4.9	*A*
	Subtotal	1,162	1,167	100	12.6	*B*
SW	L	193	194	100	51.4	*D*
	T	121	125	104	0.8	*A*
	R	306	298	97	23.0	*C*
	Subtotal	620	617	100	27.4	*C*
Total		3,560	3,567	100	17.1	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,726	1,733	100	5.2	*A*
	R	72	70	97	4.1	*A*
	Subtotal	1,798	1,803	100	5.2	*A*
SB	L	21	22	105	49.9	*E*
	T	1,047	1,058	101	5.9	*A*
	Subtotal	1,068	1,080	101	6.8	*A*
WB	***L***	***17***	***15***	***88***	***137.7***	***F***
	R	36	37	102	80.1	*F*
	Subtotal	53	52	98	96.7	*F*
Total		2,919	2,935	101	7.4	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	63	61	96	49.3	*D*
	T	407	408	100	61.3	*E*
	R	41	41	99	44.6	*D*
	Subtotal	511	510	100	58.5	*E*
SB	L	471	474	101	49.9	*D*
	T	269	280	104	26.9	*C*
	R	324	326	101	4.6	*A*
	Subtotal	1,064	1,080	102	30.3	*C*
EB	L	706	714	101	55.8	*E*
	T	246	241	98	37.9	*D*
	R	44	47	106	30.2	*C*
	Subtotal	996	1,002	101	50.3	*D*
WB	L	46	46	99	73.6	*E*
	T	181	186	103	65.0	*E*
	R	685	680	99	47.9	*D*
	Subtotal	912	912	100	52.7	*D*
Total		3,484	3,504	101	46.0	*D*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	78	75	96	39.9	*D*
	T	50	50	100	28.3	*C*
	R	209	206	99	3.7	*A*
	Subtotal	337	331	98	15.6	*B*
SE	L	58	56	96	35.0	*C*
	T	168	166	99	32.9	*C*
	R	31	33	106	6.5	*A*
	Subtotal	257	255	99	29.9	*C*
NE	L	37	38	103	34.8	*C*
	T	340	337	99	34.2	*C*
	R	231	232	101	28.5	*C*
	Subtotal	608	607	100	32.1	*C*
SW	L	559	568	102	50.8	*D*
	T	422	423	100	9.3	*A*
	R	43	48	112	6.1	*A*
	Subtotal	1,024	1,039	101	31.8	*C*
Total		2,226	2,232	100	29.3	*C*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***3***	***3***	***100***	***8.0***	***A***
	R	24	28	117	5.0	*A*
	Subtotal	27	31	115	5.3	*A*
EB	T	548	545	99	0.5	*A*
	R	32	32	99	0.1	*A*
	Subtotal	580	577	99	0.5	*A*
WB	L	23	22	96	6.5	*A*
	T	544	542	100	1.8	*A*
	Subtotal	567	564	99	2.0	*A*
Total		1,174	1,172	100	1.3	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	515	503	98	15.0	*B*
	R	166	166	100	5.9	*A*
	Subtotal	681	669	98	12.7	*B*
SE	L	252	248	98	12.1	*B*
	T	865	875	101	5.3	*A*
	Subtotal	1,117	1,123	101	6.8	*A*
SW	L	220	216	98	36.9	*D*
	T	77	80	104	0.6	*A*
	R	250	249	100	7.4	*A*
	Subtotal	547	545	100	18.1	*B*
Total		2,346	2,337	100	11.2	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	642	630	98	4.1	*A*
	R	24	22	92	2.9	*A*
	Subtotal	666	652	98	4.1	*A*
SB	T	1,104	1,110	101	3.8	*A*
	Subtotal	1,104	1,110	101	3.8	*A*
WB	***R***	***17***	***16***	***96***	***6.8***	***A***
	Subtotal	17	16	94	6.8	*A*
Total		1,787	1,778	99	4.0	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	56	57	101	33.1	C
	T	141	140	99	33.3	C
	R	41	40	98	14.4	B
	Subtotal	238	237	100	30.1	C
SB	L	489	496	101	25.9	C
	T	294	284	97	16.1	B
	R	336	346	103	4.4	A
	Subtotal	1,119	1,126	101	16.8	B
EB	L	300	290	97	40.3	D
	T	172	182	106	28.8	C
	R	36	36	99	19.9	B
	Subtotal	508	508	100	34.7	C
WB	L	34	32	93	48.5	D
	T	232	238	103	39.0	D
	R	225	222	99	5.2	A
	Subtotal	491	492	100	24.4	C
Total		2,356	2,363	100	23.6	C

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	184	186	101	30.0	*C*
	T	101	99	98	25.1	*C*
	R	745	735	99	15.6	*B*
	Subtotal	1,030	1,020	99	19.1	*B*
SE	L	48	47	97	42.5	*D*
	T	59	54	91	29.8	*C*
	R	25	25	99	6.7	*A*
	Subtotal	132	126	95	30.0	*C*
NE	L	36	36	99	24.5	*C*
	T	658	643	98	21.0	*C*
	R	155	158	102	19.7	*B*
	Subtotal	849	837	99	20.9	*C*
SW	L	343	347	101	68.3	*E*
	T	394	391	99	7.5	*A*
	R	38	37	97	5.7	*A*
	Subtotal	775	775	100	34.6	*C*
Total		2,788	2,758	99	24.6	*C*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***9***	***90***	***10.8***	***B***
	R	72	72	100	7.2	*A*
	Subtotal	82	81	99	7.6	*A*
EB	T	777	762	98	0.4	*A*
	R	29	33	113	0.1	*A*
	Subtotal	806	795	99	0.4	*A*
WB	L	22	24	109	8.2	*A*
	T	610	609	100	1.9	*A*
	Subtotal	632	633	100	2.1	*A*
Total		1,521	1,509	99	1.5	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,428	1,430	100	19.0	*B*
	R	350	344	98	15.0	*B*
	Subtotal	1,778	1,774	100	18.2	*B*
SE	L	322	320	99	36.7	*D*
	T	840	841	100	4.8	*A*
	Subtotal	1,162	1,161	100	13.6	*B*
SW	L	193	188	97	50.5	*D*
	T	121	122	101	1.0	*A*
	R	306	307	100	24.6	*C*
	Subtotal	620	617	100	27.8	*C*
Total		3,560	3,552	100	18.4	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,726	1,713	99	12.5	*B*
	R	72	72	100	11.9	*B*
	Subtotal	1,798	1,785	99	12.5	*B*
SB	T	1,047	1,042	100	5.6	*A*
	Subtotal	1,047	1,042	100	5.6	*A*
WB	***R***	***36***	***36***	***99***	***43.3***	***E***
	Subtotal	36	36	100	43.3	*E*
Total		2,881	2,863	99	10.3	*B*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Background (Mitigated)*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	63	62	98	53.6	*D*
	T	407	396	97	69.0	*E*
	R	41	42	102	54.1	*D*
	Subtotal	511	500	98	65.8	*E*
SB	L	471	471	100	44.0	*D*
	T	269	265	99	25.7	*C*
	R	324	327	101	5.4	*A*
	Subtotal	1,064	1,063	100	27.6	*C*
EB	L	706	694	98	58.3	*E*
	T	246	246	100	41.4	*D*
	R	44	43	97	35.9	*D*
	Subtotal	996	983	99	53.1	*D*
WB	L	46	41	89	81.3	*F*
	T	181	178	98	67.7	*E*
	R	685	691	101	41.5	*D*
	Subtotal	912	910	100	48.4	*D*
Total		3,484	3,456	99	46.0	*D*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	78	76	97	38.8	*D*
	T	50	47	94	32.0	*C*
	R	209	208	100	3.8	*A*
	Subtotal	337	331	98	15.8	*B*
SE	L	58	55	94	34.8	*C*
	T	168	164	98	34.8	*C*
	R	32	33	102	6.5	*A*
	Subtotal	258	252	98	31.1	*C*
NE	L	39	40	103	34.7	*C*
	T	348	352	101	34.5	*C*
	R	232	227	98	28.9	*C*
	Subtotal	619	619	100	32.5	*C*
SW	L	559	560	100	44.3	*D*
	T	424	418	99	8.5	*A*
	R	43	45	105	5.9	*A*
	Subtotal	1,026	1,023	100	28.0	*C*
Total		2,240	2,225	99	27.8	*C*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***8***	***7***	***85***	***9.1***	***A***
	T	20	18	91	0.3	*A*
	R	35	34	96	5.8	*A*
	Subtotal	63	59	94	4.5	*A*
EB	T	548	552	101	0.5	*A*
	R	35	36	102	0.1	*A*
	Subtotal	583	588	101	0.5	*A*
WB	L	26	26	100	6.5	*A*
	T	544	534	98	1.8	*A*
	Subtotal	570	560	98	2.0	*A*
Total		1,216	1,207	99	1.4	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	519	522	101	15.7	*B*
	R	166	170	102	6.3	*A*
	Subtotal	685	692	101	13.4	*B*
SE	L	255	260	102	12.5	*B*
	T	865	868	100	5.2	*A*
	Subtotal	1,120	1,128	101	6.9	*A*
SW	L	220	214	97	37.0	*D*
	T	78	79	102	0.5	*A*
	R	255	251	99	7.7	*A*
	Subtotal	553	544	98	18.2	*B*
Total		2,357	2,364	100	11.4	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***T***	***643***	***650***	***101***	***4.5***	***A***
	R	27	27	100	4.4	*A*
	Subtotal	670	677	101	4.5	*A*
SB	T	1,104	1,102	100	4.2	*A*
	Subtotal	1,104	1,102	100	4.2	*A*
WB	T	18	19	104	0.1	*A*
	R	21	20	95	4.3	*A*
	Subtotal	39	39	100	2.3	*A*
Total		1,814	1,818	100	4.3	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	56	54	96	35.5	*D*
	T	142	142	100	35.0	*C*
	R	41	44	108	13.6	*B*
	Subtotal	239	240	100	31.2	*C*
SB	L	493	494	100	26.3	*C*
	T	297	293	99	16.7	*B*
	R	340	340	100	4.5	*A*
	Subtotal	1,130	1,127	100	17.2	*B*
EB	L	301	305	101	41.4	*D*
	T	172	170	99	29.0	*C*
	R	36	36	99	19.8	*B*
	Subtotal	509	511	100	35.8	*D*
WB	L	34	33	96	46.9	*D*
	T	232	238	103	37.5	*D*
	R	226	226	100	5.3	*A*
	Subtotal	492	497	101	23.5	*C*
Total		2,371	2,375	100	24.0	*C*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	36	33	91	0.2	*A*
	R	3	3	100	0.0	*A*
	Subtotal	39	36	92	0.2	*A*
SB	L	6	6	96	2.8	*A*
	T	55	55	100	0.4	*A*
	Subtotal	61	61	100	0.6	*A*
WB	***L***	***4***	***4***	***100***	***4.8***	***A***
	R	27	27	100	4.0	*A*
	Subtotal	31	31	100	4.1	*A*
Total		132	128	97	1.3	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	185	183	99	31.4	C
	T	101	98	97	25.2	C
	R	745	737	99	15.6	B
	Subtotal	1,031	1,018	99	19.4	B
SE	L	48	50	104	37.0	D
	T	59	59	100	30.6	C
	R	27	27	99	6.7	A
	Subtotal	134	136	101	28.2	C
NE	L	37	37	99	23.9	C
	T	662	659	100	21.7	C
	R	156	149	96	20.0	B
	Subtotal	855	845	99	21.5	C
SW	L	343	344	100	67.6	E
	T	401	403	101	7.9	A
	R	38	37	97	5.8	A
	Subtotal	782	784	100	34.0	C
Total		2,803	2,783	99	24.7	C

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***13***	***13***	***100***	***10.2***	***B***
	T	11	12	109	0.2	A
	R	78	79	102	7.6	A
	Subtotal	102	104	102	7.1	A
EB	T	777	768	99	0.4	A
	R	37	38	102	0.1	A
	Subtotal	814	806	99	0.4	A
WB	L	32	30	93	8.0	A
	T	610	611	100	1.9	A
	Subtotal	642	641	100	2.2	A
Total		1,558	1,551	100	1.6	A

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,430	1,432	100	19.0	*B*
	R	350	348	99	14.6	*B*
	Subtotal	1,780	1,780	100	18.1	*B*
SE	L	330	329	100	36.7	*D*
	T	840	832	99	4.7	*A*
	Subtotal	1,170	1,161	99	13.8	*B*
SW	L	193	194	100	49.7	*D*
	T	121	123	102	0.8	*A*
	R	309	302	98	24.2	*C*
	Subtotal	623	619	99	27.5	*C*
Total		3,573	3,560	100	18.4	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,726	1,724	100	12.1	*B*
	R	82	82	100	11.8	*B*
	Subtotal	1,808	1,806	100	12.1	*B*
SB	T	1,047	1,038	99	5.3	*A*
	Subtotal	1,047	1,038	99	5.3	*A*
WB	***R***	***38***	***40***	***105***	***38.9***	***E***
	Subtotal	38	40	105	38.9	*E*
Total		2,894	2,884	100	10.1	*B*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Existing (2022) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	63	66	104	49.7	*D*
	T	409	409	100	67.6	*E*
	R	41	39	95	51.2	*D*
	Subtotal	513	514	100	64.1	*E*
SB	L	473	472	100	45.1	*D*
	T	271	262	97	26.9	*C*
	R	326	326	100	5.0	*A*
	Subtotal	1,070	1,060	99	28.3	*C*
EB	L	710	718	101	61.3	*E*
	T	246	256	104	42.5	*D*
	R	44	45	102	34.0	*C*
	Subtotal	1,000	1,019	102	55.4	*E*
WB	L	46	44	95	84.6	*F*
	T	181	182	100	69.0	*E*
	R	689	681	99	42.9	*D*
	Subtotal	916	907	99	50.2	*D*
Total		3,500	3,500	100	47.2	*D*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	87	87	100	0.3	*A*
	R	10	12	120	0.3	*A*
	Subtotal	97	99	102	0.3	*A*
SB	L	18	17	94	3.0	*A*
	T	52	52	101	0.5	*A*
	Subtotal	70	69	99	1.1	*A*
WB	***L***	***2***	***1***	***50***	***7.0***	***A***
	R	15	16	107	4.3	*A*
	Subtotal	17	17	100	4.5	*A*
Total		183	185	101	1.0	*A*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	81	80	98	43.5	*D*
	T	50	52	104	34.7	*C*
	R	225	231	103	6.4	*A*
	Subtotal	356	363	102	18.6	*B*
SE	L	60	61	101	36.2	*D*
	T	170	167	98	34.1	*C*
	R	32	33	102	6.8	*A*
	Subtotal	262	261	100	31.1	*C*
NE	L	41	34	83	34.6	*C*
	T	361	366	101	34.8	*C*
	R	238	244	103	30.1	*C*
	Subtotal	640	644	101	33.0	*C*
SW	L	580	584	101	58.7	*E*
	T	477	478	100	13.6	*B*
	R	45	48	107	10.1	*B*
	Subtotal	1,102	1,110	101	37.2	*D*
Total		2,360	2,378	101	32.7	*C*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***5***	***5***	***95***	***8.5***	***A***
	R	30	32	106	5.3	*A*
	Subtotal	35	37	106	5.7	*A*
EB	T	609	614	101	0.5	*A*
	R	35	36	102	0.1	*A*
	Subtotal	644	650	101	0.5	*A*
WB	L	25	24	96	6.9	*A*
	T	565	566	100	2.2	*A*
	Subtotal	590	590	100	2.4	*A*
Total		1,270	1,277	101	1.5	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	526	529	101	15.9	*B*
	R	187	191	102	6.3	*A*
	Subtotal	713	720	101	13.4	*B*
SE	L	284	285	100	13.1	*B*
	T	898	897	100	5.7	*A*
	Subtotal	1,182	1,182	100	7.5	*A*
SW	L	225	223	99	36.7	*D*
	T	84	84	101	0.7	*A*
	R	262	264	101	8.2	*A*
	Subtotal	571	571	100	18.2	*B*
Total		2,464	2,473	100	11.7	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	681	687	101	4.0	*A*
	R	20	19	96	4.2	*A*
	Subtotal	701	706	101	4.0	*A*
SB	T	1,139	1,140	100	3.8	*A*
	Subtotal	1,139	1,140	100	3.8	*A*
WB	***R***	***20***	***21***	***106***	***4.5***	***A***
	Subtotal	20	21	105	4.5	*A*
Total		1,860	1,867	100	3.9	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	60	63	105	34.3	C
	T	145	146	101	35.6	D
	R	45	52	116	14.3	B
	Subtotal	250	261	104	31.0	C
SB	L	503	496	99	25.6	C
	T	295	301	102	16.7	B
	R	357	360	101	4.2	A
	Subtotal	1,155	1,157	100	16.6	B
EB	L	315	316	100	41.3	D
	T	180	182	101	28.6	C
	R	40	39	98	22.4	C
	Subtotal	535	537	100	35.6	D
WB	L	35	34	96	45.3	D
	T	240	239	100	38.3	D
	R	240	245	102	5.7	A
	Subtotal	515	518	101	23.3	C
Total		2,455	2,473	101	23.7	C

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	188	189	100	50.0	D
	T	105	104	99	44.1	D
	R	790	797	101	37.2	D
	Subtotal	1,083	1,090	101	40.1	D
SE	L	50	49	98	39.7	D
	T	60	58	96	31.0	C
	R	26	30	114	7.0	A
	Subtotal	136	137	101	28.9	C
NE	L	39	39	99	23.5	C
	T	690	700	101	24.7	C
	R	157	160	102	21.2	C
	Subtotal	886	899	101	24.0	C
SW	L	360	354	98	154.1	F
	T	449	438	98	13.9	B
	R	40	44	109	9.8	A
	Subtotal	849	836	98	73.1	E
Total		2,956	2,962	100	44.8	D

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***9***	***90***	***11.9***	***B***
	R	80	80	100	7.2	A
	Subtotal	90	89	99	7.7	A
EB	T	806	823	102	0.4	A
	R	35	34	96	0.1	A
	Subtotal	841	857	102	0.4	A
WB	L	25	25	99	8.0	A
	T	638	632	99	2.0	A
	Subtotal	663	657	99	2.2	A
Total		1,595	1,603	101	1.6	A

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,479	1,469	99	22.0	*C*
	R	355	366	103	17.7	*B*
	Subtotal	1,834	1,835	100	21.1	*C*
SE	L	331	341	103	39.0	*D*
	T	861	848	98	4.9	*A*
	Subtotal	1,192	1,189	100	14.7	*B*
SW	L	200	201	100	50.2	*D*
	T	123	123	100	1.1	*A*
	R	325	317	97	24.4	*C*
	Subtotal	648	641	99	28.0	*C*
Total		3,675	3,665	100	20.3	*C*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,793	1,803	101	14.4	*B*
	R	55	57	103	13.5	*B*
	Subtotal	1,848	1,860	101	14.4	*B*
SB	T	1,064	1,052	99	5.6	*A*
	Subtotal	1,064	1,052	99	5.6	*A*
WB	***R***	***40***	***37***	***92***	***49.7***	***E***
	Subtotal	40	37	93	49.7	*E*
Total		2,953	2,949	100	11.7	*B*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	65	64	98	52.5	*D*
	T	415	416	100	77.2	*E*
	R	45	47	104	61.4	*E*
	Subtotal	525	527	100	72.8	*E*
SB	L	479	476	99	43.6	*D*
	T	273	268	98	27.1	*C*
	R	334	327	98	5.4	*A*
	Subtotal	1,086	1,071	99	27.8	*C*
EB	L	736	743	101	74.1	*E*
	T	255	253	99	47.9	*D*
	R	45	48	106	41.1	*D*
	Subtotal	1,036	1,044	101	66.2	*E*
WB	L	50	50	100	90.2	*F*
	T	190	188	99	79.9	*E*
	R	697	702	101	45.3	*D*
	Subtotal	937	940	100	54.6	*D*
Total		3,585	3,582	100	52.7	*D*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	81	81	100	41.9	*D*
	T	50	54	108	30.6	*C*
	R	225	225	100	5.8	*A*
	Subtotal	356	360	101	17.6	*B*
SE	L	60	55	91	38.9	*D*
	T	170	174	102	35.7	*D*
	R	33	32	96	7.2	*A*
	Subtotal	263	261	99	32.9	*C*
NE	L	43	40	94	34.9	*C*
	T	368	368	100	36.6	*D*
	R	239	240	100	32.5	*C*
	Subtotal	650	648	100	35.0	*C*
SW	L	580	581	100	71.9	*E*
	T	479	478	100	13.9	*B*
	R	45	44	98	10.5	*B*
	Subtotal	1,104	1,103	100	44.3	*D*
Total		2,374	2,372	100	36.6	*D*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***10***	***98***	***9.5***	***A***
	T	21	21	100	0.4	*A*
	R	41	44	108	5.8	*A*
	Subtotal	72	75	104	4.8	*A*
EB	T	609	605	99	0.5	*A*
	R	38	39	103	0.2	*A*
	Subtotal	647	644	100	0.5	*A*
WB	L	28	27	96	7.0	*A*
	T	565	564	100	2.2	*A*
	Subtotal	593	591	100	2.4	*A*
Total		1,312	1,310	100	1.6	*A*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	530	525	99	16.1	*B*
	R	187	189	101	6.6	*A*
	Subtotal	717	714	100	13.6	*B*
SE	L	287	281	98	13.6	*B*
	T	898	894	100	5.7	*A*
	Subtotal	1,185	1,175	99	7.6	*A*
SW	L	225	228	101	35.6	*D*
	T	83	88	106	0.7	*A*
	R	267	259	97	7.6	*A*
	Subtotal	575	575	100	17.6	*B*
Total		2,476	2,464	99	11.7	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	681	683	100	4.5	*A*
	R	23	24	104	3.3	*A*
	Subtotal	704	707	100	4.5	*A*
SB	T	1,139	1,139	100	4.1	*A*
	Subtotal	1,139	1,139	100	4.1	*A*
WB	T	20	19	96	0.0	*A*
	R	***24***	***23***	***96***	***7.5***	***A***
	Subtotal	44	42	95	4.1	*A*
Total		1,886	1,888	100	4.2	*A*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	60	63	105	34.1	*C*
	T	146	150	103	36.7	*D*
	R	45	47	104	14.3	*B*
	Subtotal	251	260	104	32.0	*C*
SB	L	507	499	98	26.6	*C*
	T	297	290	98	17.0	*B*
	R	361	372	103	4.3	*A*
	Subtotal	1,165	1,161	100	17.1	*B*
EB	L	316	311	98	40.9	*D*
	T	180	174	97	28.5	*C*
	R	40	43	108	20.1	*C*
	Subtotal	536	528	99	35.1	*D*
WB	L	35	36	102	51.2	*D*
	T	240	250	104	40.5	*D*
	R	241	245	102	5.6	*A*
	Subtotal	516	531	103	25.1	*C*
Total		2,469	2,480	100	24.3	*C*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	45	46	102	0.3	*A*
	R	3	4	133	0.1	*A*
	Subtotal	48	50	104	0.3	*A*
SB	L	6	5	80	2.5	*A*
	T	60	61	103	0.4	*A*
	Subtotal	66	66	100	0.6	*A*
WB	***L***	***4***	***4***	***100***	***4.9***	***A***
	R	27	29	107	4.1	*A*
	Subtotal	31	33	106	4.2	*A*
Total		145	149	103	1.3	*A*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	189	185	98	49.5	*D*
	T	105	105	100	46.9	*D*
	R	790	791	100	36.2	*D*
	Subtotal	1,084	1,081	100	39.5	*D*
SE	L	50	49	98	39.0	*D*
	T	60	60	100	31.3	*C*
	R	28	31	110	6.8	*A*
	Subtotal	138	140	101	28.6	*C*
NE	L	40	39	97	24.1	*C*
	T	694	702	101	25.0	*C*
	R	158	154	97	22.1	*C*
	Subtotal	892	895	100	24.5	*C*
SW	L	360	346	96	160.7	*F*
	T	456	458	100	14.2	*B*
	R	40	42	104	9.5	*A*
	Subtotal	856	846	99	73.9	*E*
Total		2,972	2,962	100	45.4	*D*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***13***	***11***	***85***	***10.5***	***B***
	T	18	18	100	0.2	*A*
	R	86	83	97	7.6	*A*
	Subtotal	117	112	96	6.7	*A*
EB	T	806	812	101	0.5	*A*
	R	43	44	102	0.1	*A*
	Subtotal	849	856	101	0.5	*A*
WB	L	35	34	96	9.3	*A*
	T	639	643	101	2.1	*A*
	Subtotal	674	677	100	2.5	*A*
Total		1,640	1,645	100	1.7	*A*

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SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,481	1,464	99	21.4	*C*
	R	355	359	101	16.7	*B*
	Subtotal	1,836	1,823	99	20.5	*C*
SE	L	339	350	103	37.9	*D*
	T	861	858	100	4.9	*A*
	Subtotal	1,200	1,208	101	14.5	*B*
SW	L	200	196	98	50.7	*D*
	T	123	121	99	1.1	*A*
	R	328	339	103	25.8	*C*
	Subtotal	651	656	101	28.7	*C*
Total		3,688	3,687	100	20.0	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,793	1,790	100	13.0	*B*
	R	65	65	100	12.4	*B*
	Subtotal	1,858	1,855	100	13.0	*B*
SB	T	1,064	1,057	99	5.6	*A*
	Subtotal	1,064	1,057	99	5.6	*A*
WB	T	10	11	110	0.0	*A*
	R	***42***	***41***	***97***	***49.1***	***E***
	Subtotal	52	52	100	38.7	*E*
Total		2,975	2,964	100	10.8	*B*

SimTraffic LOS Report

Project: Park City Homestake TIS
Analysis Period: *Future (2027) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	65	63	97	57.3	*E*
	T	417	415	100	73.4	*E*
	R	45	48	106	58.4	*E*
	Subtotal	527	526	100	70.1	*E*
SB	L	481	476	99	45.0	*D*
	T	275	267	97	26.9	*C*
	R	336	338	101	5.0	*A*
	Subtotal	1,092	1,081	99	28.0	*C*
EB	L	740	754	102	85.4	*F*
	T	255	258	101	48.9	*D*
	R	45	47	104	39.9	*D*
	Subtotal	1,040	1,059	102	74.5	*E*
WB	L	50	48	96	85.2	*F*
	T	190	184	97	72.9	*E*
	R	701	690	98	44.7	*D*
	Subtotal	941	922	98	52.4	*D*
Total		3,601	3,588	100	54.3	*D*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	102	99	97	0.2	*A*
	R	10	9	90	0.3	*A*
	Subtotal	112	108	96	0.2	*A*
SB	L	18	17	94	3.0	*A*
	T	62	62	101	0.7	*A*
	Subtotal	80	79	99	1.2	*A*
WB	***L***	***2***	***1***	***50***	***8.2***	***A***
	R	15	13	87	4.2	*A*
	Subtotal	17	14	82	4.5	*A*
Total		208	201	97	0.9	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	86	90	105	44.0	*D*
	T	50	51	102	36.3	*D*
	R	250	251	100	6.5	*A*
	Subtotal	386	392	102	19.0	*B*
SE	L	65	70	108	39.2	*D*
	T	170	176	104	41.1	*D*
	R	32	36	112	8.0	*A*
	Subtotal	267	282	106	36.4	*D*
NE	L	41	38	93	36.6	*D*
	T	436	438	101	39.5	*D*
	R	243	246	101	34.9	*C*
	Subtotal	720	722	100	37.8	*D*
SW	L	665	606	91	205.4	*F*
	T	557	553	99	39.3	*D*
	R	55	61	110	27.0	*C*
	Subtotal	1,277	1,220	96	121.2	*F*
Total		2,650	2,616	99	77.3	*E*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***5***	***6***	***114***	***7.6***	***A***
	R	30	31	102	5.9	*A*
	Subtotal	35	37	106	6.2	*A*
EB	T	689	685	99	0.5	*A*
	R	35	38	108	0.2	*A*
	Subtotal	724	723	100	0.5	*A*
WB	L	25	22	88	7.4	*A*
	T	651	658	101	2.4	*A*
	Subtotal	676	680	101	2.6	*A*
Total		1,436	1,440	100	1.6	*A*

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SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	555	553	100	16.5	*B*
	R	197	196	99	7.5	*A*
	Subtotal	752	749	100	14.1	*B*
SE	L	354	354	100	15.6	*B*
	T	933	922	99	5.9	*A*
	Subtotal	1,287	1,276	99	8.6	*A*
SW	L	255	250	98	36.4	*D*
	T	83	83	100	0.9	*A*
	R	317	324	102	9.3	*A*
	Subtotal	655	657	100	18.6	*B*
Total		2,694	2,682	100	12.6	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	721	719	100	4.7	*A*
	R	20	22	111	4.6	*A*
	Subtotal	741	741	100	4.7	*A*
SB	T	1,204	1,190	99	4.2	*A*
	Subtotal	1,204	1,190	99	4.2	*A*
WB	***R***	***20***	***19***	***96***	***5.7***	***A***
	Subtotal	20	19	95	5.7	*A*
Total		1,964	1,950	99	4.4	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	60	57	95	35.3	*D*
	T	145	151	104	38.3	*D*
	R	45	46	102	16.7	*B*
	Subtotal	250	254	102	33.7	*C*
SB	L	523	511	98	28.6	*C*
	T	304	306	101	18.4	*B*
	R	392	388	99	4.7	*A*
	Subtotal	1,219	1,205	99	18.3	*B*
EB	L	355	348	98	42.6	*D*
	T	195	193	99	28.3	*C*
	R	40	38	96	22.0	*C*
	Subtotal	590	579	98	36.5	*D*
WB	L	35	32	91	53.1	*D*
	T	270	273	101	40.9	*D*
	R	240	241	100	6.2	*A*
	Subtotal	545	546	100	26.3	*C*
Total		2,604	2,584	99	25.7	*C*

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SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	188	180	96	115.8	*F*
	T	105	106	101	113.9	*F*
	R	885	858	97	104.6	*F*
	Subtotal	1,178	1,144	97	107.2	*F*
SE	L	55	54	98	40.2	*D*
	T	60	65	108	33.5	*C*
	R	26	27	103	7.3	*A*
	Subtotal	141	146	104	31.1	*C*
NE	L	39	38	97	24.0	*C*
	T	780	766	98	25.6	*C*
	R	162	162	100	21.9	*C*
	Subtotal	981	966	98	24.9	*C*
SW	L	415	359	87	392.3	*F*
	T	519	514	99	39.0	*D*
	R	40	43	107	18.0	*B*
	Subtotal	974	916	94	176.5	*F*
Total		3,275	3,172	97	105.3	*F*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***9***	***90***	***13.6***	***B***
	R	80	83	104	8.4	*A*
	Subtotal	90	92	102	8.9	*A*
EB	T	901	882	98	0.5	*A*
	R	35	36	102	0.1	*A*
	Subtotal	936	918	98	0.5	*A*
WB	L	25	24	95	9.2	*A*
	T	708	696	98	2.2	*A*
	Subtotal	733	720	98	2.4	*A*
Total		1,759	1,730	98	1.7	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,554	1,532	99	35.6	*D*
	R	400	392	98	28.6	*C*
	Subtotal	1,954	1,924	98	34.2	*C*
SE	L	381	383	101	42.8	*D*
	T	916	919	100	5.6	*A*
	Subtotal	1,297	1,302	100	16.5	*B*
SW	L	220	216	98	51.3	*D*
	T	123	120	98	1.5	*A*
	R	375	373	100	27.3	*C*
	Subtotal	718	709	99	30.2	*C*
Total		3,968	3,935	99	27.7	*C*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,913	1,895	99	22.2	*C*
	R	55	52	94	21.4	*C*
	Subtotal	1,968	1,947	99	22.2	*C*
SB	T	1,139	1,138	100	5.5	*A*
	Subtotal	1,139	1,138	100	5.5	*A*
WB	***R***	***40***	***39***	***97***	***64.3***	***F***
	Subtotal	40	39	98	64.3	*F*
Total		3,148	3,124	99	16.7	*C*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	70	67	95	63.2	*E*
	T	415	420	101	91.4	*F*
	R	45	48	106	75.8	*E*
	Subtotal	530	535	101	86.5	*F*
SB	L	509	510	100	50.3	*D*
	T	273	263	96	27.2	*C*
	R	379	381	101	5.4	*A*
	Subtotal	1,161	1,154	99	30.2	*C*
EB	L	821	802	98	97.4	*F*
	T	280	282	101	52.9	*D*
	R	45	42	93	47.9	*D*
	Subtotal	1,146	1,126	98	84.4	*F*
WB	L	50	52	103	96.5	*F*
	T	205	200	97	94.5	*F*
	R	732	740	101	57.4	*E*
	Subtotal	987	992	101	66.9	*E*
Total		3,825	3,807	100	63.9	*E*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	86	81	94	46.0	*D*
	T	50	49	98	34.1	*C*
	R	250	245	98	6.7	*A*
	Subtotal	386	375	97	18.8	*B*
SE	L	65	58	90	41.3	*D*
	T	170	170	100	38.1	*D*
	R	33	33	99	8.3	*A*
	Subtotal	268	261	97	35.0	*C*
NE	L	43	40	94	35.4	*D*
	T	443	445	100	38.6	*D*
	R	244	245	100	35.2	*D*
	Subtotal	730	730	100	37.3	*D*
SW	L	665	627	94	167.7	*F*
	T	559	555	99	31.2	*C*
	R	55	56	101	19.3	*B*
	Subtotal	1,279	1,238	97	99.8	*F*
Total		2,664	2,604	98	65.9	*E*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***10***	***9***	***88***	***10.5***	***B***
	T	21	22	105	0.3	*A*
	R	41	42	103	6.6	*A*
	Subtotal	72	73	101	5.2	*A*
EB	T	689	688	100	0.5	*A*
	R	38	38	101	0.1	*A*
	Subtotal	727	726	100	0.5	*A*
WB	L	28	27	96	7.1	*A*
	T	651	644	99	2.2	*A*
	Subtotal	679	671	99	2.4	*A*
Total		1,478	1,470	99	1.6	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	559	565	101	16.0	*B*
	R	197	197	100	7.1	*A*
	Subtotal	756	762	101	13.7	*B*
SE	L	357	359	101	15.7	*B*
	T	933	939	101	6.0	*A*
	Subtotal	1,290	1,298	101	8.7	*A*
SW	L	255	250	98	36.5	*D*
	T	83	82	99	0.9	*A*
	R	322	317	98	10.0	*A*
	Subtotal	660	649	98	19.1	*B*
Total		2,706	2,709	100	12.6	*B*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	720	730	101	4.8	*A*
	R	23	24	104	3.8	*A*
	Subtotal	743	754	101	4.8	*A*
SB	T	1,204	1,203	100	4.2	*A*
	Subtotal	1,204	1,203	100	4.2	*A*
WB	T	20	21	106	0.0	*A*
	R	***24***	***20***	***83***	***5.3***	***A***
	Subtotal	44	41	93	2.6	*A*
Total		1,991	1,998	100	4.4	*A*

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	60	59	98	36.6	*D*
	T	146	145	99	40.0	*D*
	R	45	45	100	17.5	*B*
	Subtotal	251	249	99	35.1	*D*
SB	L	527	529	100	29.5	*C*
	T	307	302	98	18.3	*B*
	R	396	402	101	4.7	*A*
	Subtotal	1,230	1,233	100	18.7	*B*
EB	L	356	364	102	44.1	*D*
	T	195	188	96	28.2	*C*
	R	40	39	98	21.5	*C*
	Subtotal	591	591	100	37.6	*D*
WB	L	35	35	99	53.2	*D*
	T	270	264	98	41.4	*D*
	R	241	242	100	5.8	*A*
	Subtotal	546	541	99	26.2	*C*
Total		2,618	2,614	100	26.2	*C*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	45	46	102	0.3	*A*
	R	3	3	100	0.1	*A*
	Subtotal	48	49	102	0.3	*A*
SB	L	6	6	96	2.6	*A*
	T	60	58	97	0.5	*A*
	Subtotal	66	64	97	0.7	*A*
WB	***L***	***4***	***2***	***50***	***6.3***	***A***
	R	27	27	100	4.0	*A*
	Subtotal	31	29	94	4.2	*A*
Total		145	142	98	1.3	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Kearns Boulevard & Bonanza Drive/Monitor Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	189	185	98	113.3	*F*
	T	105	97	93	110.0	*F*
	R	885	846	96	101.0	*F*
	Subtotal	1,179	1,128	96	103.8	*F*
SE	L	55	57	103	42.9	*D*
	T	60	59	98	32.3	*C*
	R	28	28	99	8.2	*A*
	Subtotal	143	144	101	31.8	*C*
NE	L	40	40	99	24.3	*C*
	T	785	793	101	25.4	*C*
	R	163	163	100	22.5	*C*
	Subtotal	988	996	101	24.9	*C*
SW	L	415	345	83	454.1	*F*
	T	526	512	97	56.7	*E*
	R	40	38	94	30.8	*C*
	Subtotal	981	895	91	208.8	*F*
Total		3,292	3,163	96	114.5	*F*

Intersection: Homestake Road & Kearns Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***13***	***14***	***108***	***13.3***	***B***
	T	18	18	100	0.2	*A*
	R	86	86	100	8.7	*A*
	Subtotal	117	118	101	7.9	*A*
EB	T	901	907	101	0.5	*A*
	R	43	44	102	0.2	*A*
	Subtotal	944	951	101	0.5	*A*
WB	L	35	31	88	10.6	*B*
	T	709	696	98	2.3	*A*
	Subtotal	744	727	98	2.7	*A*
Total		1,805	1,796	100	1.9	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Kearns Boulevard
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	T	1,556	1,532	98	36.6	*D*
	R	400	390	98	29.2	*C*
	Subtotal	1,956	1,922	98	35.1	*C*
SE	L	389	400	103	44.1	*D*
	T	916	933	102	5.6	*A*
	Subtotal	1,305	1,333	102	17.2	*B*
SW	L	220	212	96	52.4	*D*
	T	123	123	100	1.5	*A*
	R	378	375	99	28.2	*C*
	Subtotal	721	710	98	30.8	*C*
Total		3,981	3,965	100	28.4	*C*

Intersection: Park Avenue & Homestake Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	1,913	1,884	98	22.8	*C*
	R	65	65	100	22.7	*C*
	Subtotal	1,978	1,949	99	22.8	*C*
SB	T	1,139	1,148	101	5.6	*A*
	Subtotal	1,139	1,148	101	5.6	*A*
WB	T	10	11	110	0.1	*A*
	R	***42***	***43***	***102***	***46.1***	***E***
	Subtotal	52	54	104	36.7	*E*
Total		3,170	3,151	99	16.8	*C*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Park City Homestake Avengers TIS
Analysis Period: *Future (2040) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT22-2234*

Intersection: Park Avenue & Empire Avenue/Deer Valley Drive
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	70	72	102	59.4	*E*
	T	417	419	100	89.4	*F*
	R	45	46	102	71.9	*E*
	Subtotal	532	537	101	83.9	*F*
SB	L	511	513	100	49.3	*D*
	T	275	279	101	30.7	*C*
	R	381	387	102	5.9	*A*
	Subtotal	1,167	1,179	101	30.7	*C*
EB	L	825	798	97	102.3	*F*
	T	280	279	100	56.5	*E*
	R	45	44	97	51.0	*D*
	Subtotal	1,150	1,121	97	88.9	*F*
WB	L	50	48	96	97.6	*F*
	T	205	205	100	95.7	*F*
	R	736	740	101	58.1	*E*
	Subtotal	991	993	100	67.8	*E*
Total		3,841	3,830	100	65.2	*E*

Intersection: Homestake Road & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	102	100	98	0.2	*A*
	R	10	11	110	0.2	*A*
	Subtotal	112	111	99	0.2	*A*
SB	L	18	15	83	3.0	*A*
	T	62	62	101	0.6	*A*
	Subtotal	80	77	96	1.1	*A*
WB	***L***	***2***	***1***	***50***	***7.2***	***A***
	R	15	17	113	4.1	*A*
	Subtotal	17	18	106	4.3	*A*
Total		208	206	99	0.9	*A*

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	275	125	100	100				125	75	175	600		275	175							
02: Homestake Road & Kearns Boulevard		50																						50			
03: Park Avenue & Kearns Boulevard									150	200				125		175	150	125									
04: Park Avenue & Homestake Road			100	150							50		200												50		
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	100							400	100	225								150		175	75		100	225

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	200	250	175	750	525				75	50	100	225		100	100							
02: Homestake Road & Kearns Boulevard		75																						50			
03: Park Avenue & Kearns Boulevard									200	475				250		175	175	225									
04: Park Avenue & Homestake Road			425	425							75		225												150		
05: Park Avenue & Empire Avenue/Deer Valley Drive	150		325	300							525	125	325								400		350	150		900	275

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Background (Mitigated)

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	200	275	125	100	100				125	50	175	550		825	275						
02: Homestake Road & Kearns Boulevard		50																						50		
03: Park Avenue & Kearns Boulevard									125	175				150		175	150	100								
04: Park Avenue & Homestake Road			100	125									175													
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	100							375	100	225								175		200	100	100	250

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Background (Mitigated)

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	250	225	275	500				100	50	100	450		425	200						
02: Homestake Road & Kearns Boulevard		75																						50		
03: Park Avenue & Kearns Boulevard									200	950				275		175	150	250								
04: Park Avenue & Homestake Road			375	400									200												75	
05: Park Avenue & Empire Avenue/Deer Valley Drive	200		425	300							500	125	275								425		350	150	800	300

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB				SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	LT	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	275	125	100	100					125	75	200	825		475	250							
02: Homestake Road & Kearns Boulevard		50																							50			
03: Park Avenue & Kearns Boulevard									150	200					150		150	150	125									
04: Park Avenue & Homestake Road			100	150										175														
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	125							375		100	225								175		200	100		100	250
06: Homestake Road & Project Access																										50		

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Existing (2022) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB				SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	LT	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	250	175	275	525					100	50	100	675		300	200							
02: Homestake Road & Kearns Boulevard		75																							50			
03: Park Avenue & Kearns Boulevard									200	900					275		175	175	225									
04: Park Avenue & Homestake Road			350	400										200													100	
05: Park Avenue & Empire Avenue/Deer Valley Drive	225		400	325							475		125	300								450		400	150		775	300
06: Homestake Road & Project Access																										50		

SimTraffic Queueing Report

Project: Park City Homestake TIS

Analysis: Future (2027) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	300	125	100	100				125	75	175	525		600	250						
02: Homestake Road & Kearns Boulevard		50																						50		
03: Park Avenue & Kearns Boulevard									125	200				150		175	150	125								
04: Park Avenue & Homestake Road			100	125									175													
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	125							375	100	225								175		200	100	125	250

SimTraffic Queueing Report

Project: Park City Homestake TIS

Analysis: Future (2027) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	250	275	175	275	1,000				100	50	100	575		975	500						
02: Homestake Road & Kearns Boulevard		75																						50		
03: Park Avenue & Kearns Boulevard									200	575				300		175	175	250								
04: Park Avenue & Homestake Road			425	450									200												75	
05: Park Avenue & Empire Avenue/Deer Valley Drive	225		475	325							475	125	275								550		450	200	625	350

SimTraffic Queueing Report

Project: Park City Homestake TIS

Analysis: Future (2027) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB				SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	LT	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	225	300	125	100	100					125	75	200	550		875	500							
02: Homestake Road & Kearns Boulevard		50																							50			
03: Park Avenue & Kearns Boulevard									150	200					150		175	150	125									
04: Park Avenue & Homestake Road			100	150										175													50	
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	125							375		125	200								175		200	125		100	275
06: Homestake Road & Project Access																										50		

SimTraffic Queueing Report

Project: Park City Homestake TIS

Analysis: Future (2027) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB				SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	LT	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	250	275	175	275	1,000					100	50	100	575		1,075	500							
02: Homestake Road & Kearns Boulevard		75																							50			
03: Park Avenue & Kearns Boulevard									200	550					300		175	150	250									
04: Park Avenue & Homestake Road			400	425										200													75	
05: Park Avenue & Empire Avenue/Deer Valley Drive	225		425	325							500		125	350								650		500	175		650	300
06: Homestake Road & Project Access																										50		

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Future (2040) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	275	325	125	100	100				175	75	200	575		2,650	2,525						
02: Homestake Road & Kearns Boulevard		50																						50		
03: Park Avenue & Kearns Boulevard									150	225				200		175	150	175								
04: Park Avenue & Homestake Road			125	150									175													
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	125							400	125	225								200		225	125	125	300

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Future (2040) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB		
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	275	300	175	250	2,350				100	50	100	550		2,500	2,075						
02: Homestake Road & Kearns Boulevard		75																						50		
03: Park Avenue & Kearns Boulevard									200	725				350		200	175	325								
04: Park Avenue & Homestake Road			600	625									200												100	
05: Park Avenue & Empire Avenue/Deer Valley Drive	275		575	350							575	150	450								725		525	200	650	375

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Future (2040) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB			SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	275	325	125	100	100				150	75	200	550		2,075	2,000							
02: Homestake Road & Kearns Boulevard		50																						50			
03: Park Avenue & Kearns Boulevard									150	225				200		175	175	175									
04: Park Avenue & Homestake Road			125	150									200														
05: Park Avenue & Empire Avenue/Deer Valley Drive	100		125	125							400	125	225								200		200	125		100	275
06: Homestake Road & Project Access																									50		

SimTraffic Queueing Report

Project: Park City Homestake Avengers TIS

Analysis: Future (2040) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

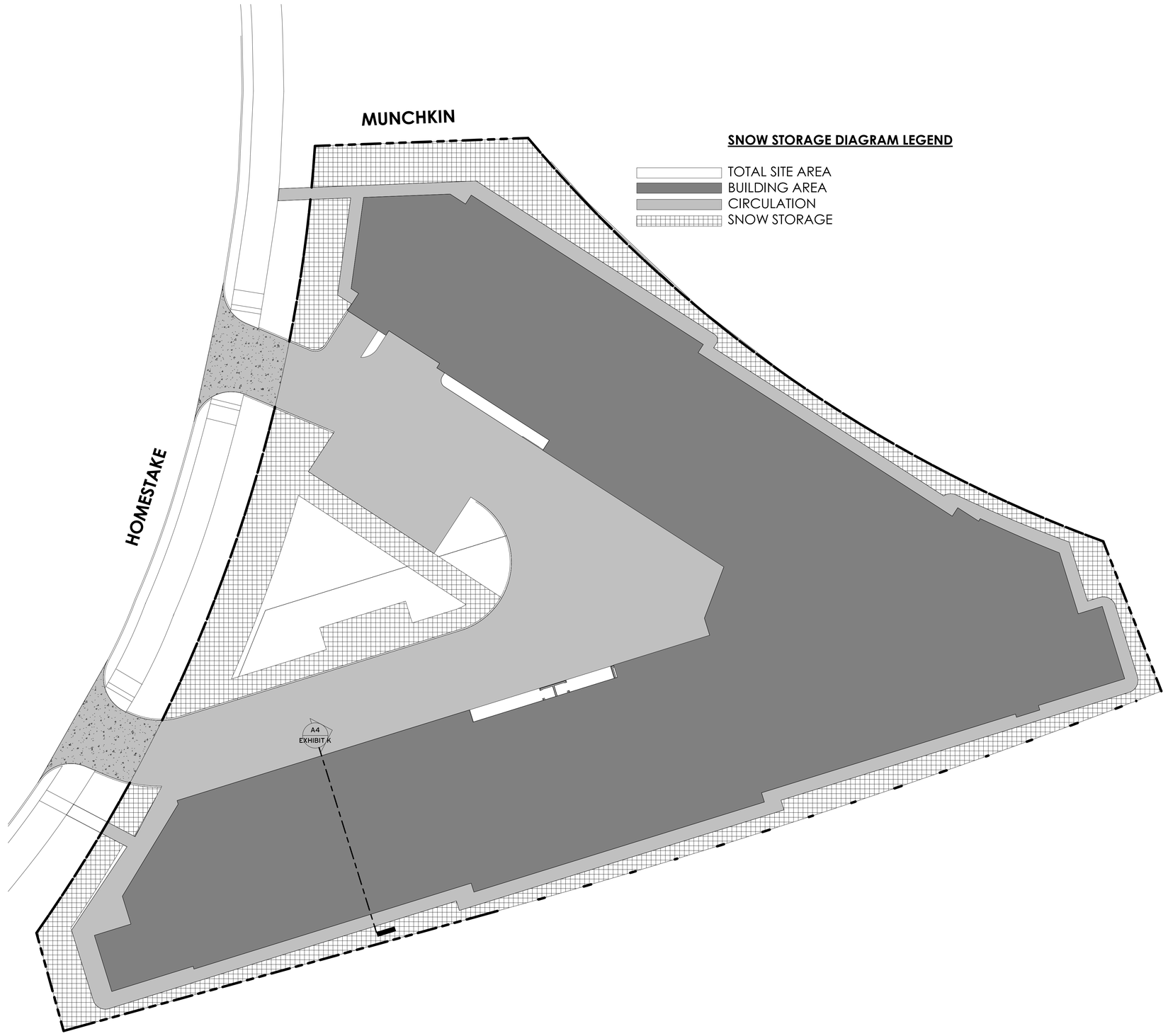
HALES ENGINEERING
innovative transportation solutions

Project #: UT22-2234

Intersection	NB				NE			NW			SB				SE			SW				EB			WB			
	L	LR	T	TR	L	T	TR	L	R	T	L	LT	R	T	L	R	T	L	R	T	TR	L	T	TR	L	LR	R	T
01: Kearns Boulevard & Bonanza Drive/Monitor Drive					75	275	300	200	250	2,350					100	50	100	550		2,775	2,825							
02: Homestake Road & Kearns Boulevard		75																							50			
03: Park Avenue & Kearns Boulevard									200	750					375		225	175	325									
04: Park Avenue & Homestake Road			600	650										200													100	
05: Park Avenue & Empire Avenue/Deer Valley Drive	250		525	350							550		150	400								775		525	225		675	425
06: Homestake Road & Project Access																										50		

EXHIBIT E

SNOW STORAGE PLAN



A2 SNOW STORAGE DIAGRAM
SCALE: 1" = 20'-0"

PLANNING
MPD/ CUP
REVIEW ONLY
NOT FOR CONST.

CIVIL: TALISMAN
STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210036
ISSUE DATE: 09.02.2022
ISSUE: MPD-CUP APPLICATION
REVISIONS

SNOW STORAGE DIAGRAM

EXHIBIT F

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the concepts, ideas, drawings and specifications herein are an original unpublished work and the property of WOW Atelier, LLC and shall not be used on any other work, do not scale drawings, all conditions shall be verified on site, discrepancies shall be brought to the attention of the architect before proceeding.
plot date: 10/10/2022 12:57:52 PM > D:\Revit Local Files\Homestake_AMPD_CENTRAL_chimso@be-wow.com.rvt

EXHIBIT F

LIMITED SOIL SAMPLING INVESTIGATION SUMMARY REPORT

LIMITED SOIL SAMPLING INVESTIGATION SUMMARY REPORT FOR HOMESTAKE PARCEL

Tax Assessor Parcel #YARD-B-1X; Lot B (1.86-acres)

Summit County, Utah

Prepared for:
J Fisher Companies
1216 W Legacy Crossing Blvd #300
Centerville, UT 84014

Prepared by:
Stantec Consulting Services Inc.
2890 East Cottonwood Parkway; Suite 300
Salt Lake City UT 84121-7283

Project No.: 203722755

September 13, 2022

Sign-off Sheet and Signature of Environmental Professional

This document was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of J Fisher Companies. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by: _____

John G. Russell, III, CPG
Utah PG #5216074-2250
Sr. Hydrogeologist, Environmental Risk Manager

Reviewed By: _____

Cameron Cordner
Hydrogeological Scientist

Sign-off Sheet and Signature of Environmental Professional

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1.0 INTRODUCTION

On behalf of J. Fisher Companies ("Client"), and in accordance with Stantec Consulting Services Inc.'s ("Stantec") July 8, 2022 *Proposal and Cost Estimate*, Stantec conducted a limited topsoil and subsurface soil investigation at the Homestake parcel located at 1875 Homestake Road in Park City, Summit County, Utah ("Property"). The intent of the investigation was to investigate if, and to what degree, soils might be impacted by heavy metals at specific locations where the Client is considering redevelopment activities, including proposed construction of abovegrade residences and underground parking structures. This report presents a summary of field activities and analytical results associated with the investigation.

The limited soil investigation was conducted in response to the Client's and Stantec's review of historical *Phase I Environmental Site Assessment (ESA) Reports* (Terracon, 2016 and 2017), a *Limited Site Investigation Report* (Terracon, 2016), and a more recent *Site Assessment Report* (Blue Ledge Consulting, LLC, 2021), documents prepared on behalf of the Park City Municipal Corporation (PCMC) and shared with the Client. The 2016 and 2017 investigations included the Property and off-site lands located immediately north of the Property, which extended from the generalized northern Property boundary to Kearns Boulevard (a distance of approximately 400 feet).

The 2016 investigation included field-screening of soils at eight soil test borings to 20 to 25 feet below grade, utilizing a portable x-ray fluorescence (XRF) analyzer to screen for metals and a portable photoionization detector (PID) to screen for volatile organic compound (VOC) constituents. The 2016 XRF study identified localized Property topsoil and near-surface soil (generally within the upper two feet of the ground surface) that contained lead concentrations in excess of PCMC's *Soil Ordinance* screening level for lead at occupied properties (200 milligrams per kilogram (mg/kg); i.e., parts per million-ppm). Reportedly, all other metal XRF concentrations were deemed representative of typical background metal concentrations. Field-screening of soils using the PID indicated no qualitative signs of VOCs.

This 2022 limited soil investigation, conducted on August 22, 2022, included the collection of topsoil and subsurface soil samples and field-screening for metals using an XRF analyzer, with select soil samples being submitted for quantitative laboratory analysis of the eight Resource Conservation and Recovery Act (RCRA) Metals by Method EPA 6010B/C/D (mercury: EPA 7471A). Stantec, the Client, and PCMC representatives agreed on the sampling locations in advance of the investigation, as outlined and proposed within Stantec's July 8, 2022 Proposal. In accordance with United States Environmental Protection Agency (US EPA) *Method 6200. Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment*, the XRF field results were used in part to identify which soil samples were analyzed by the laboratory.

The 2022 site and soil test boring locations are identified on Figures 1 and 2, respectively herein. Metal results and sampling depths of particular interest are presented on Figure 3. A copy of the

laboratory Quality Assurance/Quality Control (QA/QC) Level III result report is attached as Appendix A.

2.0 SOIL SAMPLING ACTIVITIES

In advance of field drilling activities, Stantec spray-painted the proposed boring locations for easy reference when locating buried utilities. Stantec coordinated a private ground-penetrating radar (GPR) utility locate by GPRS, LLC (GPRS) of Salt Lake City, Utah and a public utility locate by Blue Stakes Utility Locators of Utah (Blue Stakes). GPRS and Blue Stakes did not identify any buried utilities within 10 feet of any proposed soil test boring location.

2.1 SOIL SAMPLING PROTOCOL

On August 22, 2022, a Stantec geologist observed the drilling and sampling of 17 soil test borings by Direct Push Services, LLC of Salt Lake City, Utah, utilizing direct-push technology (reference Figure 2). Each soil test boring was drilled and sampled using a GeoProbe™ direct-push drill rig, equipped with an approximate 3.25-inch (3.25-in.) diameter, steel drive-point that was pushed hydraulically into the subsurface. Soil samples were collected continuously within new disposable, 5-feet long, clear-acrylic, sampling tubes for easy visual inspection and sample collection.

Stantec observed that the land surface was covered by an approximate 4-inch thick, asphalt-paved surface. There appeared to be a thin layer of imported or other roadbase material located between the bottom of the asphalt cover and underlying soil material, although at some borings it was difficult to differentiate between possible imported material and underlying soils. During soil sampling, Stantec screened soil samples for qualitative signs (visual and olfactory observations) of potential contamination. Stantec did not observe any qualitative signs of potential contamination at any of the borings.

At ten of the shallow topsoil sampling boreholes noted on Figure 2 (borings HS-2, -4, -6, -8, -10, -12, -14, -15, -16, and HS-17), Stantec used a portable XRF analyzer to screen soils in approximate six-inch vertical intervals within the upper, approximate 1.5 feet (i.e., 3-in., 9-in., 15-in. depths beneath the bottom of the asphalt pavement, etc.) of soils located immediately beneath the asphalt-paved surface. At the seven deep soil test boreholes (borings HS-1, -3, -5, -7, -9, -11, and HS-13), Stantec used the XRF to screen soils in approximate 2.5-ft. intervals within the upper, approximate 20 feet (i.e., 3-in., 2.5-ft., 5-ft., 7.5-ft., 10-ft., 12.5-ft., 15-ft., 17.5-ft., and 20-ft.) of soils beneath the asphalt pavement. Stantec's uppermost soil sample collected beneath the asphalt-paved, parking lot was collected of material that appeared to represent uppermost natural soil (i.e., not asphalt material or underlying roadbase, etc.).

Subsurface soils were comprised of a heterogeneous mix of unsaturated, varying brown/tan to gray, medium- to coarse-grained sand, gravel, and pebbles within a silt-rich matrix, as well as a few interspersed, small fragments of highly-weathered, red sandstone. At each of the seven 20-ft. deep borings, Stantec observed clay- to silt-rich soils at depths between 15 to 20 feet, including increasing moisture content with increasing depth.

All soil samples were screened in the field for 11 of the 13 Priority Pollutant Metals using a hand-held, XRF analyzer (i.e., Niton™ XL2 GOLDD analyzer). Prior to analyzing samples, the calibration of the XRF analyzer was checked using a RCRA 500 standard and a blank standard (pure silica sand). Beryllium is too light for analysis by typical hand-held, XRF analyzers, and the Niton XRF did not screen for Thallium. Neither metal is anticipated to be of environmental concern, related to the Property or nearby, surrounding lands, based on Stantec's extensive experience sampling and analyzing several hundred soil samples throughout the region during the past several years. The XRF Limit of Detection (LOD) differed for each metal, typically between 5 to 10 ppm.

Stantec's field geologist extended the X-ray detector end of the XRF analyzer atop each sample to measure the outer, exposed surface of soil, in general accordance with the XRF analyzing protocol detailed within US EPA Method 6200. All XRF readings were logged within the XRF analyzer and then downloaded subsequently onto a Stantec computer for archiving.

Stantec reviewed the XRF results in terms of criteria outlined within Stantec's July 8, 2022 Proposal, including at least one soil representative of each of the highest, moderate, and lowest lead concentrations and 12 additional samples that exhibited some of the highest lead or other metal concentrations, to help select which specific soil samples would be analyzed quantitatively by the laboratory. In some instances, Stantec collected samples for laboratory analysis which represented sampling intervals that were either overlying or underlying soils that exhibited slightly elevated lead or other metal XRF concentrations.

As outlined within Stantec's Proposal, a total of 15 soil samples were collected within laboratory-provided sample containers for quantitative analysis of the eight Resource Conservation and Recovery Act (RCRA) metals by Method EPA 6010B/C/D (Mercury by EPA 7471A). Stantec's field geologist utilized nitrile gloves during soil sample collection and XRF screening. Following sample collection, each container was labeled as to sample location, date, and analysis and then hand-delivered to Chemtech-Ford Laboratories of Salt Lake City, Utah, a Utah-certified, analytical laboratory. Strict Chain-of Custody (CoC) and Quality Assurance/Quality Control (QA/QC) protocol were administered throughout the sampling program and delivery of samples to the laboratory.

Following sampling activities, each borehole was backfill-abandoned with bentonite pellets, from the bottom of each borehole, progressing upward and including an asphalt-patch material emplaced within the upper approximate 1- to 1.5 feet, flush to grade. Stantec inspected the backfilled boreholes on the evening of August 22 and the morning of August 23, 2002 to verify that all borings' asphalt backfill had cured flush with the existing asphalt-paved, land surface.

2.2 SOIL ANALYTICAL RESULTS

Attached Table 1 presents a summary of Stantec's XRF field-screening results, while attached Table 2 presents a comparative analysis of XRF and laboratory results. A copy of the analytical report is presented as Appendix A herein.

In consideration of the heterogenous nature of the lithologic characteristics of the soil materials (sand, gravel, pebbles, rock fragments, etc.), it is not surprising that XRF field-screening results and analytical laboratory results may differ. However, in general, Stantec's review of XRF and laboratory results indicate reasonable correlation between the data. Stantec's review of the XRF and laboratory results indicates that all but seven soil samples exhibited metal concentrations deemed representative of natural background metal concentrations – based on Stantec's extensive experience sampling and analyzing several hundred soil samples throughout the region during the past several years.

Seven soil samples exhibited a lead concentration in excess of the PCMC's *Soil Ordinance* screening level of 200 ppm:

Sample	**Depth** (below asphalt)	***XRF* Lead (ppm*)**	***Lab* Lead (ppm)**
HS-1-2.5	2.5 feet	592	531
HS-2-1	9-inches	541	193 (less than 200 ppm)
HS-3-2.5	2.5 feet	471	668
HS-5-2.5	2.5 feet	6,686	11,000
HS-6-1.5	15-inches	589	1,730
HS-16-1	9-inches	413	374
HS-17-1	9-inches	440	572

* ppm – milligrams per kilogram; aka, parts per million

XRF and laboratory lead concentrations in all other soil samples are deemed by Stantec to represent typical background lead concentrations. The US EPA Risk-Based Screening Level (RSL) for lead, deemed protective of residential land use, is 400 ppm. The RSL for lead under industrial land use scenarios is 800 ppm. Aside from lead and arsenic, no other metal concentration in any soil sample exceeded a corollary RSL deemed protective of residential land use.

It is well-documented throughout Utah that natural background concentrations of arsenic almost always exceed the US EPA's residential RSL for arsenic of 0.68 ppm, which is based on national, generic exposure factors. Stantec's review of the analytical data indicates that there were only three soil samples that exhibited what Stantec believes to be representative of arsenic concentrations in excess of natural background conditions, namely laboratory samples: HS-5-2.5 (arsenic at 260 ppm); HS-6-1.5 (79.2 ppm); and HS-17-1 (61 ppm). As listed above, each of the three samples also exhibited elevated lead concentrations. All other XRF and laboratory arsenic concentrations are deemed representative of typical, natural background arsenic concentrations.

3.0 SUMMARY OBSERVATIONS AND CONCLUSIONS

This limited soil sampling investigation provided a timely and cost-effective means by which soil beneath the asphalt-paved, land surface were investigated for heavy metal presence. The intent of the investigation was not to fully delineate potential metal contamination at the property but provide data to help estimate potential presence and generalized concentrations of metals within near-surface and subsurface soils beneath the property.

The XRF and laboratory results should be reviewed in light of corollary boring locations and soil sampling depths for extrapolation of subsurface soil conditions and lateral and vertical metal concentrations laterally between the different soil test borings and vertically within individual soil boreholes. Since individual XRF and laboratory samples were collected at specific sampling depths within each individual soil test boring (every 6-inches at shallow borings and at 2.5-ft. intervals at the 20-ft. deep borings), the results should be used to estimate metal concentrations across the property in adjacent, overlying, and/or underlying soils that were not XRF field-screened or laboratory-analyzed.

At the time of investigation, the property was covered by an approximate, 4-inch thick, asphalt-paved, vehicle parking lot. Subsurface soils were comprised of a heterogeneous mix of unsaturated, varying brown/tan to gray, medium- to coarse-grained sand, gravel, and pebbles within a silt-rich matrix, as well as a few interspersed, small fragments of highly-weathered, red sandstone. At each of the seven 20-ft. deep borings, Stantec observed clay- to silt-rich soils between 15 to 20 feet, including increasing moisture content with increasing depth to borehole completion depths of 20 feet below grade. Stantec estimated that the depth to the water table may approximate 20 or more feet below grade.

Topsoil and near-surface soil sampling across the property indicated that at least the upper six inches of soil beneath the bottom of the approximate four inch thick, asphalt parking lot appear to contain metal concentrations representative of typical, natural background metal concentrations. The results suggest the possibility that, under future potential land redevelopment activities which may include removal of the asphalt pavement, the upper six inches of soil (if exposed to the natural elements but not disturbed) may pose little to no risk to human health as regards heavy metal concentrations in topsoil.

For instance, as long as the upper six inches of soil is not penetrated, it is possible that movement of pedestrians, vehicles, and/or equipment across exposed property topsoil may pose no unacceptable risk to human health and the environment. Since the upper six inches of soil appear to reflect natural background conditions and metal concentrations, risk associated with potential direct physical contact (dermal exposure) and/or air dispersion of soil/particulate matter (inhalation and/or ingestion exposure) appears to be of little to no significant risk as regards metal concentrations in the soil. For instance, as long as the upper six inches of soil is not penetrated, it may be possible to mobilize vehicles, construction trailers, and earth-moving

equipment onto the property in preparation for future land redevelopment with little to no risk to human health and the environment as regards metal concentrations in topsoil.

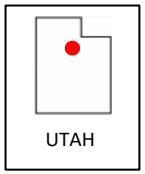
However, if the upper six inches of soil at the property is penetrated during future land redevelopment activities, thereby exposing underlying, subsurface soil to the natural atmosphere, there are localized subsurface soils that *may* pose unacceptable risk to human health. As identified on Figure 3, three soil samples contained lead concentrations in excess of 200 ppm at a depth of nine inches below the bottom of the asphalt, namely samples HS-2-1, HS-16-1, and HS-17-1. The next deepest depth at which an elevated lead concentration was identified in any boring was at 15 inches beneath the bottom of the asphalt parking lot at lone boring HS-6. The next depth at which an elevated lead concentration was identified was at 2.5-ft. beneath the bottom of the asphalt parking lot at borings HS-1, HS-3, and HS-5. Subsurface soils at deeper depths at borings HS-1, -3, -5, -7, -9, -11, and HS-13 appeared to reflect typical, natural background metal concentrations, which are anticipated to pose little to no risk to human health and the environment as regards metal concentrations.

Figure 1 General Property Location Map

INSET

SUMMIT *COUNTY TAX ASSESSOR OFFICE RECORDS*

Parcel # YARD-B-1AM-X; Lot B (~ 1.86-acres)



Stantec

INSET SCALE
1 in = 70 feet

0 35 70

T2S, R4E Section 9 Summit County UT
NAD 1983 UTM Zone 12N

DRAWN BY: JR	1ST REVIEW: CC	2ND REVIEW: SS
DATE: 8/23/2022	PROJECT NO: 203722755	

PCMC-Homestake Project

Figure 1

General Property Location, Aerial Map

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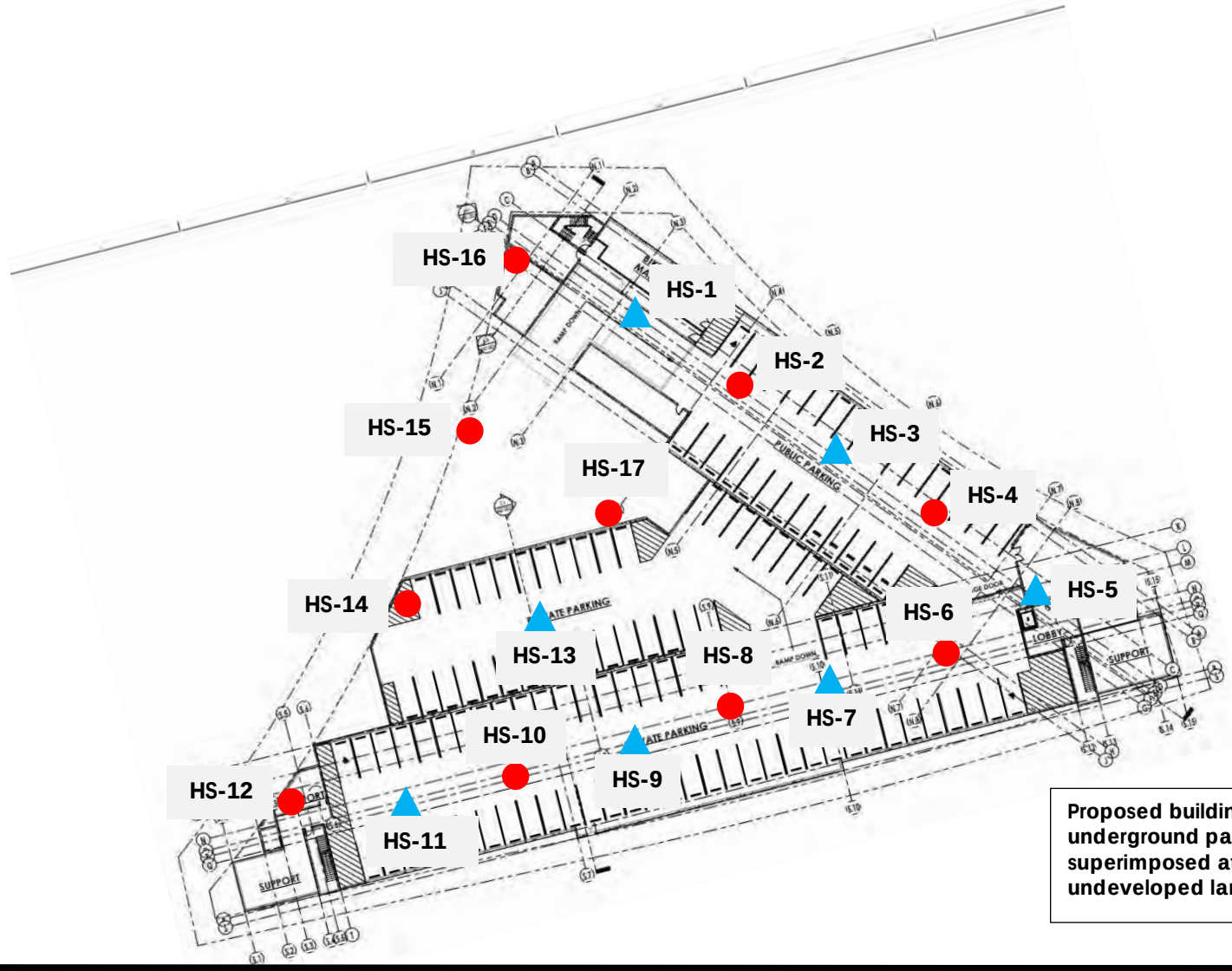
Figure 2 Soil Test Boring Location Map



Proposed buildings and/or underground parking structures superimposed atop vacant, undeveloped land surface

SUMMIT *COUNTY TAX ASSESSOR OFFICE RECORDS*

Parcel # YARD-B-1AM-X; Lot B (~ 1.86-acres)

HS – Topsoil (0 to 18 inches) Boring

HS – Subsurface Soil (20-ft. depth) Boring

UTAH

Stantec

Feet

0 50 100 1 in = 100 feet

T2S, R4E Section 9 Summit County UT
NAD 1983 UTM Zone 12N

DRAWN BY: JR	1ST REVIEW: CC	2ND REVIEW: SS
DATE: 8/23/2022	PROJECT NO: 203722755	

PCMC-Homestake Project

Figure 2

Soil Test Boring Locations

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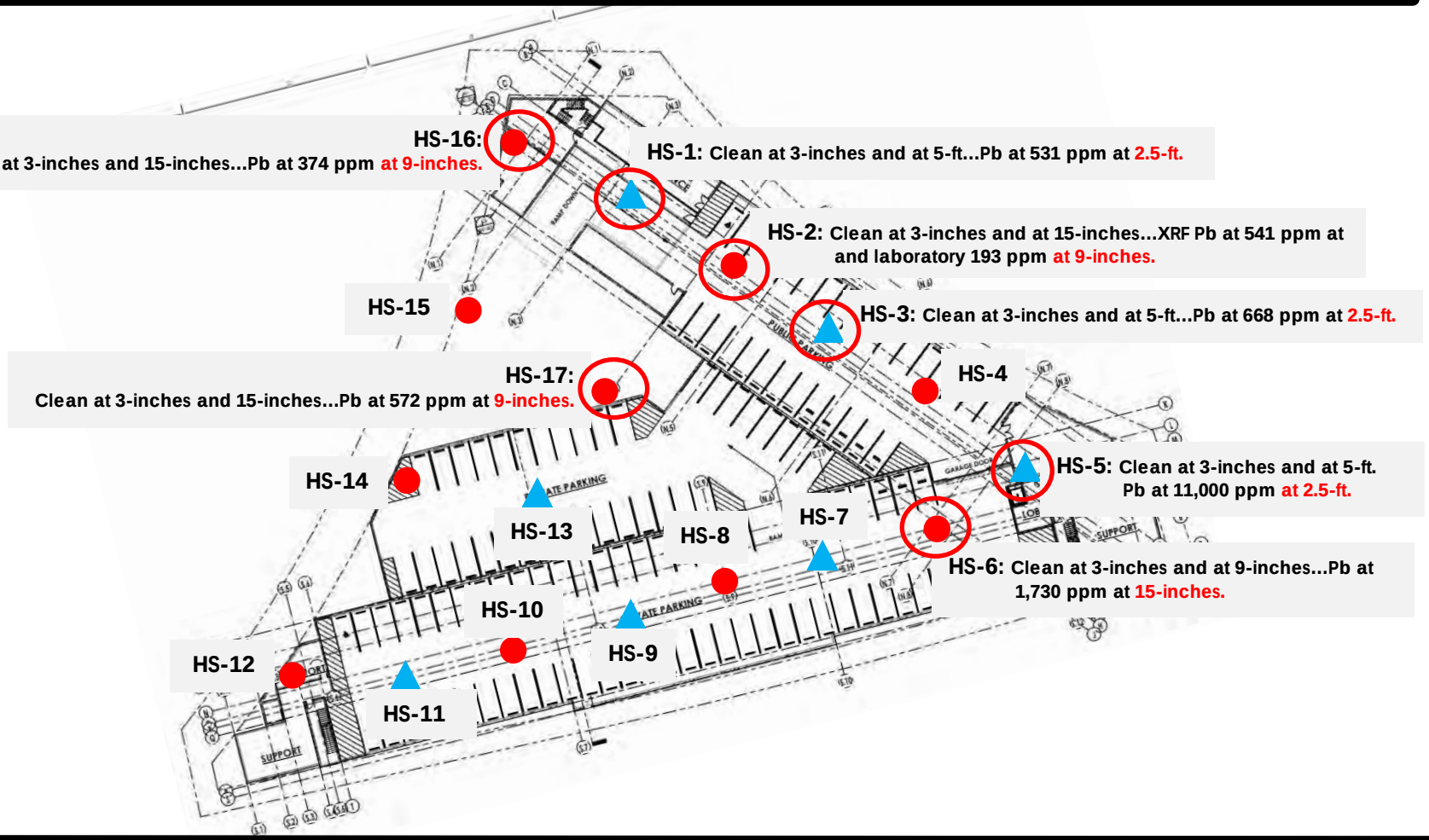
Figure 3 Laboratory Analytical Results

Only those samples with Lead (Pb) laboratory concentrations in excess of PCMC's *Soil Ordinance* screening level for lead of 200 ppm are noted herein. All other samples are "clean."

Depths are below the asphalt-paved, land surface.



SUMMIT *COUNTY TAX ASSESSOR OFFICE RECORDS*

Parcel # YARD-B-1AM-X; Lot B (~ 1.86-acres)

UTAH

HS – Topsoil (0 to 18 inches) Boring: clean at 3-, 9-, & 15-inches...except where noted.

HS – Subsurface Soil (20-ft. depth) Boring: clean at 3-inches and 2.5-, 5-, 7.5-, 10-, 12.5-, 15-,17.5- and 20-feet...except where noted.

Stantec

N

0 50 100 Feet

1 in = 100 feet

T2S, R4E Section 9 Summit County UT
NAD 1983 UTM Zone 12N

DRAWN BY: JR	1ST REVIEW: CC	2ND REVIEW: SS
DATE: 9/7/2022	PROJECT NO: 203722755	

PCMC-Homestake Project

Figure 3

Laboratory Results

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

TABLE 1 XRF FIELD-SCREENING RESULTS

TABLE 1. XRF FIELD-SCREENING RESULTS
Homestake Property
Park City, Utah

SAMPLE	Sb**	Cd	Ag	Pb, Lead	Se	As	Hg	Zn	Cu	Ni	Cr
HS-1 (3-inches) *	23.04	13	8.55	< LOD ***	< LOD	6.54	< LOD	32.21	16.92	< LOD	126.1
HS-1-2.5 (2.5-ft.)	21.65	14.47	< LOD	**592.28**	< LOD	46.82	< LOD	2137.7	78.55	< LOD	< LOD
HS-1-5 (5-ft.)	33.35	12.17	11.34	31.98	< LOD	12.57	< LOD	236.32	< LOD	< LOD	< LOD
HS-1-7.5 (7.5-ft.)	23.75	< LOD	< LOD	30.46	< LOD	13.42	< LOD	129.11	< LOD	< LOD	< LOD
HS-1-10 (10-ft.)	40.81	13.92	14.7	107.61	< LOD	20.52	< LOD	164.04	37.57	37.93	< LOD
HS-1-12.5 (12.5-ft.)	26.2	11.19	9.81	54.2	< LOD	8.92	< LOD	206.64	18.55	< LOD	< LOD
HS-1-15 (15-ft.)	32.3	9	8.44	52.28	< LOD	15.58	< LOD	142.17	24.7	32.05	< LOD
HS-1-17.5 (17.5-ft.)	33.04	11.71	< LOD	30.3	< LOD	14.85	< LOD	136.31	< LOD	< LOD	< LOD
HS-1-20 (20-ft.)	42.67	12.66	12.35	27.13	< LOD	26.67	< LOD	267.41	19.02	< LOD	< LOD
HS-2-0.5 (3-inches)	38.8	< LOD	10.17	< LOD	< LOD	6.53	< LOD	41.82	25.52	< LOD	< LOD
HS-2-1 (9-inches)	46.22	32.65	< LOD	**541.15**	< LOD	< LOD	< LOD	924.75	63.18	< LOD	< LOD
HS-2-1.5 (15-inches)	< LOD	< LOD	< LOD	29.15	< LOD	11.92	< LOD	762.45	25.07	< LOD	< LOD
HS-3 (3-inches)	42.27	18.55	9.51	14.7	< LOD	< LOD	< LOD	39.29	24	28.09	< LOD
HS-3-2.5 (2.5-ft.)	20.19	< LOD	< LOD	**471.96**	< LOD	21.03	< LOD	1291.6	59.39	< LOD	< LOD
HS-3-5 (5-ft.)	35.96	15.83	9.87	38.53	< LOD	16.17	< LOD	132.41	20.59	33.51	< LOD
HS-3-7.5 (7.5-ft.)	28.97	< LOD	< LOD	55.54	< LOD	23.76	< LOD	140.63	20.46	< LOD	< LOD
HS-3-10 (10-ft.)	18.73	< LOD	< LOD	58.95	< LOD	16.18	< LOD	165.13	19.35	< LOD	< LOD
HS-3-12.5 (12.5-ft.)	23.31	< LOD	< LOD	28.82	< LOD	12.8	< LOD	76.62	16.13	< LOD	87.55
HS-3-15 (15-ft.)	31.63	8.6	< LOD	20.57	< LOD	8.69	< LOD	107.53	54.85	38.58	< LOD
HS-3-17.5 (17.5-ft.)	< LOD	< LOD	< LOD	20.89	< LOD	12.68	< LOD	93.65	34.37	< LOD	< LOD
HS-3-20 (20-ft.)	22.79	< LOD	< LOD	45.45	< LOD	14.25	< LOD	115.74	33.13	36.95	115.2
HS-4-0.5 (3-inches)	< LOD	< LOD	< LOD	< LOD	< LOD	7.7	< LOD	29.82	17.82	< LOD	< LOD
HS-4-1 (9-inches)	33.11	8.53	8.73	16.16	< LOD	5.62	< LOD	75.19	348.6	< LOD	< LOD
HS-4-1.5 (15-inches)	< LOD	< LOD	< LOD	34.16	< LOD	17.33	< LOD	186.45	35.69	< LOD	< LOD
HS-5 (3-inches)	< LOD	< LOD	< LOD	< LOD	< LOD	12.84	< LOD	47.58	27.97	< LOD	< LOD
HS-5-2.5 (2.5-ft.)	253.4	13.57	64.52	**6686.27**	< LOD	107.5	9.7	3821.3	399.7	< LOD	< LOD
HS-5-5 (5-ft.)	< LOD	< LOD	< LOD	79.86	< LOD	24.65	< LOD	2974.5	21.37	39.69	< LOD
HS-5-7.5 (7.5-ft.)	< LOD	9.99	< LOD	64.51	< LOD	23.07	< LOD	1306.2	22.37	29.25	< LOD
HS-5-10 (10-ft.)	34.67	13.64	13.56	< LOD	< LOD	9.74	< LOD	236.09	< LOD	< LOD	< LOD
HS-5-12.5 (12.5-ft.)	< LOD	< LOD	< LOD	69	< LOD	17.95	< LOD	243.84	26	29.21	< LOD
HS-5-15 (15-ft.)	16.61	< LOD	< LOD	50.03	< LOD	21.34	< LOD	186.81	25.31	< LOD	< LOD
HS-5-17.5 (17.5-ft.)	20.35	< LOD	< LOD	44.34	< LOD	26.82	< LOD	185.91	33.31	23.17	109.7
HS-5-20 (20-ft.)	21.96	< LOD	8.49	24.36	< LOD	12.74	< LOD	135.66	18.04	< LOD	< LOD
HS-6-0.5 (3-inches)	< LOD	< LOD	< LOD	< LOD	< LOD	9.6	< LOD	66.56	33.09	< LOD	< LOD
HS-6-1 (9-inches)	54.06	15.05	8.92	61.93	< LOD	< LOD	< LOD	217.57	22.4	< LOD	< LOD
HS-6-1.5 (15-inches)	44.73	9.29	< LOD	**589.75**	< LOD	< LOD	< LOD	1212.5	60.28	< LOD	< LOD
HS-7 (3-inches)	21.31	< LOD	8.98	< LOD	< LOD	12.57	< LOD	39.2	25.08	< LOD	< LOD
HS-7-2.5 (2.5-ft.)	20.56	< LOD	< LOD	81.15	< LOD	17.1	< LOD	192.88	23.65	< LOD	< LOD
HS-7-5 (5-ft.)	57.24	15.74	9.32	41.31	< LOD	27.83	6.46	245.83	21.04	40.77	< LOD
HS-7-7.5 (7.5-ft.)	17.54	< LOD	< LOD	46.93	< LOD	17.11	< LOD	132.98	26.35	< LOD	< LOD

TABLE 1. XRF FIELD-SCREENING RESULTS
Homestake Property
Park City, Utah

SAMPLE	Sb	Cd	Ag	Pb, Lead	Se	As, Arsenic	Hg	Zn	Cu	Ni	Cr
HS-7-10 (10-ft.)	< LOD	< LOD	< LOD	63.86	< LOD	18.7	< LOD	156.09	22.5	24.62	< LOD
HS-7-12.5 (12.5-ft.)	< LOD	< LOD	< LOD	23.93	< LOD	13.63	< LOD	116.09	15.49	25.9	< LOD
HS-7-15 (15-ft.)	48.97	16.06	13.04	40.1	< LOD	13.69	< LOD	110.31	27.52	< LOD	< LOD
HS-7-17.5 (17.5-ft.)	21.81	< LOD	< LOD	73.61	< LOD	19.71	< LOD	144.61	39.94	36.57	< LOD
HS-7-20 (20-ft.)	< LOD	< LOD	< LOD	16.58	< LOD	14.46	< LOD	136.53	25.25	< LOD	< LOD
HS-8-0.5 (3-inches)	52.92	14.38	15.22	< LOD	< LOD	10.45	< LOD	54.77	37.53	< LOD	< LOD
HS-8-1 (9-inches)	52.67	13.51	15.31	14.47	< LOD	8.73	< LOD	48.37	30.63	< LOD	< LOD
HS-8-1.5 (15-inches)	17.05	< LOD	< LOD	170.29	< LOD	13.49	< LOD	529.19	128.3	26.71	< LOD
HS-9 (3-inches)	32.56	< LOD	< LOD	13.1	< LOD	6.9	< LOD	41.07	34.47	< LOD	138.8
HS-9-2.5 (2.5-ft.)	35.36	11.86	9.44	46.82	< LOD	14.55	< LOD	130.96	21.05	< LOD	< LOD
HS-9-5 (5-ft.)	27.11	10.88	7.41	26.46	< LOD	16.65	< LOD	171.12	20.06	< LOD	< LOD
HS-9-7.5 (7.5-ft.)	20.88	12.19	9.41	38.2	< LOD	20.82	< LOD	96.66	22.42	< LOD	< LOD
HS-9-10 (10-ft.)	39.61	10.63	11.56	90.56	< LOD	25.22	< LOD	168.88	27.73	29.83	< LOD
HS-9-12.5 (12.5-ft.)	35.23	13.47	10.21	43.89	< LOD	19.55	< LOD	140.59	25.78	< LOD	< LOD
HS-9-15 (15-ft.)	43.76	16.76	13.43	19.68	< LOD	13.03	< LOD	91.86	14.86	< LOD	< LOD
HS-9-17.5 (17.5-ft.)	20.03	< LOD	6.85	31.3	< LOD	13.88	< LOD	105.82	27.43	30.96	113.8
HS-9-20 (20-ft.)	26.53	< LOD	< LOD	27.24	< LOD	16.28	< LOD	96.26	13.94	< LOD	97.37
HS-10-0.5 (3-inches)	38.08	14.23	18.23	< LOD	< LOD	13.28	< LOD	61.91	< LOD	< LOD	< LOD
HS-10-1 (9-inches)	36.89	13.25	7.32	9.36	< LOD	7.8	< LOD	43.31	32.23	< LOD	< LOD
HS-10-1.5 (15-inches)	< LOD	< LOD	< LOD	6.37	< LOD	8.24	< LOD	44.14	22.71	< LOD	< LOD
HS-11 (3-inches)	34.36	10.34	8.39	< LOD	< LOD	7.33	< LOD	46.8	43.74	31.99	< LOD
HS-11-2.5 (2.5-ft.)	15	< LOD	< LOD	13.96	< LOD	6.92	< LOD	69.04	34.34	< LOD	115.9
HS-11-5 (5-ft.)	29.85	< LOD	< LOD	65.89	< LOD	14.97	< LOD	166.22	15.54	< LOD	< LOD
HS-11-7.5 (7.5-ft.)	26.75	< LOD	< LOD	32.61	< LOD	16.1	< LOD	141.66	< LOD	40.01	102
HS-11-10 (10-ft.)	24.3	< LOD	< LOD	78.62	< LOD	24.87	< LOD	134.28	18.75	< LOD	< LOD
HS-11-12.5 (12.5-ft.)	44.91	11.74	12.21	70.2	< LOD	15.53	< LOD	89.84	16.86	< LOD	122.3
HS-11-15 (15-ft.)	21.79	8.3	< LOD	50.82	< LOD	13.68	< LOD	179.39	19.68	< LOD	< LOD
HS-11-17.5 (17.5-ft.)	31.57	10.1	9.76	77.62	< LOD	15.18	< LOD	121.89	24.78	< LOD	< LOD
HS-11-20 (20-ft.)	36.11	11.51	7.71	18.74	< LOD	19.11	< LOD	211.89	12.79	< LOD	< LOD
HS-12-0.5 (3-inches)	69.23	23.33	24.12	12.04	< LOD	7.94	< LOD	51.07	< LOD	< LOD	< LOD
HS-12-1 (9-inches)	25.61	< LOD	< LOD	75.42	< LOD	21.29	< LOD	285.43	32.04	< LOD	< LOD
HS-12-1.5 (15-inches)	31.71	8.99	< LOD	130.33	< LOD	23.12	< LOD	310.82	40.39	< LOD	< LOD
HS-13 (3-inches)	39.3	14.54	15.46	12.32	< LOD	< LOD	< LOD	40.6	42.95	< LOD	< LOD
HS-13-2.5 (2.5-ft.)	36.47	12.6	8.5	32.92	< LOD	14.94	< LOD	98.46	44.87	< LOD	< LOD
HS-13-5 (5-ft.)	26.72	< LOD	12.46	< LOD	< LOD	11.74	< LOD	70.08	< LOD	< LOD	< LOD
HS-13-7.5 (7.5-ft.)	38.85	11.16	11.17	84.01	< LOD	20.48	< LOD	150	25.38	31.91	< LOD
HS-13-10 (10-ft.)	13.74	< LOD	< LOD	99.94	< LOD	18.88	< LOD	177.36	31.54	< LOD	< LOD
HS-13-12.5 (12.5-ft.)	< LOD	< LOD	< LOD	51.04	< LOD	17.76	< LOD	114.38	13.97	< LOD	< LOD
HS-13-15 (15-ft.)	< LOD	< LOD	< LOD	29.86	< LOD	9.31	< LOD	121.19	18.21	24.18	< LOD
HS-13-17.5 (17.5-ft.)	25.54	< LOD	< LOD	20.77	< LOD	13.56	< LOD	156.75	82.27	< LOD	< LOD

TABLE 1. XRF FIELD-SCREENING RESULTS
Homestake Property
Park City, Utah

SAMPLE	Sb	Cd	Ag	Pb	Se	As	Hg	Zn	Cu	Ni	Cr
HS-13-20 (20-ft.)	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	51.58	< LOD	< LOD	< LOD
HS-14-0.5 (3-inches)	46.73	13.22	11.77	< LOD	< LOD	10.62	< LOD	52.66	52.66	31.9	119.1
HS-14-1 (9-inches)	57.28	14.39	18.53	28.15	< LOD	< LOD	< LOD	309.36	34.77	< LOD	< LOD
HS-14-1.5 (15-inches)	35.52	< LOD	16.79	17.52	< LOD	16.13	< LOD	66.2	< LOD	< LOD	< LOD
HS-15-0.5 (3-inches)	48.09	21.05	13.46	6.69	< LOD	7.54	< LOD	31.17	30.39	23.89	< LOD
HS-15-1 (9-inches))	50	< LOD	< LOD	52.43	< LOD	< LOD	< LOD	91.71	38.92	< LOD	< LOD
HS-15-1.5 (1.5-ft.)	< LOD	< LOD	< LOD	44.7	< LOD	14.85	< LOD	133.65	21.33	< LOD	< LOD
HS-16-0.5 (3-inches)	23.86	< LOD	< LOD	< LOD	< LOD	13.06	< LOD	45.19	35.91	< LOD	< LOD
HS-16-1 (9-inches)	52.13	10.67	11.11	**413.5**	< LOD	25.12	< LOD	527.18	75.52	28.41	< LOD
HS-16-1.5 (15-inches)	< LOD	< LOD	< LOD	32.21	< LOD	12.05	< LOD	162.76	26.89	< LOD	< LOD
HS-17-0.5 (3-inches)	24.24	12.54	7.72	13.9	< LOD	9.48	< LOD	71.41	31.15	< LOD	< LOD
HS-17-1 (9-inches)	< LOD	< LOD	< LOD	**440.1**	< LOD	27	< LOD	787.58	64.76	< LOD	< LOD
HS-17-1.5 (15-inches)	38.89	19.68	7.97	141.06	< LOD	< LOD	< LOD	319.6	28.98	< LOD	< LOD

All Results in milligrams per kilogram (mg/kg); i.e., parts per million-ppm.

* Depth beneath the approximate 4-inch thick, asphalt-paved, land surface.

Sb**: Antimony

Cd: Cadmium

Ag: Silver

Pb: Lead

Se: Selenium

As: Arsenic

Hg: Mercury

Zn: Zinc

Cu: Copper

Ni: Nickel

Cr: Chromium

< LOD *:** Less than Limit of Detection (all LOD < corollary US EPA *Risk-Based Screening Levels* [RSLs]).

Emboldened Lead (Pb) XRF Field Results exceed PCMC *Soils Ordinance* screening level of 200 ppm for occupied properties.

TABLE 2 COMPARATIVE ANALYSIS OF XRF AND LABORATORY ANALYTICAL RESULTS

TABLE 2. XRF and Laboratory Comparative Analysis
Homestake Property
Park City, Utah

SAMPLE	Cd * XRF	Cd lab	Ag XRF	Ag lab	Pb XRF	Pb lab	Se XRF	Se lab	As XRF	As lab	Hg XRF	Hg lab	Cr XRF	Cr lab
HS-1	13	0.319 J	8.55	< 0.479	< LOD **	15.2	< LOD	< 4.79	6.54	5.35 J	< LOD	0.02 J	126.1	13.7
HS-1-2.5	14.47	17.60	< LOD	3.54	**592.28**	**531.00**	< LOD	< 12.7	46.82	25 J	< LOD	1.24	< LOD	20.7
HS-2-1	32.65	5.20	< LOD	1.7	**541.15**	193.00	< LOD	< 3.52	< LOD	11.7	< LOD	1.04	< LOD	12.7
HS-3-2.5	< LOD	11.7	< LOD	4.58	**471.96**	**668.00**	< LOD	< 13.3	21.03	32.30	< LOD	0.73	< LOD	21.1
HS-5	< LOD	0.171 J	< LOD	0.152 J	< LOD	30.2	< LOD	< 3.28	12.84	8.35	< LOD	0.02 J	< LOD	6.92
HS-5-2.5	13.57	39.30	64.52	45.10	**6686.27**	**11000.00**	< LOD	< 10.4	107.5	260.0	9.7	2.7	< LOD	12.2
HS-5-5	< LOD	12.1	< LOD	0.646 J	79.86	81.10	< LOD	< 5.38	24.65	17.80	< LOD	0.48	< LOD	19.8
HS-5-7.5	9.99	17.20	< LOD	0.672 J	64.51	73.70	< LOD	< 5.42	23.07	45.10	< LOD	0.5	< LOD	21.6
HS-6-1	15.05	9.42	8.92	1.64 J	61.93	179.00	< LOD	< 16.4	< LOD	14 J	< LOD	0.03	< LOD	19.3
HS-6-1.5	9.29	21.20	< LOD	12.9	**589.75**	**1730.00**	< LOD	< 10.8	< LOD	79.2	< LOD	0.98	< LOD	21.9
HS-7-5	15.74	1.45 J	9.32	< 1.12	41.31	32.40	< LOD	< 11.2	27.83	30.10	6.46	0.05	< LOD	21.7
HS-11-10	< LOD	0.977 J	< LOD	0.448 J	78.62	107.00	< LOD	< 3.39	24.87	24.10	< LOD	0.04	< LOD	21.4
HS-12-0.5	23.33	0.168 J	24.12	0.285	12.04	7.26	< LOD	< 2.85	7.94	3.89 J	< LOD	0.03	< LOD	8.5
HS-16-1	10.67	3.42	11.11	3.01	**413.5**	**374.0**	< LOD	< 2.94	25.12	14.90	< LOD	0.77	< LOD	10.7
HS-17-1	< LOD	9.28	< LOD	3.6	**440.1**	**572.0**	< LOD	< 15.1	27	61	< LOD	1.51	< LOD	20.8

All Results in milligrams per kilogram (mg/kg); i.e., parts per million-ppm.

Cd*: Cadmium

Ag: Silver

Pb: Lead

Se: Selenium

As: Arsenic

Hg: Mercury

Cr: Chromium

< LOD **: Less than XRF Limit of Detection (all LOD < corollary US EPA Risk-Based Screening Levels [RSLs]).

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration.

Emboldened Lead (Pb) Results exceed PCMC *Soils Ordinance* screening level of 200 ppm for occupied properties.

APPENDIX A

A Copy of Chemtech-Ford Laboratories' Soil Result Report

CHEMTECH-FORD
LABORATORIES

9/6/2022

Work Order: 22H2269
Project: Homestake

Stantec Consulting Inc.
Attn: John Russell
2890 East Cottonwood Parkway, Suite 300
Salt Lake City, UT 84121

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

CHEMTECH-FORD
LABORATORIES

Stantec Consulting Inc.

Project: Homestake
Project Manager: John Russell

Laboratory ID	Sample Name
22H2269-01	HS-1
22H2269-02	HS-1-2.5
22H2269-03	HS-2-1
22H2269-04	HS-3-2.5
22H2269-05	HS-5
22H2269-06	HS-5-2.5
22H2269-07	HS-5-5
22H2269-08	HS-5-7.5
22H2269-09	HS-6-1
22H2269-10	HS-6-1.5
22H2269-11	HS-7-5
22H2269-12	HS-11-10
22H2269-13	HS-12-0.5
22H2269-14	HS-16-1
22H2269-15	HS-17-1

Work Order Report Narrative

Sample Preparation

All samples were prepared within method specified holding times. No preparation issues were noted.

Method Blanks

All blank values were within method acceptance criteria. No blank values exceeded the minimum reporting limit for any analysis in this work order.

Laboratory Control Samples

All laboratory control samples were within method acceptance criteria.

Method Spikes

All method spike recoveries were within method acceptance criteria, except as noted by qualifying flags.

Method Spike Duplicates

All method spike duplicates were within method acceptance criteria, except as noted by qualifying flags.

Corrective Actions

There are no corrective actions associated with this work order.

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Sandy, UT 84070
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www.ChemtechFord.com

Certificate of Analysis

Stantec Consulting Inc.
John Russell
2890 East Cottonwood Parkway, Suite 300
Salt Lake City, UT 84121

PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-1**
Matrix: **Solid**
Lab ID: **22H2269-01**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	99.1	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	5.35	mg/kg dry	9.58	EPA 6010B/C/D	8/23/22	8/25/22	J
Barium, Total	54.5	mg/kg dry	0.479	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	0.319	mg/kg dry	0.479	EPA 6010B/C/D	8/23/22	8/25/22	J
Chromium, Total	13.7	mg/kg dry	0.479	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	15.2	mg/kg dry	4.79	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.02	mg/kg dry	0.03	EPA 7471A	8/26/22	8/29/22	J
Selenium, Total	ND	mg/kg dry	4.79	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	ND	mg/kg dry	0.479	EPA 6010B/C/D	8/23/22	8/25/22	

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Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-1-2.5**

Matrix: **Solid**
Lab ID: **22H2269-02**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	86.4	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	25.0	mg/kg dry	25.4	EPA 6010B/C/D	8/23/22	8/25/22	J
Barium, Total	177	mg/kg dry	1.27	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	17.6	mg/kg dry	1.27	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	20.7	mg/kg dry	1.27	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	531	mg/kg dry	12.7	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	1.24	mg/kg dry	0.02	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	12.7	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	3.54	mg/kg dry	1.27	EPA 6010B/C/D	8/23/22	8/25/22	

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Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-2-1**

Matrix: **Solid**
Lab ID: **22H2269-03**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	92.4	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	11.7	mg/kg dry	7.04	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	87.3	mg/kg dry	0.352	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	5.20	mg/kg dry	0.352	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	12.7	mg/kg dry	0.352	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	193	mg/kg dry	3.52	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	1.04	mg/kg dry	0.02	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	3.52	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	1.70	mg/kg dry	0.352	EPA 6010B/C/D	8/23/22	8/25/22	

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Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-3-2.5**
Matrix: **Solid**
Lab ID: **22H2269-04**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	84.8	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	32.3	mg/kg dry	26.6	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	175	mg/kg dry	1.33	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	11.7	mg/kg dry	1.33	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	21.1	mg/kg dry	1.33	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	668	mg/kg dry	13.3	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.73	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	13.3	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	4.58	mg/kg dry	1.33	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-5**

Matrix: **Solid**

Lab ID: **22H2269-05**

Date Sampled: **8/22/22 0:00**

Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	99.5	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	8.35	mg/kg dry	6.56	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	31.3	mg/kg dry	0.328	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	0.171	mg/kg dry	0.656	EPA 6010B/C/D	8/23/22	8/25/22	J
Chromium, Total	6.92	mg/kg dry	0.328	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	30.2	mg/kg dry	3.28	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.02	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	J
Selenium, Total	ND	mg/kg dry	3.28	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	0.152	mg/kg dry	0.328	EPA 6010B/C/D	8/23/22	8/25/22	J

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-5-2.5**

Matrix: **Solid**
Lab ID: **22H2269-06**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	87.4	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	260	mg/kg dry	20.7	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	209	mg/kg dry	1.04	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	39.3	mg/kg dry	1.04	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	12.2	mg/kg dry	1.04	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	11000	mg/kg dry	10.4	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	2.72	mg/kg dry	0.31	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	10.4	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	45.1	mg/kg dry	1.04	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-5-5**

Matrix: **Solid**
Lab ID: **22H2269-07**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	91.3	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	17.8	mg/kg dry	10.8	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	51.7	mg/kg dry	0.538	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	12.1	mg/kg dry	0.538	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	19.8	mg/kg dry	0.538	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	81.1	mg/kg dry	5.38	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.48	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	5.38	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	0.646	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	J

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Salt Lake City, UT 84121

PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-5-7.5**

Matrix: **Solid**
Lab ID: **22H2269-08**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	90.7	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	45.1	mg/kg dry	10.8	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	54.9	mg/kg dry	0.542	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	17.2	mg/kg dry	0.542	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	21.6	mg/kg dry	0.542	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	73.7	mg/kg dry	5.42	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.50	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	5.42	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	0.672	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	J

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-6-1**

Matrix: **Solid**
Lab ID: **22H2269-09**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	91.1	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	14.0	mg/kg dry	32.7	EPA 6010B/C/D	8/23/22	8/25/22	J
Barium, Total	223	mg/kg dry	1.64	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	9.42	mg/kg dry	1.64	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	19.3	mg/kg dry	1.64	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	179	mg/kg dry	16.4	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.03	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	16.4	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	1.24	mg/kg dry	1.64	EPA 6010B/C/D	8/23/22	8/25/22	J

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-6-1.5**

Matrix: **Solid**
Lab ID: **22H2269-10**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	84.4	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	79.2	mg/kg dry	21.7	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	162	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	21.2	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	21.9	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	1730	mg/kg dry	10.8	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.98	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	10.8	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	12.9	mg/kg dry	1.08	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-7-5**

Matrix: **Solid**
Lab ID: **22H2269-11**
Date Sampled: **8/22/22 0:00**
Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	92.1	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	30.1	mg/kg dry	22.4	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	29.0	mg/kg dry	1.12	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	1.45	mg/kg dry	1.86	EPA 6010B/C/D	8/23/22	8/25/22	J
Chromium, Total	21.7	mg/kg dry	1.12	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	32.4	mg/kg dry	11.2	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.05	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	11.2	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	ND	mg/kg dry	1.12	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-11-10**

Matrix: **Solid**

Lab ID: **22H2269-12**

Date Sampled: **8/22/22 0:00**

Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	94.1	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	24.1	mg/kg dry	6.78	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	35.2	mg/kg dry	0.339	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	0.977	mg/kg dry	1.02	EPA 6010B/C/D	8/23/22	8/25/22	J
Chromium, Total	21.4	mg/kg dry	0.339	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	107	mg/kg dry	3.39	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.04	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	3.39	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	0.448	mg/kg dry	1.02	EPA 6010B/C/D	8/23/22	8/25/22	J

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-12-0.5**

Matrix: **Solid**

Lab ID: **22H2269-13**

Date Sampled: **8/22/22 0:00**

Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	98.2	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	3.89	mg/kg dry	5.69	EPA 6010B/C/D	8/23/22	8/25/22	J
Barium, Total	39.8	mg/kg dry	0.285	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	0.168	mg/kg dry	0.285	EPA 6010B/C/D	8/23/22	8/25/22	J
Chromium, Total	8.50	mg/kg dry	0.285	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	7.26	mg/kg dry	2.85	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.03	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	2.85	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	ND	mg/kg dry	0.285	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-16-1**

Matrix: **Solid**

Lab ID: **22H2269-14**

Date Sampled: **8/22/22 0:00**

Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	92.2	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	14.9	mg/kg dry	5.89	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	81.8	mg/kg dry	0.294	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	3.42	mg/kg dry	0.294	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	10.7	mg/kg dry	0.294	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	374	mg/kg dry	2.94	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	0.77	mg/kg dry	0.03	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	2.94	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	3.01	mg/kg dry	0.294	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Sample ID: **HS-17-1**

Matrix: **Solid**

Lab ID: **22H2269-15**

Date Sampled: **8/22/22 0:00**

Sampled By: **Cameron Cordner**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	86.3	%	0.1	EPA 8000C	8/24/22	8/25/22	
Metals							
Arsenic, Total	60.6	mg/kg dry	30.2	EPA 6010B/C/D	8/23/22	8/25/22	
Barium, Total	171	mg/kg dry	1.51	EPA 6010B/C/D	8/23/22	8/25/22	
Cadmium, Total	9.28	mg/kg dry	1.51	EPA 6010B/C/D	8/23/22	8/25/22	
Chromium, Total	20.8	mg/kg dry	1.51	EPA 6010B/C/D	8/23/22	8/25/22	
Lead, Total	572	mg/kg dry	15.1	EPA 6010B/C/D	8/23/22	8/25/22	
Mercury, Total	1.51	mg/kg dry	0.22	EPA 7471A	8/25/22	8/29/22	
Selenium, Total	ND	mg/kg dry	15.1	EPA 6010B/C/D	8/23/22	8/25/22	
Silver, Total	3.60	mg/kg dry	1.51	EPA 6010B/C/D	8/23/22	8/25/22	

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PO#: **203722755**
Receipt: **8/23/22 15:18 @ 2.7** °C
Date Reported: 9/6/2022
Project Name: **Homestake**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Stantec
ADDRESS: 2890 E Cottonwood Parkway, Suite 300
CITY/STATE/ZIP: Salt Lake City, UT 84121
PHONE #: 801-703-1927
CONTACT: John Russell
EMAIL: john.russelliii@stantec.com
PROJECT: ~~2037~~ ce Monestatice
PO Number: 203722755
INVOICE EMAIL ADDRESS: see contact

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
3

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge Narrative plus Batch QC, your sample selected
QC4: 40% surcharge Add raw data

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Phone: 801-262-7299
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22H2269 (1 of 2)

Glass 202 1104

Sample condition					
	Custody Seal	✓	Correct Containers		
✓	Container Intact	✓	Sufficient Sample Volume	Delivery Method	
✓	COC/Labels Agree		Headspace Present (VOC)		UPS		USPS
✓	Received on Ice		Temperature Blank		FedEx		Chemtech-Ford Courier
		✓	Received within Holding Time	✓	Walk-in		Customer Courier

TESTS REQUESTED

Lab Use Only	CLIENT SAMPLE INFORMATION				8 RCRA Metals
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	
-01	1. HS-1	8/22/22		Soil	X
-02	2. HS-1-2.5	↓		↓	↓
-03	3. HS-2-1				
-04	4. HS-3-2.5				
-05	5. HS-5				
-06	6. HS-5-2.5				
-07	7. HS-5-5				
-08	8. HS-5-7.5				
-09	9. HS-6-1				
-10	10. HS-6-1.5	↓		↓	↓
				Bottle type	
				Lot #	

Sampled by: [print] Cameron Cordner
Sampled by: [signature]

ON ICE NOT ON ICE Temp (C°): 2.7

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	8/23/22 15:18		8/23/22 15:18
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Stantec
ADDRESS: 2890 E Cottonwood Parkway, Suite 300
CITY/STATE/ZIP: Salt Lake City, UT 84121
PHONE #: 801-703-1927
CONTACT: John Russell
EMAIL: john.russell.iii@stantec.com
PROJECT: Homestake
PO Number: 203722755
INVOICE EMAIL ADDRESS: see contact

22H2269 (2 of 2)

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
3

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

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Phone: 801-262-7299
www.chemtechford.com

Sample condition

	Custody Seal		Correct Containers		
	Container Intact		Sufficient Sample Volume	Delivery Method	
	COC/Labels Agree		Headspace Present (VOC)	UPS	USPS
	Received on Ice		Temperature Blank	FedEx	Chemtech-Ford Courier
			Received within Holding Time	Walk-in	Customer Courier

TESTS REQUESTED

Lab Use Only		CLIENT SAMPLE INFORMATION: LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	8 RCRA Metals
-11	-10	1. HS-7-5	8/22/22		Soil	X
-12	-11	2. HS-11-10	↓		↓	↓
13	-12	3. HS-12-0.5				
14	-13	4. HS-16-1				
5	-14	5. HS-17-1				
		6.				
		7.				
		8.				
		9.				
		10.				
					Bottle type	
					Lot #	

Sampled by: [print] Cameron Cordner
Sampled by: [signature]

ON ICE NOT ON ICE Temp (C°): 2.7

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	8/23/22 15:18		8/23/22 15:18
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

EXHIBIT G

MINE HAZARDS REPORT

Blue Ledge Consulting, LLC

2334 Stringham Avenue
Salt Lake City, Utah 84109

June 8, 2022

Mr. Rory Murphy
2590 Sidewinder Drive
Park City, Utah 84060-7437

RE: Mine Hazards on Homestake Affordable Housing Site.

Rory:

Park City's mining history dates from 1869 to 1982. During that period, prospectors and miners roamed and prospected the mountains and hills in and around Park City in hopes of finding the riches that existed in the underground. As a result, hundreds of mining claims were staked (property boundaries laid out on the land and surveyed) establishing ownership. Each mining claim was required to have a discovery point (hole in the ground that would lead to minerals) or a tunnel, or shaft that would provide access to the underground. Each of these features had the potential to present a mine hazard to the public or surface property.

In 2011, Park City, under title 11 Buildings and Building Regulations established Chapter 20, titled Physical Mine Hazard Mitigation. This Chapter provides a definition of a mine hazard. Along with a requirement to allow Physical Mine Hazards, a requirement that the owner of the lands identify and evaluate each mine feature found, a reporting requirement along with a requirement to mitigate. Other items such as inspection and update requirements are also included in the Chapter.

Upon examination of the Homestake Parcel there are no features which meet the definition of a mine hazard as per Section 11-20-2. However, the abundance of mill tailings in the Prospector

subdivision do warrant further study of the Homestake parcel and mitigation if proven to be required. Lead and other metals can prove to be hazardous if exposures occur under the right circumstances.

Based on the Park City Ordinance 11-20-2, a visual inspection and what is contained herein there does not appear to be any mine hazards on this parcel.

If you have any questions or would like more information, please contact me.

I have included a copy of Section 11-20-2 for you review.

Sincerely,

Kerry C. Gee
Blue Ledge Consulting

Attachment

EXHIBIT H

ABOVE-GROUND HISTORIC STRUCTURES REVIEW

OGDEN, UTAH OFFICE
3670 Quincy Ave., Ste. 203
Ogden, UT 84403
(801) 394-0013

July 5, 2022
U-0718

Jack Waldher
J Fisher Companies
1216 W Legacy Crossing Blvd, Suite 300
Centerville, UT 84014

RE: Above-Ground Historic Structures Review for the Property at 1875 Homestake Road in Park City, Summit County, Utah

Dear Mr. Waldher,

Commonwealth Heritage Group, Inc. (Commonwealth) completed a preliminary above-ground resources assessment for J Fisher Companies (Client) for the 1875 Homestake Road Property (Project) in Section 9 of T2S R4E, Summit County, Utah (Figure 1). The Client provided mapping and a description of the Project to Commonwealth in June of 2022.

This inventory was done to meet Park City's municipal code 15-6.1-11 (O) regarding Affordable Master Planned Developments. The code indicates that "Applicants shall submit a map and inventory of Historic Structures and Sites on the Property and a Historic Structures Report prepared by a Qualified Historic Preservation Professional."

This letter report provides the results of the background research as well as an assessment of the potential for the project area to contain National Register of Historic Places (NRHP) eligible or listed above-ground *historic properties* that are protected under the National Historic Preservation Act. For the background research, Commonwealth conducted a literature review at the Utah State Historic Preservation Office (SHPO), compiling information derived from the National and State Registers of Historic Places, historic aerials, and maps to determine if any architectural/historical resources are known to be in the project area.

Above-Ground Resources

For the 1875 Homestake Road Project, the Above-Ground area of potential effect (APE), which accounts for indirect effects, is considered to include those cultural resources (buildings, structures, objects, or sites) that are in the Project Area and a one-parcel/property-deep around it. Commonwealth conducted a literature review for this area to identify any previously recorded above-ground resources (Figure 2). Review of SHPO survey files revealed that there are no

previously recorded above-ground resources in the Above-Ground Study Area. The Park City Historic District was noted; however, the district is located over 0.5 miles away from the current project.

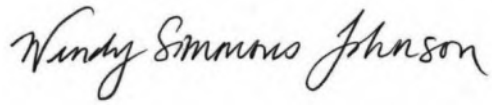
Through field survey, Commonwealth Architectural Historian Katie Beck, identified no properties that are over 50 years old in the Above-Ground APE. Historic aerial imagery indicates that all of the above-ground resources in the Above-Ground APE were constructed after 1975. Therefore, the Project will have no effect on historic above-ground properties.

Recommendations

Based on the literature review, there are no previously recorded above-ground resources in the Above-Ground APE or in the Above-Ground Study Area. Commonwealth identified no above-ground resources over 50 years of age as a result of survey in the Above-Ground APE as well. No effects on historic above-ground properties are anticipated as a result of the proposed Project activities.

Commonwealth is pleased to have been able to assist with the above-ground resources review for the 1875 Homestake Road Project. Please do not hesitate to call me, if you have any additional questions or concerns related to this letter or require assistance with future cultural resources projects.

Sincerely,



Wendy Simmons Johnson
Regional Director
wjohnson@chg-inc.com
P. 801-394-0013

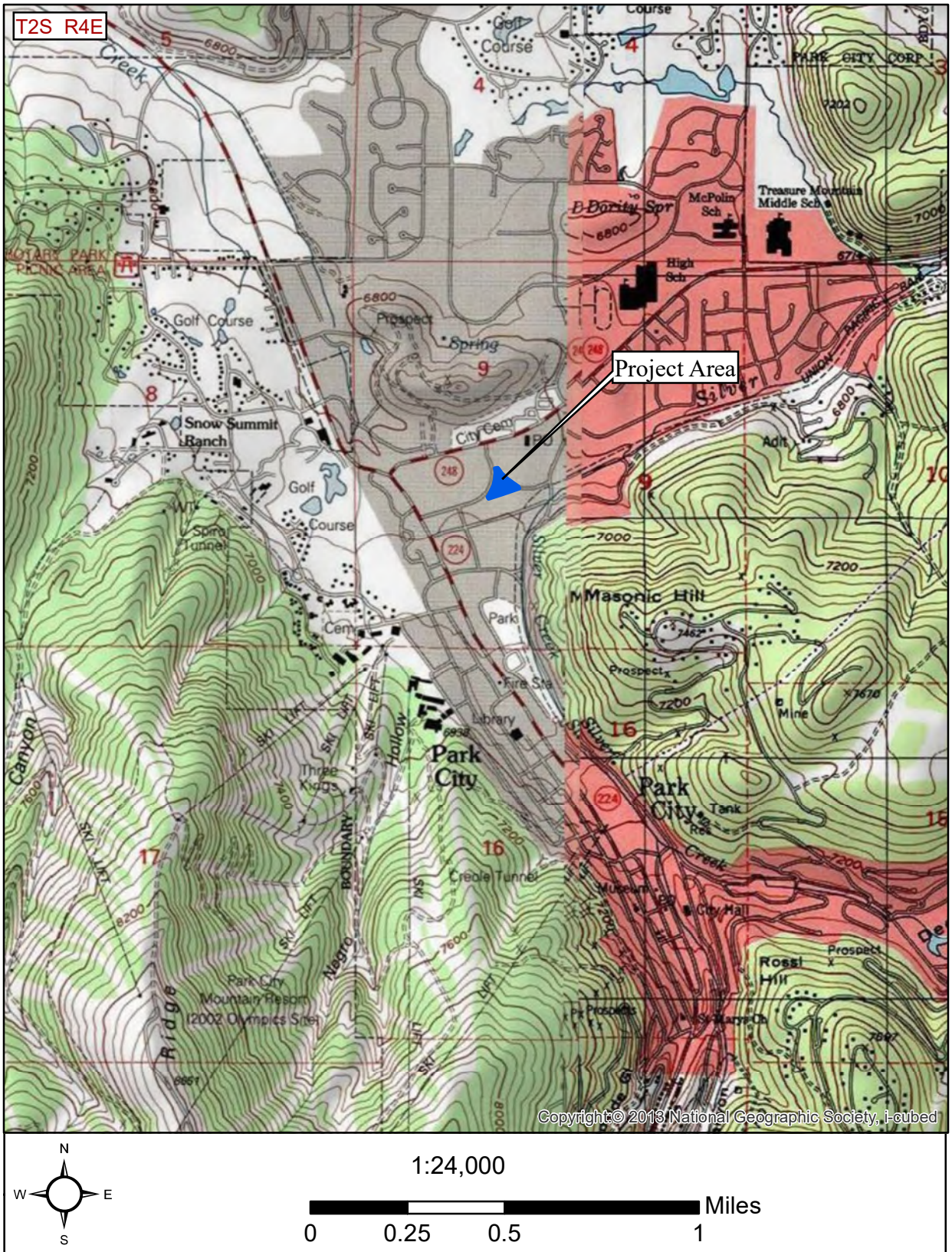


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Figure 1. Location of the 1875 Homestake Rd. Project Area in Park City, Utah. Taken from the USGS 7.5' Quadrangles Park City East and Park City West, Utah (1998).

Figure 2. Aerial view of the 1875 Homestake Rd. Project Area in Park City, Utah.

EXHIBIT I

EXISTING CONDITIONS SURVEY

ALTA/NSPS LAND TITLE SURVEY

A PORTION OF THE SOUTHWEST OF SECTION 9,
TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN,
PARK CITY, SUMMIT COUNTY, UTAH

SURVEY CERTIFICATE

COMMITMENT NO.: 26539, COMMITMENT DATE: MAY 18, 2016 8:00AM

THE FOLLOWING PARTIES AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS:

1251 KEARNS, L.L.C., A UTAH LIMITED LIABILITY COMPANY.
PARK CITY MUNICIPAL CORPORATION.
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE 1, 2, 3, 4, 5, 7, 8, 11a, 11b, 13, 16, AND 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 18, 2021.

DATE OF PLAT OR MAP: JUNE 13, 2022

NATHAN CHRISTENSEN
P.L.S. 10175991

PROFESSIONAL LAND SURVEYOR
NATHAN CHRISTENSEN
No. 10175991
STATE OF UTAH

LEGAL DESCRIPTION: (COMMITMENT NO.: 26539)

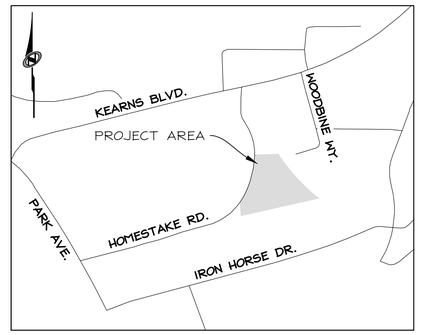
PARCEL 1, THE YARD SUBDIVISION, A PARCEL COMBINATION PLAT, ACCORDING TO THE OFFICIAL PLAT THEREOF ON FILE AND OF RECORD IN THE SUMMIT COUNTY RECORDER'S OFFICE.

GENERAL NOTES:

1. BURIED UTILITIES AND/OR PIPE LINES ARE SHOWN PER VISIBLE SURFACE EVIDENCE. IF ANY UNDERGROUND UTILITY LOCATIONS ARE REQUIRED THE WILL HAVE TO BE VERIFIED BY FIELD POT HOLING THE UTILITIES. TALISMAN AND THE SURVEYOR OF RECORD SHALL NOT BE LIABLE FOR THE LOCATION OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES. (11)
2. FIELD WORK FOR THIS SURVEY WAS COMPLETED NOVEMBER 18, 2021, AND MAY 27, 2022
3. PROPERTY ADDRESS: 1875 HOMESTAKE RD, PARK CITY, UT 84060. PARCEL NO. YARD-B-1AM-X
4. THE FLOOD ZONE CLASSIFICATION FOR THE SUBJECT PROPERTY IS ZONE "X". ZONE "X" ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. FEMA FIRM MAP NUMBER: 49043C0917D, MAP REVISED 3/23/2021, PANEL 917 OF 1250.
5. THIS PARKING LOT CONTAINS 56 PARKING SPACES, 42 PRIVATE COVERED PARKING SPACES (3 6-STALL STRUCTURES AND 6 4-STALL STRUCTURES), AND 2 HANDICAP SPACES. THIS PARKING COUNT IS FOR THE SUBJECT PROPERTY ONLY, AND DOES NOT REFLECT THE TOTAL COUNT IN THE PROVIDED ZONING REPORT.
6. THERE IS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTION FIELDWORK.
7. NO PROPOSED STREET RIGHT OF WAY LINE CHANGES WERE MADE AWARE TO TALISMAN AT THE TIME OF FIELDWORK.
8. NO PLOTTABLE OFFSITE EASEMENTS WERE DISCLOSED IN ANY DOCUMENTS PROVIDED OR OBTAINED BY THE SURVEYOR.
9. NO EVIDENCE OF ANY CEMETERY, BURIAL GROUNDS OR INDIVIDUAL GRAVE SITES.
10. THE PROPERTY HAS DIRECT ACCESS HOMESTAKE ROAD, A 50 FOOT PUBLIC RIGHT-OF-WAY.
11. NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

SURVEY NOTES:

1. THE SUBJECT PARCEL HAS BEEN REPLATTED BY THE YARD SUBDIVISION FIRST AMENDED AND RENAMED AS LOT "B", AS RECORDED IN TO THE OFFICE OF THE SUMMIT COUNTY RECORDED, FILE NUMBER S0009100, 7/19/2017.
2. THE CALCULATED SECTION LINE BETWEEN THE WEST QUARTER CORNER AND THE CENTER OF SECTION, FOR SECTION 9 TOWNSHIP 2 SOUTH, RANGE 4 EAST, WAS CALCULATED USING THE TIE SHEET OF THE WEST QUARTER CORNER, FILE NO. S0008740, AND THE THE RECORD OF SURVEY FOR PARK CITY RESORT, FILE NO. S0008738, PREPARED BY DOMINION ENGINEERING AND AS RECORDED IN THE OFFICE OF THE SUMMIT COUNTY RECORDER.



VICINITY MAP

N.T.S.

SCHEDULE B - SECTION II, EXCEPTIONS COMMITMENT NO.: 26539

EXCEPTIONS 1-8, ARE NOT SURVEY RELATED ITEMS.

9. A TERM LOAN DEED OF TRUST,ASSIGNMENT OF RENTS AND LEASES, SECURITY AGREEMENT AND FIXTURE FILING SECURING AN INDEBTEDNESS OF THE AMOUNT STATED THEREIN AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS THEREOF:
DATED: MAY 14, 2007
TRUSTOR: 1251 KEARNS BOULEVARD, LLC, A UTAH LIMITED LIABILITY COMPANY
AMOUNT: $ 4,410,000.00
U.S. TRUSTEE: US BANK NATIONAL ASSOCIATION
BENEFICIARY: US BANK NATIONAL ASSOCIATION
RECORDED: MAY 15, 2007
ENTRY NO.: 813511
BOOK: 1865
PAGE: 1844

AN ASSIGNMENT OF LESSOR'S INTEREST IN LEASES DATED MAY 14,2007 , BY 1251 KEARNS BOULEVARD, LLC, A UTAH LIMITED LIABILITY COMPANY ("OWNER"), IN FAVOR OF U.S. BANK NATIONAL ASSOCIATION ("LENDER"), RECORDED MAY 15, 2007 AS ENTRY NO. 813512, IN BOOK 1865, AT PAGE 1870, SUMMIT COUNTY RECORDER'S OFFICE.
(BLANKET IN NATURE)

10. RIGHTS OF PARTIES / TENANTS IN POSSESSION.
(NOT A SURVEY MATTER)

11. ALL MATTERS CONTAINED IN THAT CERTAIN STOCK BUILDING SUPPLY, ALTA/ACSM LAND TITLE SURVEY BY GREAT BASIN ENGINEERING - SOUTH, FILED FEBRUARY 8, 2005, FILE NO. 5-5713 IN THE SUMMIT COUNTY RECORDER'S OFFICE, INCLUDING BUT NOT LIMITED TO ANY ADVERSE CLAIM AS TO LAND LYING BETWEEN THE BOUNDARY LINE AND FENCELINE ALONG THE SOUTH AND WEST BOUNDARIES.
(SHOWN HEREON)

12. GRANT OF EASEMENT IN FAVOR OF THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH COMPANY A COLORADO CORPORATION THE RIGHT, PRIVILEGE AND AUTHORITY TO CONSTRUCT, OPERATE AND MAINTAIN ITS LINES OF TELEPHONE AND TELEGRAPH, INCLUDING THE NECESSARY, POLES, CABLES, WIRES AND FIXTURES UPON, OVER AND ACROSS THE SUBJECT PROPERTY. SAID EASEMENT RECORDED DECEMBER 15,1972 AS ENTRY NO. 118268, IN BOOK M43, AT PAGE 705, SUMMIT COUNTY RECORDER'S OFFICE.
(DOES NOT AFFECT SUBJECT PROPERTY- AFFECTS PARCEL: YARD-A-1AM)

13. GRANT OF EASEMENT IN FAVOR OF THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH COMPANY A COLORADO CORPORATION THE RIGHT, PRIVILEGE AND AUTHORITY TO CONSTRUCT, OPERATE AND MAINTAIN ITS LINES OF TELEPHONE AND TELEGRAPH, INCLUDING THE NECESSARY, POLES, CABLES, WIRES AND FIXTURES UPON, OVER AND ACROSS THE SUBJECT PROPERTY. SAID EASEMENT RECORDED DECEMBER 10, 1973 AS ENTRY NO. 121750, IN BOOK M52, AT PAGE 593, SUMMIT COUNTY RECORDER'S OFFICE.
(DOES NOT AFFECT SUBJECT PROPERTY- AFFECTS PARCEL: YARD-A-1AM, SA-224-X, S-22)

14. GRANT OF EASEMENT IN FAVOR OF UTAH POWER AND LIGHT COMPANY A PERPETUAL EASEMENT AND RIGHT OF WAY FOR THE RIGHT OF WAY, ERECTION, OPERATION AND CONTINUED MAINTENANCE, REPAIR, INSPECTION, RELOCATION AND REPLACEMENT OF THE ELECTRIC TRANSMISSION AND DISTRIBUTION CIRCUITS RECORDED AUGUST 1, 1989, AS ENTRY NO.311159, IN BOOK 530, AT PAGE 41, SUMMIT COUNTY RECORDER'S OFFICE.
(DOES NOT AFFECT SUBJECT PROPERTY - SHOWN HEREON, AFFECTS PARCEL: YARD-A-1AM)

15. GRANT OF EASEMENT IN FAVOR OF UTAH POWER AND LIGHT COMPANY A PERPETUAL EASEMENT AND RIGHT OF WAY FOR THE RIGHT OF WAY, ERECTION, OPERATION AND CONTINUED MAINTENANCE, REPAIR, INSPECTION, RELOCATION AND REPLACEMENT OF THE ELECTRIC TRANSMISSION AND DISTRIBUTION CIRCUITS RECORDED DECEMBER 31 , 1985, AS ENTRY NO. 244342, IN BOOK 368, AT PAGE 654, SUMMIT COUNTY RECORDER'S OFFICE.
(DOES NOT AFFECT SUBJECT PROPERTY)

16. CONDITIONS, RESTRICTIONS, EASEMENTS, AND NOTES AS SHOWN ON THE RECORDED PLAT.

17. RESERVATIONS CONTAINED IN THOSE CERTAIN PATENTS EXECUTED BY THE UNITED STATES OF AMERICA AND RECORDED DECEMBER 10, 1880, IN BOOK M OLD, AT PAGE 306 AND RECORDED NOVEMBER 29, 1881, IN BOOK C OF MISC, AT PAGE 63, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

"SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING OR OTHER PURPOSES, AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF COURTS, AND ALSO SUBJECT TO THE RIGHT OF PROPRIETOR OF A VEIN OR LODE TO EXTRACT AND REMOVE HIS ORE THEREFROM, SHOULD-THE SAME BE FOUND TO PENETRATE OR INTERSECT THE PREMISES HEREBY GRANTED, AS PROVIDED BY LAW."
(BLANKET IN NATURE)

SCHEDULE B - SECTION II, EXCEPTIONS COMMITMENT NO.: 26539

18. RESERVATION OF MINERAL RIGHTS AS RESERVED IN THAT CERTAIN QUIT CLAIM DEED EXECUTED BY ONTARIO SILVER MINING COMPANY, A CORPORATION OF THE STATE OF DELAWARE, AND RECORDED MAY 15, 1931, AS ENTRY NO. 146316, IN BOOK F OF QUIT CLAIM DEEDS, AT PAGE 261, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

EXCEPTING AND RESERVING, HOWEVER, TO SAID GRANTOR, ITS SUCCESSORS AND ASSIGNS, ALL MINERALS UNDERLYING THE SURFACE OF SAID DESCRIBED TRACT OF LAND, TOGETHER WITH THE RIGHT TO DEVELOP, MINE AND REMOVE THE SAME; PROVIDED, HOWEVER THAT THE DEVELOPMENT, MINING AND REMOVAL OF SAID MINERALS SHALL BE CARRIED ON IN SUCH A WAY AS NOT TO DAMAGE OR INJURE THE SURFACE OF SAID LAND OR TO INTERFERE WITH OR DAMAGE IN ANY MANNER THE TRACKAGE AND/OR STRUCTURES OF THE GRANTEE, ITS SUCCESSORS OR ASSIGNS, NOW OR HEREAFTER LOCATED UPON SAID LAND, OR TO INTERFERE WITH THE SAFE OPERATION OF THE ENGINES, TRAINS AND CARS THEREOVER, NOR TO INTERFERE I NAY WAY WITH THE USE AND ENJOYMENT OF SAID LAND FOR RAILROAD PURPOSES BY THE GRANTEE, ITS SUCCESSORS AND ASSIGNS.
(BLANKET IN NATURE)

19. RESERVATIONS CONTAINED IN THAT CERTAIN QUIT CLAIM DEED EXECUTED BY UNION PACIFIC LAND RESOURCES AND RECORDED DECEMBER 18, 1989, AS ENTRY NO. 317177,IN BOOK 546, AT PAGE 462, SUMMIT COUNTY RECORDER'S OFFICE, SET FORTH AS FOLLOWS:

"EXCEPTING FROM THIS QUIT CLAIM AND RESERVING UNTO GRANTOR, ITS SUCCESSORS AND ASSIGNS, FOREVER, ALL MINERALS AND ALL MINERAL RIGHTS OF EVERY KIND AND CHARACTER NOW KNOWN TO EXIST OR HEREAFTER DISCOVERED, INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, OIL AND GAS AND RIGHTS THERETO, TOGETHER WITH THE SOLE, EXCLUSIVE AND PERPETUAL RIGHT TO EXPLORE FOR, REMOVE AND DISPOSE OF, SAID MINERALS BY ANY MEANS OR METHODS SUITABLE TO GRANTOR, ITS SUCCESSORS AND ASSIGNS, BUT WITHOUT ENTERING UPON OR USING THE SURFACE OF THE LANDS HEREBY QUIT CLAIMED, AND IN SUCH MANNER AS NOT TO DAMAGE THE SURFACE OF SAID LANDS OR TO INTERFERE WITH THE USE THEREOF BY GRANTEE, GRANTEE'S SUCCESSORS AND ASSIGNS."
(BLANKET IN NATURE)

20. RESERVATIONS CONTAINED IN THAT CERTAIN SPECIAL WARRANTY DEED EXECUTED BY UNITED PARK CITY MINES COMPANY AND RECORDED AUGUST 8,1972, AS ENTRY NO. 116520, IN BOOK M40, AT PAGE 52 AND RECORDED FEBRUARY 5, 1973, AS ENTRY NO. 118753, IN BOOK M45, AT PAGE 179, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

"EXCEPTING AND RESERVING UNTO GRANTOR, ITS SUCCESSORS AND ASSIGNS, ALL ORES AND MINERALS SITUATED IN, UPON OR UNDER THE ABOVE DESCRIBED TRACT OF LAND, TOGETHER WITH ALL RIGHTS IN CONNECTION WITH OR RELATIVE TO THE MINING, REMOVAL OR SALE OF THE SAME (BUT NOT INCLUDING THE RIGHT TO ENTER UPON THE SURFACE OF THE PREMISES).
(BLANKET IN NATURE)

21. RESERVATIONS CONTAINED IN THAT CERTAIN SPECIAL WARRANTY DEED EXECUTED BY UNITED PAR CITY MINES COMPANY AND RECORDED AUGUST 1972, AS ENTRY NO. 116525, IN BOOK M40, AT PAGE 68, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

"EXCEPTING AND RESERVING UNTO GRANTOR, ITS SUCCESSORS AND ASSIGNS, ALL ORES AND MINERALS SITUATED IN, UPON OR UNDER THE ABOVE DESCRIBED TRACT OF LAND, TOGETHER WITH ALL RIGHTS IN CONNECTION WITH OR RELATIVE TO THE MINING, REMOVAL OR SALE OF THE SAME (BUT NOT INCLUDING THE RIGHT TO ENTER UPON THE SURFACE OF THE PREMISES).
(BLANKET IN NATURE)

RESERVATIONS CONTAINED IN THAT CERTAIN SPECIAL WARRANTY DEED EXECUTED BY UNITED PARK CITY MINES COMPANY AND RECORDED MAY 25, 1977 , AS ENTRY NO. 138053, IN BOOK M94, AT PAGE 433, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

"EXCEPTING AND RESERVING UNTO GRANTOR, ITS SUCCESSORS AND ASSIGNS, ALL ORES AND MINERALS SITUATED IN, UPON OR UNDER THE ABOVE DESCRIBED TRACT OF LAND, TOGETHER WITH ALL RIGHTS IN CONNECTION WITH OR RELATIVE TO THE MINING, REMOVAL OR SALE OF THE SAME (BUT NOT INCLUDING THE RIGHT TO ENTER UPON THE SURFACE OF THE PREMISES).
(BLANKET IN NATURE)

23. RESERVATIONS CONTAINED IN THAT CERTAIN SPECIAL WARRANTY DEED EXECUTED BY THE UNION PACIFIC LAND RESOURCES CORPORATION AND RECORDED DECEMBER 18, 1989, AS ENTRY NO. 317181,IN BOOK 546, AT PAGE 472, SUMMIT COUNTY RECORDER'S OFFICE, SAID RESERVATIONS BEING SET FORTH AS FOLLOWS:

"EXCEPTING FROM THIS GRANT AND RESERVING UNTO THE GRANTOR, ITS SUCCESSORS AND ASSIGNS FOREVER, ALL MINERALS AND ALL MINERAL RIGHTS OF EVERY KIND AND CHARACTER NOW KNOWN TO EXIST OR HEREAFTER DISCOVERED, INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, OIL AND GAS AND RIGHTS THERETO, TOGETHER WITH THE SOLE, EXCLUSIVE AND PERPETUAL RIGHT TO EXPLORE FOR, REMOVE, AND DISPOSE OF SAID MINERALS BY ANY MEANS OR METHODS SUITABLE TO THE GRANTOR, ITS SUCCESSORS AND ASSIGNS, BUT WITHOUT ENTERING UPON OR USING THE SURFACE OF THE LANDS HEREBY CONVEYED, AND IN SUCH MANNER AS NOT TO DAMAGE THE SURFACE OF SAID LANDS OR TO INTERFERE WITH THE USE THEREOF BY GRANTEES, THEIR SUCCESSORS OR ASSIGNS."
(BLANKET IN NATURE)

24. SAID PROPERTY IS LOCATED WITHIN THE BOUNDARIES OF THE SNYDERVILLE BASIN WATER RECLAMATION DISTRICT AND IS SUBJECT TO CHARGES AND ASSESSMENTS LEVIED THEREUNDER.
(BLANKET IN NATURE)

25. SAID PROPERTY IS LOCATED WITHIN THE BOUNDARIES OF PROSPECTOR LANDSCAPING AND MAINTENANCE OF SOIL COVER DISTRICT, AS RECORDED AUGUST 1 , 1989, AS ENTRY NO. 311124, IN BOOK 529, AT PAGE 755, SUMMIT COUNTY RECORDER'S OFFICE.
(BLANKET IN NATURE)

ORDINANCE NO. 94-6 AMENDING TITLE 11, CHAPTER 14, SECTION 1, OF THE MUNICIPAL CODE OF PARK CITY TO EXPAND THE AREA SUBJECT TO PROSPECTOR MINIMUM LANDSCAPING AND TOP SOIL REQUIREMENTS. SAID ORDINANCE RECORDED AUGUST 10, 1994 AS ENTRY NO. 412146, IN BOOK 828, AT PAGE 394, SUMMIT COUNTY RECORDER'S OFFICE.
(BLANKET IN NATURE)

26. SAID PROPERTY IS LOCATED WITHIN THE BOUNDARIES OF PARK CITY, SUMMIT COUNTY LEVY, WEBER BASIN WATER CONSERVANCY DISTRICT, SNYDERVILLE BASIN WATER RECLAMATION DISTRICT, PARK CITY FIRE PROTECTION DISTRICT, PARK CITY SCHOOL DISTRICT, PARK CITY WATER SERVICE DISTRICT AND IS SUBJECT TO CHARGES AND ASSESSMENTS LEVIED THEREUNDER.

NOTE: THE FOLLOWNG NAMES HAVE BEEN CHECKED FOR JUDGMENTS:
1251 KEARNS, L.L.C.
PARK CITY MUNICIPAL CORPORATION
NO UNSATISFIED JUDGMENTS HAVE BEEN FILED IN THE PAST EIGHT YEARS.
(BLANKET IN NATURE)

TALISMAN
CIVIL CONSULTANTS
1588 SOUTH MAIN STREET
SUITE 200
SALT LAKE CITY, UT 84115
801.743.1300

REVISIONS:

NO.	BY	DATE	
1	TD	2022-02-08	EXCEPTION 11 UPDATE
2	TD	2022-05-31	ADDED ADJACENT BUILDING AND HEIGHTS
3	TD	2022-06-13	ADDED TREES WITH SIZES (DIAMETER)

ALTA/NSPS SURVEY
LOT "B"-THE YARD SUBDIVISION AMENDED
PARK CITY, SUMMIT CO., UTAH

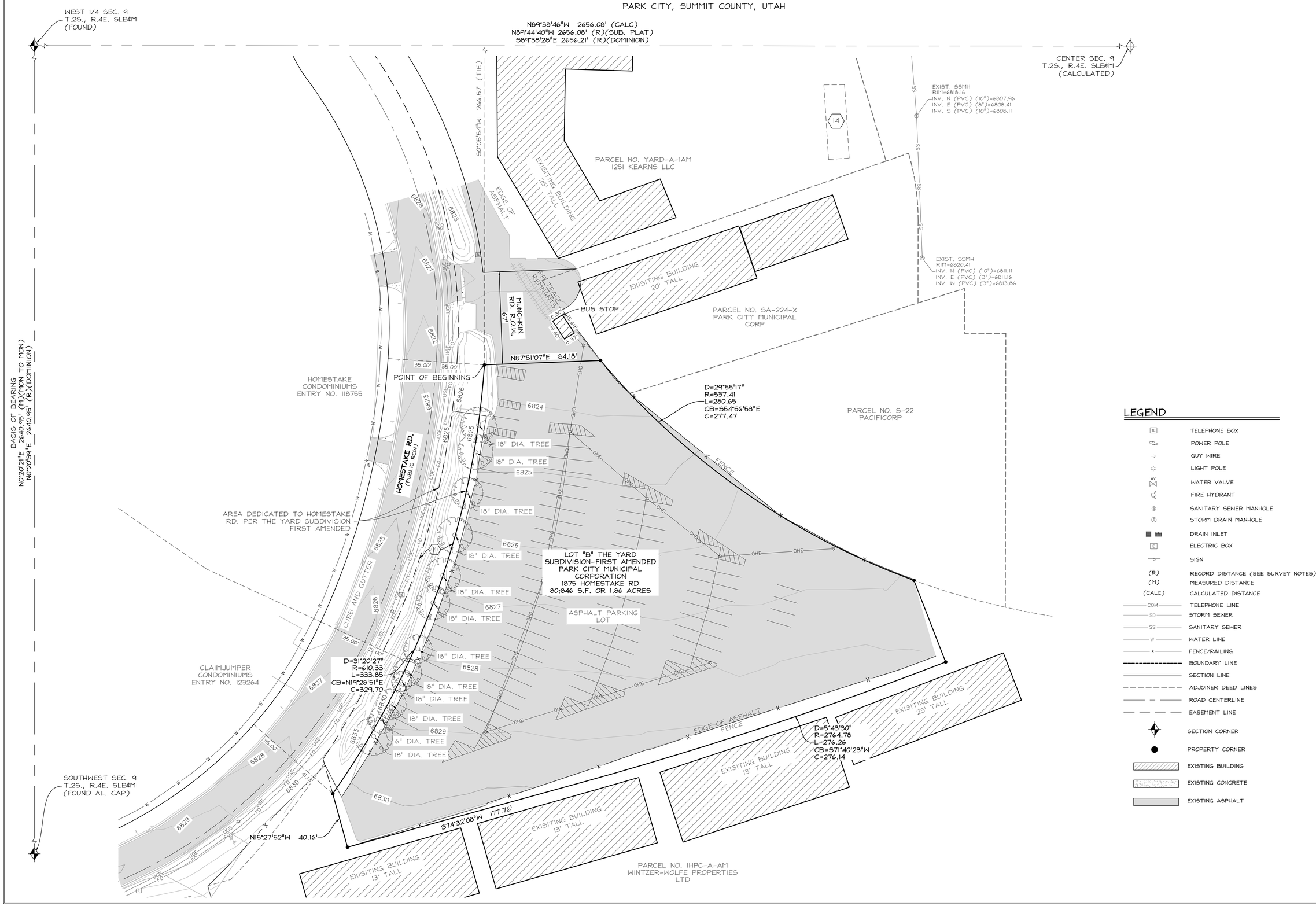
DATE SUBMITTED: 2022-06-13

TCC JOB NUMBER: 21-130

SHEET NUMBER
1
1 OF 2

ALTA/NSPS LAND TITLE SURVEY

A PORTION OF THE SOUTHWEST OF SECTION 9,
TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN,
PARK CITY, SUMMIT COUNTY, UTAH



LEGEND

- TELEPHONE BOX
- POWER POLE
- GUY WIRE
- LIGHT POLE
- WATER VALVE
- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- DRAIN INLET
- ELECTRIC BOX
- SIGN
- (R) RECORD DISTANCE (SEE SURVEY NOTES)
- (M) MEASURED DISTANCE
- (CALC) CALCULATED DISTANCE
- COM TELEPHONE LINE
- SD STORM SEWER
- SS SANITARY SEWER
- W WATER LINE
- FENCE/RAILING
- BOUNDARY LINE
- SECTION LINE
- ADJOINER DEED LINES
- ROAD CENTERLINE
- EASEMENT LINE
- SECTION CORNER
- PROPERTY CORNER
- EXISTING BUILDING
- EXISTING CONCRETE
- EXISTING ASPHALT

SCALE
HORIZONTAL: 1" = 30'
0 7.5' 15' 30' 45'

TALISMAN
CIVIL CONSULTANTS
1588 SOUTH MAIN STREET
SUITE 200
SALT LAKE CITY, UT 84115
801.743.1300

NO.	BY	DATE	REVISIONS:
1	TD	2022-02-08	EXCEPTION 11 UPDATE
2	TD	2022-05-31	ADDED ADJACENT BUILDING AND HEIGHTS
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ALTA/NSPS SURVEY
LOT "B"-THE YARD SUBDIVISION AMENDED
PARK CITY, SUMMIT CO., UTAH

DATE SUBMITTED: 2022-06-13

TCC JOB NUMBER: 21-130

SHEET NUMBER
2
2 OF 2

EXHIBIT J

UPDATED ARCHITECTURAL EXHIBITS, DATED OCTOBER 14, 2022

JFRM

HOMESTAKE MPD

AFFORDABLE HOUSING

1875 Homestake Road
Park City, Utah

MPD/CUP SUBMITTAL - UPDATED ARCHITECTURAL EXHIBITS

10.14.2022

PROJECT CONTACT INFORMATION

OWNER

Rory Murphy/ J Fisher Companies
2590 Sidewinder Drive
Park City, UT 84060
telephone: 435.640.5068
Contact: Rory Murphy
email: paladinparkcity@aol.com

ARCHITECT

WOW atelier, LLC.
73 East 400 South
Salt Lake City, Utah 84111
telephone: 801.712.4078
Contact: Chimso Onwuegbu, AIA, LEEDap
email: chimso@be-wow.com

CIVIL ENGINEER

Talisman Civil Consultants
1588 S Main St. Ste. 200,
Salt Lake City, UT, 84115
telephone: 385.301.8104
Contact: Dan Bourgue
email: DanB@talismancivil.com

STRUCTURAL ENGINEER

MECHANICAL ENGINEER

PVE Consulting Engineers
1040 North 2200 West, Suite 100
Salt Lake City, Utah 84116
Telephone (801) 359-3158
Contact: Xabier Ovalle
email: xovalle@pve-ut.com

ELECTRICAL ENGINEER

PVE Consulting Engineers
1040 North 2200 West, Suite 100
Salt Lake City, Utah 84116
Telephone (801) 359-3158
Contact: Terry Gorseth
email: tgorseth@pve-ut.com

LANDSCAPE ARCHITECT

STB Design
1375 E Perrys Hollow Road
Salt Lake City, Utah 84103
Telephone 801-554-6146
Contact: Scott Blake
email: scott@stbdesignllc.com

INTERIOR DESIGNER

ENERGY CONSULTANT

CONTRACTOR

Strategic Builders
1216 W. Legacy Crossing Blvd,
Suite 300 Centerville, UT 84014
Telephone: 801.510.0553
Contact: Alex Shirley
email: Alex@strategicbuilders.com

GENERAL DRAWINGS
- GI-000 COVER SHEET
- GI-001 GENERAL NOTES AND CODE ANALYSIS

GENERAL EXHIBITS
- EXHIBIT A SITE AERIAL MAP
- EXHIBIT B AREA PLANS
- EXHIBIT B.1 AREA PLANS
- EXHIBIT D ALLOWABLE AREA - HEIGHT ANALYSIS
- EXHIBIT E OPEN SPACE DIAGRAM
- EXHIBIT G PEDESTRIAN CIRCULATION PLAN
- EXHIBIT H CROSS CANYON VIEWS
- EXHIBIT J SITE APPROACH VIEWS
- EXHIBIT K FACADE VARIATION EXHIBIT
- EXHIBIT K.1 FACADE VARIATION EXHIBIT

CIVIL DRAWINGS
- 1 ALTA/NSPS LAND TITLE SURVEY
- 2 ALTA/NSPS LAND TITLE SURVEY
- C200 SITE PLAN
- C201 AERIAL SITE PLAN
- C300 GRADING PLAN
- C400 UTILITY PLAN

LANDSCAPE DRAWING
- L101 LANDSCAPE PLAN

ARCHITECTURAL SITE DRAWINGS
- AS-101 ARCHITECTURAL SITE PLAN

ARCHITECTURAL DRAWINGS
- AE-101 PARKING LEVEL PLAN
- AE-102 GROUND LEVEL FLOOR PLAN
- AE-103 SECOND LEVEL FLOOR PLAN
- AE-104 THIRD LEVEL FLOOR PLAN
- AE-105 FOURTH LEVEL FLOOR PLAN
- AE-109 ARCHITECTURAL ROOF PLAN
- AE-201 ELEVATIONS
- AE-202 ELEVATIONS
- AE-301 BUILDING SECTIONS

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plot date: 10/14/2022 10:29:14 AM

WOW

CIVIL: TALISMAN
STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210036
ISSUE DATE: 10.14.2022
ISSUE: MPD-CUP APPLICATION
REVISIONS

COVER SHEET

GI-000

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GENERAL PROJECT NOTES

1. THIS DESIGN IS AN ORIGINAL UNPUBLISHED WORK AND MAY NOT BE DUPLICATED, PUBLISHED AND/OR USED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/ENGINEER.

2. THESE SHEETS - LISTED BY DRAWING INDEX , ALL ACCOMPANYING SPECIFICATIONS FOR MATERIALS, WORKMANSHIP QUALITY, AND NOTES HAVE BEEN PREPARED SOLELY FOR THE CONSTRUCTION AND FINISH OF PROJECT IMPROVEMENTS, COMPLETE AND READY FOR OCCUPANCY AND USE.

3. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH PERTINENT JURISDICTIONAL CODES, RESTRICTIONS, COVENANTS, AND/OR ORDINANCES. ANY CONFLICT BETWEEN DESIGN AND REQUIREMENT SHALL BE REPORTED TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING. FAILURE TO DO SO WAIVES THE DESIGN INTENT.

4. ANY AND ALL PROPOSED CHANGE, MODIFICATIONS AND/OR SUBSTITUTION SHALL BE REPORTED TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING. ANY DEVIATION FROM THE CONTRACT DOCUMENTS, WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF THE ARCHITECT/ENGINEER, WAIVES DESIGN INTENT.

5. IN THE EVENT OF CONFLICT BETWEEN THE DESIGN DOCUMENTS AND/OR JURISDICTIONAL REQUIREMENTS, THE MORE RESTRICTIVE FROM THE STANDPOINT OF SAFETY AND PHYSICAL SECURITY SHALL APPLY, BEFORE PROCEEDING WITH WORK NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT.

6. ANY INSTALLATION OR WORK NECESSARY TO THE FUNCTIONING, SAFETY AND/OR PHYSICAL SECURITY OF DESIGN THAT IS TO BE ENCAPSULATED OR OTHERWISE PERMANENTLY OBSCURED FROM INSPECTION SHALL BE REPORTED TO THE ARCHITECT/ENGINEER A MINIMUM OF TWO (2) WORKING DAYS BEFORE ENCLOSURE.

7. ANY INSTALLATION, FINISH, OR COMPONENT INTENDED TO PROVIDE ENCLOSURE, WEATHER ABILITY OR APPEARANCE QUALITY SHALL BE PRODUCED AS A REPRESENTATIVE SAMPLE PRIOR TO PROCEEDING WITH COMPLETION. WORK PERFORMED WITHOUT WRITTEN APPROVAL OF SUCH SAMPLE BY THE ARCHITECT/ENGINEER SHALL BE DONE AT THE RISK OF THE CONTRACTOR. A MINIMUM OF TWO (2) WORKING DAYS NOTICE SHALL BE GIVEN.

8. BUILDING DESIGN IS GENERALLY PREDICATED UPON PROVISIONS OF THE CURRENT EDITION OF THE IBC AND/OR AMENDMENTS AS MAY HAVE BEEN LOCALLY ENACTED. ALL REQUIREMENTS OF THE JURISDICTIONAL FIRE SAFETY/PREVENTION DISTRICT SHALL BE ACCOMMODATED BY THIS DESIGN AND ANY CONSEQUENT CONSTRUCTION.

9. ANY DAMAGE, DISRUPTION OR COMPROMISE OF AMBIENT RIGHTS-OF-WAY, UTILITIES, OR ENVIRONMENTAL QUALITY SHALL BE IMMEDIATELY RECTIFIED BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AT NO COST TO THE OWNER.

10. ALL WORK SHALL BE INSPECTED BY GOVERNING AGENCIES IN ACCORDANCE WITH THEIR REQUIREMENTS. JURISDICTIONAL APPROVAL SHALL BE SECURED BEFORE PROCEEDING WITH WORK.

11. ALL PENETRATIONS OF FIRE-RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND CONSTRUCTION THAT CONFORMS TO UNDERWRITERS LABORATORIES LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS". THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, PROVIDED BY THE SUPPLIER OF THE FIRE STOP MATERIAL, THAT INDICATE COMPLETE CONFORMANCE WITH THE UL LISTING. DRAWINGS SHALL REMAIN AVAILABLE AT THE WORK SITE TO ARCHITECT/ENGINEER, OWNER, AND INSPECTORS. DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION, WITH APPROPRIATE UL # AND ALL VARIATIONS CLEARLY DEFINED.

12. THIS DESIGN PURPORTS TO PERMIT FULL ACCOMMODATION ACCESS, AND/OR ADAPTABILITY FOR HANDICAPPED PERSONS AS PROVIDED FOR BY PROVISIONS OF FEDERAL LAW AND LOCAL STIPULATION. ANY DEVIATION OR COMPROMISE SHALL BE REPORTED TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH WORK.

13. ALL GLASS IN HAZARDOUS LOCATIONS AND ALL GLASS WITHIN 18" OF FLOOR SHALL BE SAFETY GLASS PER SECTION 2406 OF THE IBC.

14. SMOKE DETECTORS SHALL BE PROVIDED AS SPECIFIED IN IBC 907. SEE ELECTRICAL DRAWINGS, FIRE AND EGRESS PLANS AND SPECIFICATIONS FOR LOCATIONS.

15. ALL WALLS SURROUNDING, TOILETS IN PRIVATE OFFICE SHALL BE FULLY BLOCKED FOR FUTURE INSTALLATION OF GRAB BARS AS SHOWN ON UNIT PLANS AND ADA REQUIREMENTS SHEET.

16. FOR TYPICAL ACCESSORY/EQUIPMENT MOUNTING LOCATIONS SEE ADA REQUIREMENTS SHEET -

19. DIMENSIONS (ON ARCHITECTURAL DRAWINGS) ARE TAKEN TO:
- A. COORDINATE GRID LINES
- B. FACE OF CONCRETE OR CONCRETE MASONRY UNITS (CMU) - F.O.C.
- C. FACE OR CENTERLINE OF VERTICAL STUD OR COLUMN - F.O.S.
- D. TOP SURFACE OF FLOOR (WITHOUT FINISH) WALL, TRIM. CAP, RAILING, ETC. ABOVE NEAREST REFERENCE LEVEL - A.F.F.
- E. UNLESS NOTED OTHERWISE DOOR AND WINDOW LOCATIONS ARE DIMENSIONED TO THE CENTER OF THEIR HORIZONTAL OPENING.

BUILDING CODE ANALYSIS

APPLICABLE CODES

2018 EDITION OF THE INTERNATIONAL BUILDING CODE
2018 EDITION OF THE INTERNATIONAL PLUMBING CODE
2018 EDITION OF THE INTERNATIONAL MECHANICAL CODE
2017 EDITION OF THE NATIONAL ELECTRICAL CODE
2018 EDITION OF THE INTERNATIONAL FUEL CODE
2018 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE
2018 EDITION OF THE INTERNATIONAL FIRE CODE

OCCUPANCY CLASSIFICATION - IBC CHAPTER THREE
R-2: RESIDENTIAL
S-2: STORAGE

CHAPTER FIVE: GENERAL BUILDING HEIGHTS AND AREAS

ALLOWABLE HEIGHT AND BUILDING AREAS

OCC.	CONSTRUCTION	HEIGHT	AREA
S-2	TYPE 1-A	UL	UL
R-2	TYPE 5-A	4 STORIES (70')	49,887 SF (SEE CALCS - GI-005)

ACTUAL HEIGHTS AND BUILDING AREAS

ACTUAL BUILDING HEIGHT: (45' - HIGHEST POINT ABOVE GRADE)
ACTUAL BUILDING STORIES: 4 STORIES

OCC.	CONSTRUCTION	HEIGHT	AREA
S-2	TYPE I-A	1 STORY	50,666 SF
R-2	TYPE 5-A	4 STORIES	SEE AREAS ON GI-002 & GI-003

TYPE OF CONSTRUCTION - IBC CHAPTER SIX

TABLE 601 - TYPE 5A CONSTRUCTION REQUIREMENTS

STRUCTURAL FRAME:	1 HOUR
BEARING WALLS:	1 HOUR
NON BEARING WALLS AND PARTITIONS:	0 HOUR
FLOOR CONSTRUCTION:	1 HOUR
ROOF CONSTRUCTION:	1 HOUR

TABLE 601 - TYPE 1A CONSTRUCTION REQUIREMENTS

STRUCTURAL FRAME:	3 HOUR
BEARING WALLS:	3 HOUR
NON BEARING WALLS AND PARTITIONS:	0 HOUR
FLOOR CONSTRUCTION:	3 HOUR
ROOF CONSTRUCTION:	1-1/2 HOUR

TABLE 602 - FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

EXTERIOR WALLS SHALL BE 1HR RATED AT ALL LOCATIONS BASED ON ANTICIPATED OCCUPANCIES AND THEIR SEPARATIONS.

FIRE RESISTANCE RATED CONSTRUCTION - IBC CHAPTER SEVEN

SECTION 706 FIRE WALLS
TABLE 706.4(a) - FIRE WALL RATING - 2 HOURS
SECTION 708 FIRE PARTITIONS - 1 HOUR
SECTION 711 HORIZONTAL ASSEMBLIES - 1 HOUR
SECTION 713 SHAFT ENCLOSURES
STAIR & ELEVATOR SHAFT REQUIREMENTS - 2 HOURS (4+ STORIES)

FIRE PROTECTION SYSTEM - IBC CHAPTER NINE

SYSTEM IN ACCORDANCE WITH NFPA 13 AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT STRUCTURE.

MEANS OF EGRESS - IBC CHAPTER TEN

ACCESSIBILITY - IBC CHAPTER ELEVEN

TOTAL UNITS:	123
TOTAL REQUIRED TYPE A UNITS:	3
TOTAL PROVIDED TYPE A UNITS:	3
TOTAL PARKING SPOTS:	125
TOTAL REQUIRED ADA SPOTS:	5
TOTAL PROVIDED ADA SPOTS:	5

STANDARD/ GENERAL ABBREVIATIONS

@	AT
&	AND
"	INCH
'	FOOT
#	NUMBER
C, CL	CENTER LINE
AC	AIR CONDITIONING
A.D.A.	AMERICANS WITH DISABILITIES ACT OF 1992
A.F.F.	ABOVE FINISH FLOOR
A.I.A.	AMERICAN INSTITUTE OF ARCHITECTS
AL/ ALIGN	ALIGN
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
ASPH	ASPHALT
AUTO	AUTOMATIC
BDRM	BEDROOM
BLDG	BUILDING
BLKG	BLOCKING
BSMT	BASEMENT
C.C.	CENTER TO CENTER
CAD	COMPUTERAIDED DRAFTING
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CNTR	CENTER
C.O.	CASED OPENING
COMB	COMBINED
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
C.T.	CERAMIC TILE
DBL	DOUBLE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
D.F.	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DR	DOOR
DWG	DRAWING
DWGS	DRAWINGS
EA	EACH
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
ELEC	ELECTRIC
ELEV	ELEVATION
EMER	EMERGENCY
ENGR	ENGINEER, ENGINEERING
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXT	EXTERIOR
FAB	FABRICATE
FDN	FOUNDATION
F.E.C.	FIRE EXTINGUISHER AND CABINET
FIN	FINISH
F.O.C.	FACE OF CONCRETE
F.O.S.	FACE OF STUD
F.R.	FIRE RESISTIVE
FURN	FURNISH, FURNITURE
GALV	GALVANIZED
ENL	GENERAL
GOVT	GOVERNMENT
GYP	GYPSUM
G.W.B	GYPSUM WALL BOARD
HORZ	HORIZONTAL
HR	HOUR
HVAC	HEATING, VENTILATION & AIR CONDITIONING
I.E.	ID EST (THAT IS)
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
LAM	LAMINATE
LAV	LAVATORY
L.F.	LINEAR FEET
LTR	LETTER
MACH	MACHINE
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTL	METAL
N.I.C.	NOT IN CONTRACT
N.A.	NOT APPLICABLE
O.C.	ON CENTER
PERP	PERPENDICULAR
PERIM	PERIMETER
PKG	PARKING
PLAS	PLASTER
P	PLATE
PLWD	PLYWOOD
PLBG	PLUMBING
PORT	PORTABLE
PREFAB	PREFABRICATED
PSI	POUNDS PER SQUARE INCH
PWR	POWER
QTY	QUANTITY
RAD	RADIUS
REFG	REFRIGERATOR
REG	REGULAR
REQ	REQUIRED
RES	RESILIENT
R.B.	RESILIENT BASE
REV	REVERSE
RM	ROOM
S.D.	SMOKE DETECTOR
SECT	SECTION
S.F.	SQUARE FEET
SHT	SHEET
SHWR	SHOWER
SIM	SIMILAR
SPEC	SPECIFICATION
SPECS	SPECIFICATIONS
SPKR	SPEAKER
SQ	SQUARE
STD	STANDARD
STL	STEEL
TV	TELEVISION
UT	UTILITY
SHT	SHEET
SNGL	SINGLE
STRG	STORAGE
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
TEL	TELEPHONE
TEMP	TEMPORARY
T.O.W/S/	TOP OF WALL/SLAB/ETC
T.O.C.S.	TOP OF CONCRETE SLAB
V.C.T.	VINYL COMPOSITION TILE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W.C.	WATER CLOSET
WD	WOOD, (HDWD, HARDWOOD)
WDW	WINDOW
W.V.	WOOD VENEER

SYMBOL INDEX/ DRAWING CONVENTIONS

N 90 00' 00" E Distance	PROPERTY LINE TAG - SEE SITE PLAN	1 A101 SIM	SECTION MARKER
0	GRID MARKER	1	REVISION TAG
12 / 6	SLOPE (RUN) / SLOPE (RISE)	℄	CENTERLINE MARKER
Name Elevation	VERTICAL COORDINATE REFERENCE	?	KEYNOTE. SEE REFERRING SHEET
101	DOOR TAG - REFER TO SCHEDULE FOR DETAILS	ELEV	SPOT ELEVATION
1i	WALL TAG. SEE WALL TYPES	1 A101 SIM	DETAIL MARKER.
1t	WINDOW TYPE. SEE SCHEDULE		DETAIL SHEET
Room name / 101 / 150 SF	ROOM NAME / ROOM # / SQUARE FOOTAGE (WHERE SHOWN)	1i	CASEWORK TAG

WOW

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STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210036
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GENERAL NOTES AND CODE ANALYSIS

GI-001

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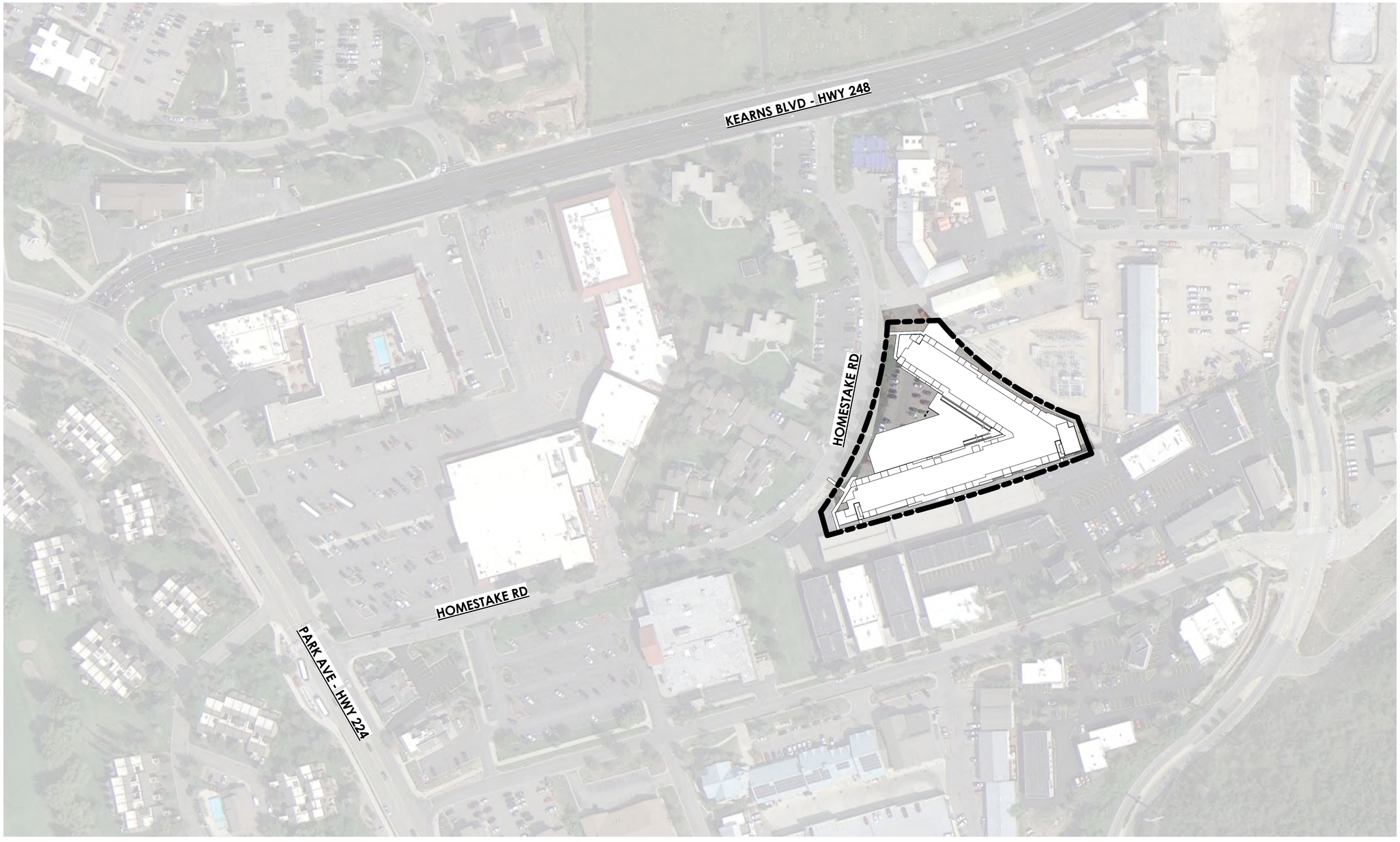

A1 ARCHITECTURAL SITE PLAN AERIAL
SCALE: 1" = 80'-0"

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SITE AERIAL MAP

EXHIBIT A

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AREA ANALYIS

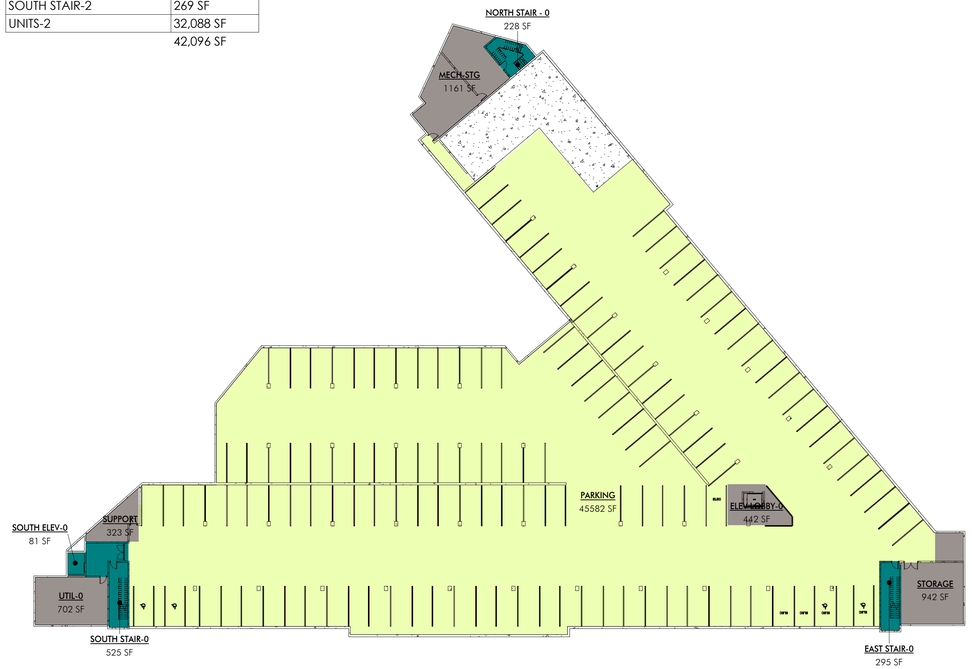
AREA NAME	AREA (SF)
PARKING LEVEL	
ELEV LOBBY-0	442 SF
MECH-STG	1,161 SF
STORAGE	942 SF
SUPPORT	323 SF
UTIL-0	702 SF
PARKING	45,582 SF
EAST STAIR-0	295 SF
NORTH STAIR - 0	228 SF
SOUTH ELEV-0	81 SF
SOUTH STAIR-0	525 SF
	50,282 SF
GROUND LEVEL	
AMENITY-1	1,552 SF
CIRC-1	5,354 SF
LOBBY	3,623 SF
TRASH A1	451 SF
TRASH B1	304 SF
UTIL-1	721 SF
EAST ELEV-1	77 SF
EAST STAIR-1	291 SF
NORTH STAIR - 1	224 SF
SOUTH ELEV-1	95 SF
SOUTH STAIR-1	279 SF
UNITS-1	26,395 SF
	39,364 SF
LEVEL 2	
AMENITY-2	1,640 SF
CIRC-2	6,006 SF
DECKS-2	61 SF
TRASH A2	202 SF
TRASH B2	167 SF
DECKS-2	970 SF
EAST ELEV-2	78 SF
EAST STAIR-2	282 SF
NORTH STAIR-2	239 SF
SOUTH ELEV-2	92 SF
SOUTH STAIR-2	269 SF
UNITS-2	32,088 SF
	42,096 SF

AREA ANALYIS

AREA NAME	AREA (SF)
LEVEL 3	
AMENITY-3	1,643 SF
CIRC-3	6,010 SF
DECKS-3	90 SF
TRASH A3	202 SF
TRASH B3	167 SF
DECKS-3	941 SF
EAST ELEV-3	76 SF
EAST STAIR-3	282 SF
NORTH STAIR-3	239 SF
SOUTH ELEV-3	84 SF
SOUTH STAIR-3	269 SF
UNITS-3	32,097 SF
	42,100 SF
LEVEL 4	
AMEMITY-4	1,105 SF
CIRC-4	5,544 SF
ELEV/UTIL	220 SF
TRASH A4	184 SF
TRASH B4	162 SF
AMENITY DECKS-4	1,996 SF
DECKS-4	2,535 SF
EAST ELEV-4	77 SF
EAST STAIR-4	179 SF
NORTH STAIR-4	231 SF
SOUTH ELEV-4	84 SF
SOUTH STAIR-4	260 SF
UNITS-4	19,222 SF
	31,799 SF
	205,640 SF

UNIT BREAKDOWN/ PARKING ANALYSIS

UNIT REQUIREMENTS	UNITS	AFFORD. UNITS	MARKET UNITS	LMC PARKING	AMPD PARKING
1 BEDROOM UNITS					
GROUND LEVEL	5	4	1	5	3
LEVEL 2	8	7	1	8	4.5
LEVEL 3	8	6	2	8	5
LEVEL 4	7	6	1	7	4
2 BEDROOM UNITS					
GROUND LEVEL	22	18	4	22	13
LEVEL 2	26	21	5	26	15.5
LEVEL 3	26	21	5	26	15.5
LEVEL 4	14	11	3	14	8.5
3 BEDROOM UNITS	7	5	2	10.5	8
TOTAL PARKING REQUIREMENT				126.5 (127)	**77**
TOTAL STALLS PROVIDED		**140 (128 UNDERGROUND + 12 SURFACE STALLS)**			



A1 PARKING AREA PLAN
SCALE: 1/32" = 1'-0"

A4 GROUND LEVEL AREA PLAN
SCALE: 1/32" = 1'-0"

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AREA PLANS

EXHIBIT B

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PARKING LEVEL	
ELEV LOBBY-0	442 SF
MECH-STG	1,161 SF
STORAGE	942 SF
SUPPORT	323 SF
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GROUND LEVEL	22	18	4	22	13
LEVEL 2	26	21	5	26	15.5
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LEVEL 4	14	11	3	14	8.5
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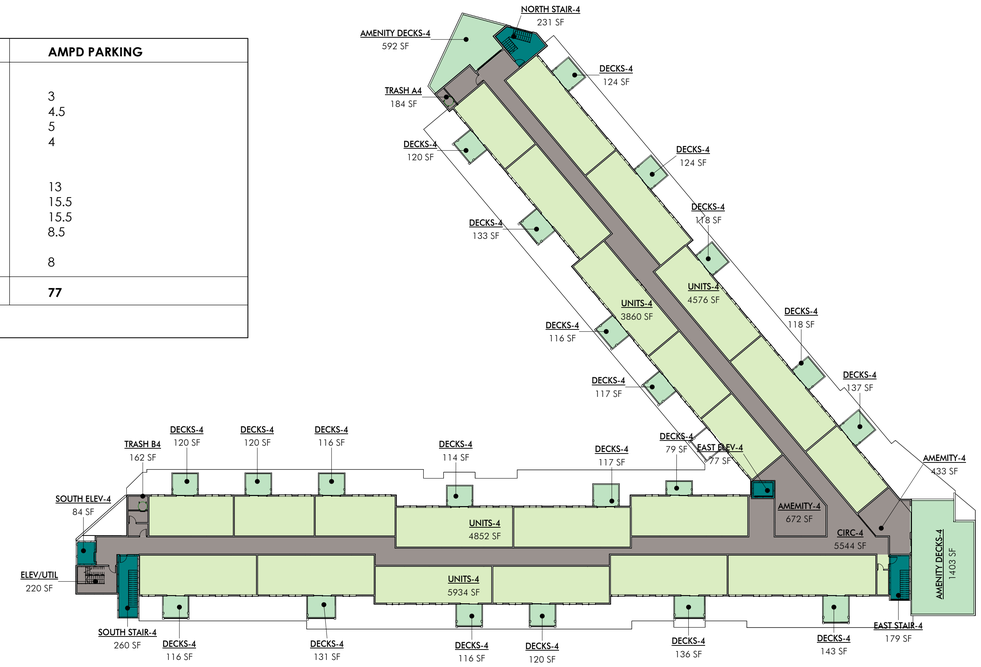
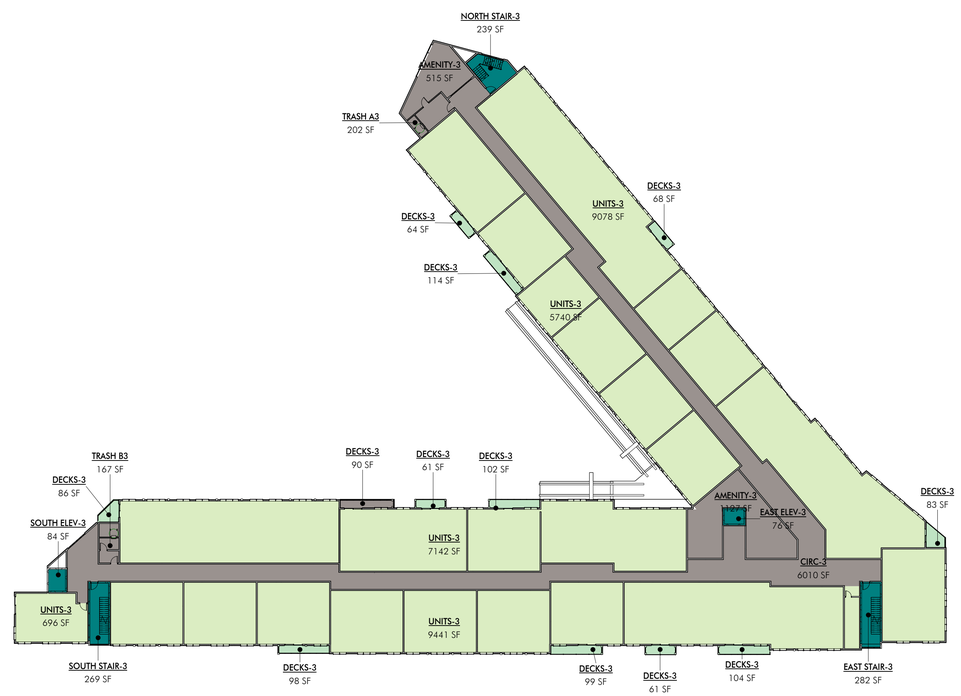
TOTAL PARKING REQUIREMENT				126.5 (127)	**77**
TOTAL STALLS PROVIDED		**140 (128 UNDERGROUND + 12 SURFACE STALLS)**			



C4 LEVEL 4
SCALE: 1/32" = 1'-0"

A1 2ND LEVEL AREA PLAN
SCALE: 1/32" = 1'-0"



A4 3RD LEVEL AREA PLAN
SCALE: 1/32" = 1'-0"

WOW

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AREA PLANS

EXHIBIT B.1

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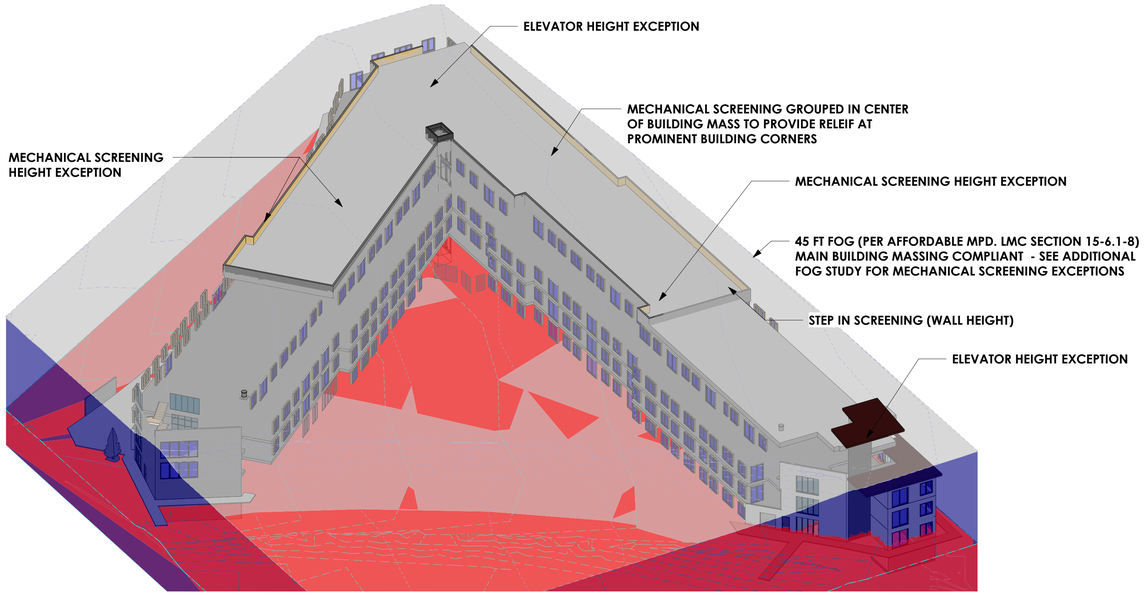
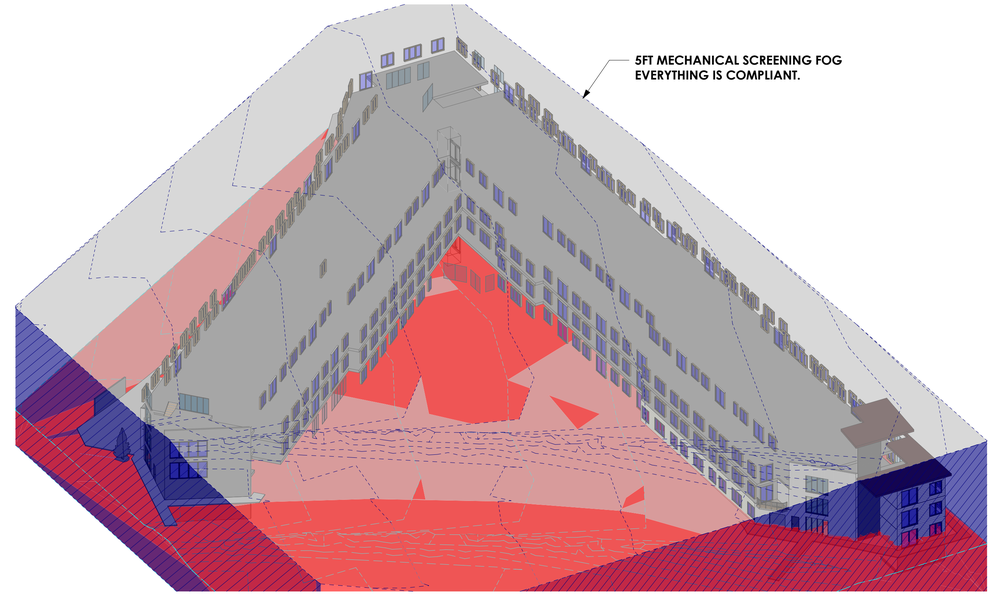


C1 FOG STUDY
SCALE:



C4 FOG STUDY - EXCEPTION
SCALE:

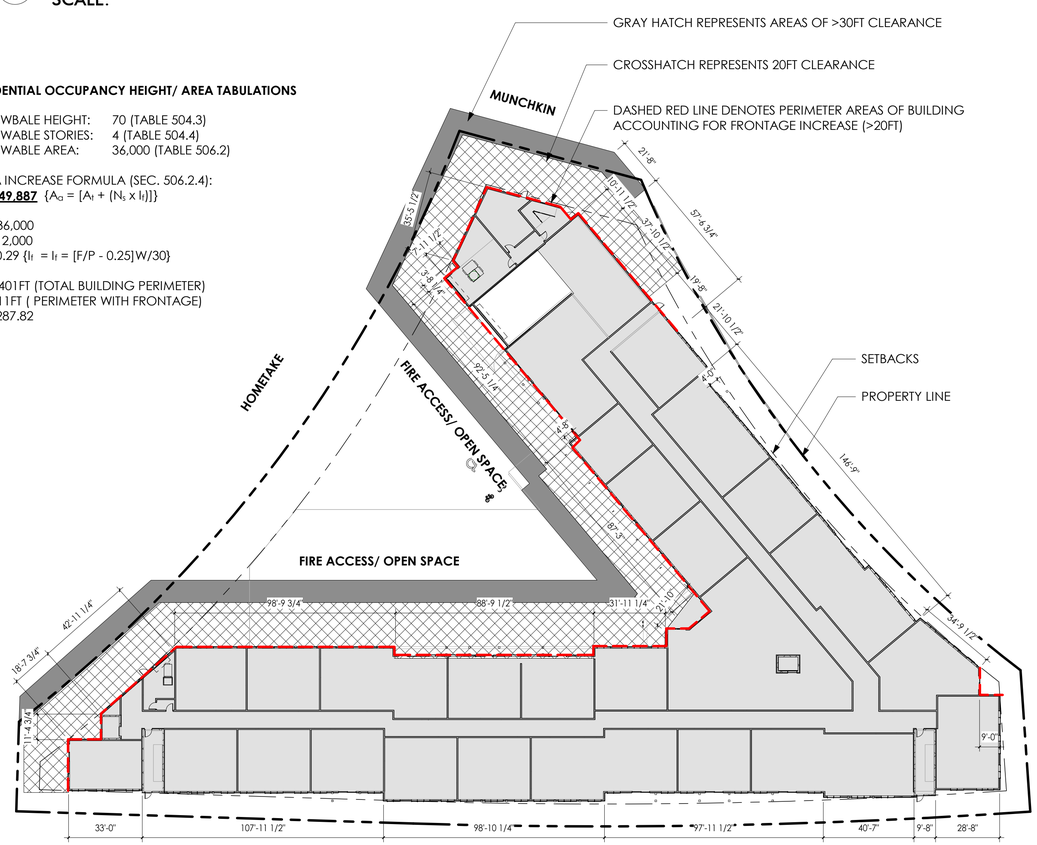
RESIDENTIAL OCCUPANCY HEIGHT/ AREA TABULATIONS

ALLOWBALE HEIGHT: 70 (TABLE 504.3)
ALLOWABLE STORIES: 4 (TABLE 504.4)
ALLOWABLE AREA: 36,000 (TABLE 506.2)

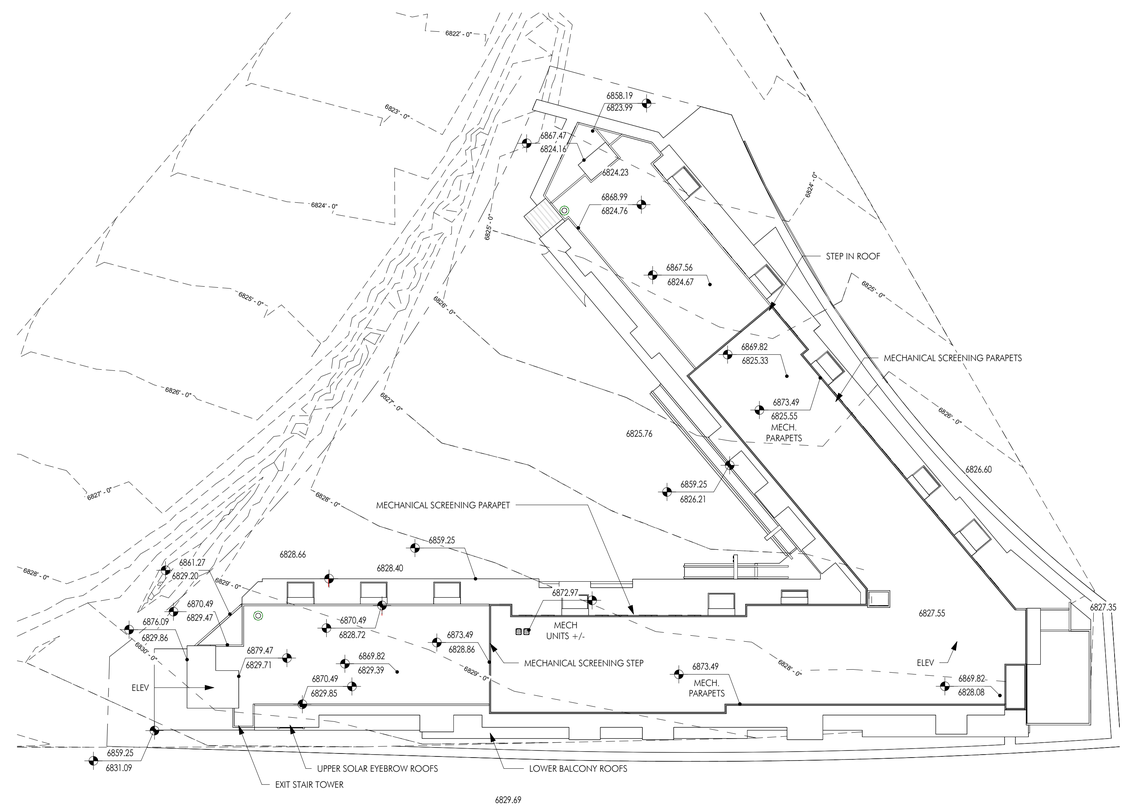
AREA INCREASE FORMULA (SEC. 506.2.4):
A_a = 49,887 $\{A_a = [A_t + (N_s \times I_f)]\}$

A_t = 36,000
N_s = 12,000
I_f = 0.29 $\{I_f = I_f = [F/P - 0.25]W/30\}$

P =1,401FT (TOTAL BUILDING PERIMETER)
F = 711FT (PERIMETER WITH FRONTAGE)
W = 287.82



A1 GROUND LEVEL - FLOOR AREA CALCULATION
SCALE: 1/32" = 1'-0"



A4 ROOF OVER EXISTING TOPOGRAPHY
SCALE: 1/32" = 1'-0"

WOW

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CIVIL: TALISMAN
STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

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ALLOWABLE AREA - HEIGHT ANALYSIS

EXHIBIT D

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OPEN SPACE/ AREA CALCULATIONS

TOTAL SITE AREA:	80,846	(100%)
BUILDING AREA:	42,465	(52.5%)
DRIVEWAY/ SIDEWALKS:	14,473	(17.9%)
OPEN SPACE - LANDSCAPE:	15,502	(19.2%)
OPEN SPACE - HARDSCAPE:	8,408	(10.4%)
TOTAL OPEN SPACE:	23,908	(29.6%)

A2 OPEN SPACE DIAGRAM
SCALE: 1" = 20'-0"

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OPEN SPACE DIAGRAM

EXHIBIT E

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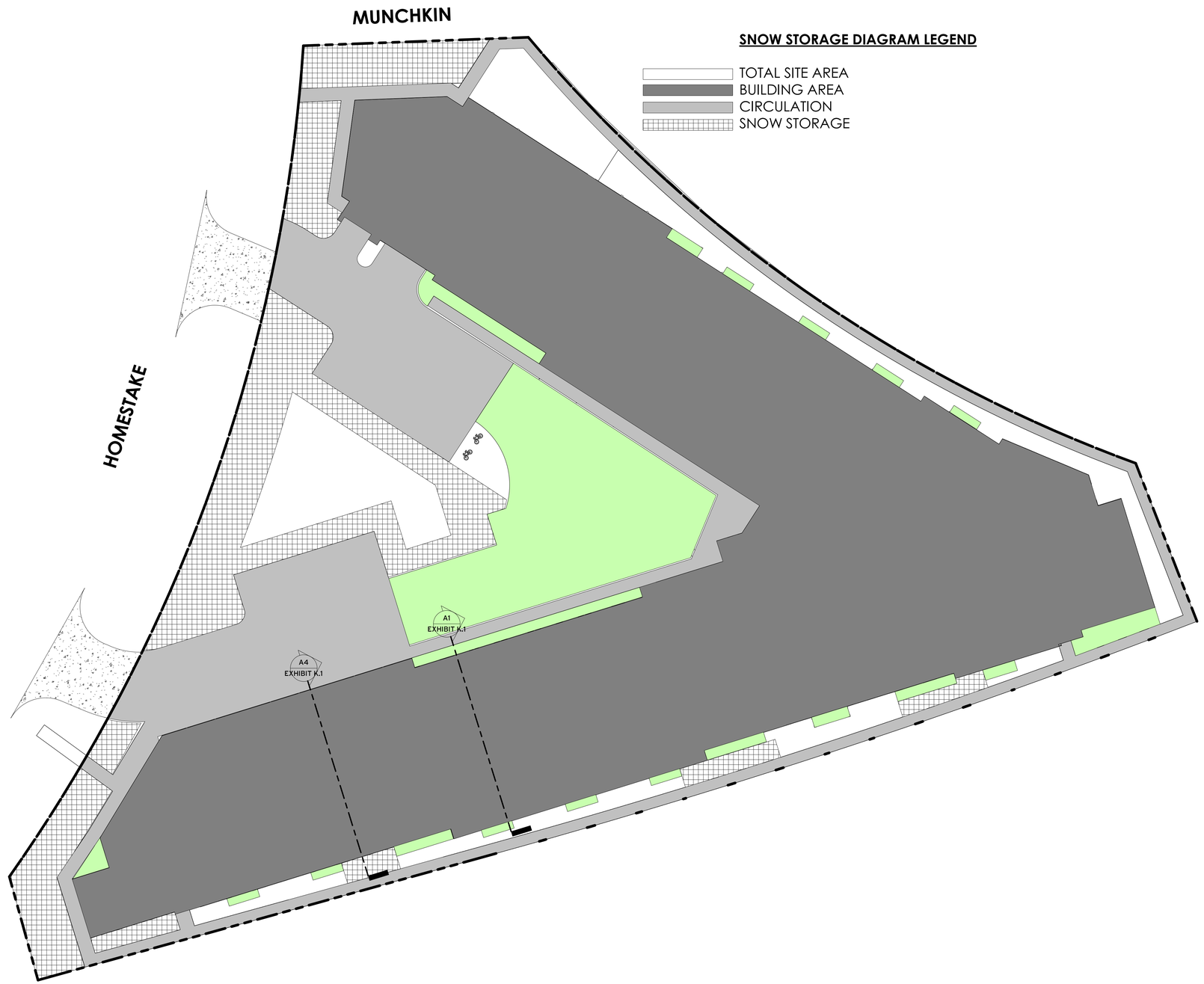

A2 SNOW STORAGE DIAGRAM
SCALE: 1" = 20'-0"

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SNOW STORAGE DIAGRAM

EXHIBIT F

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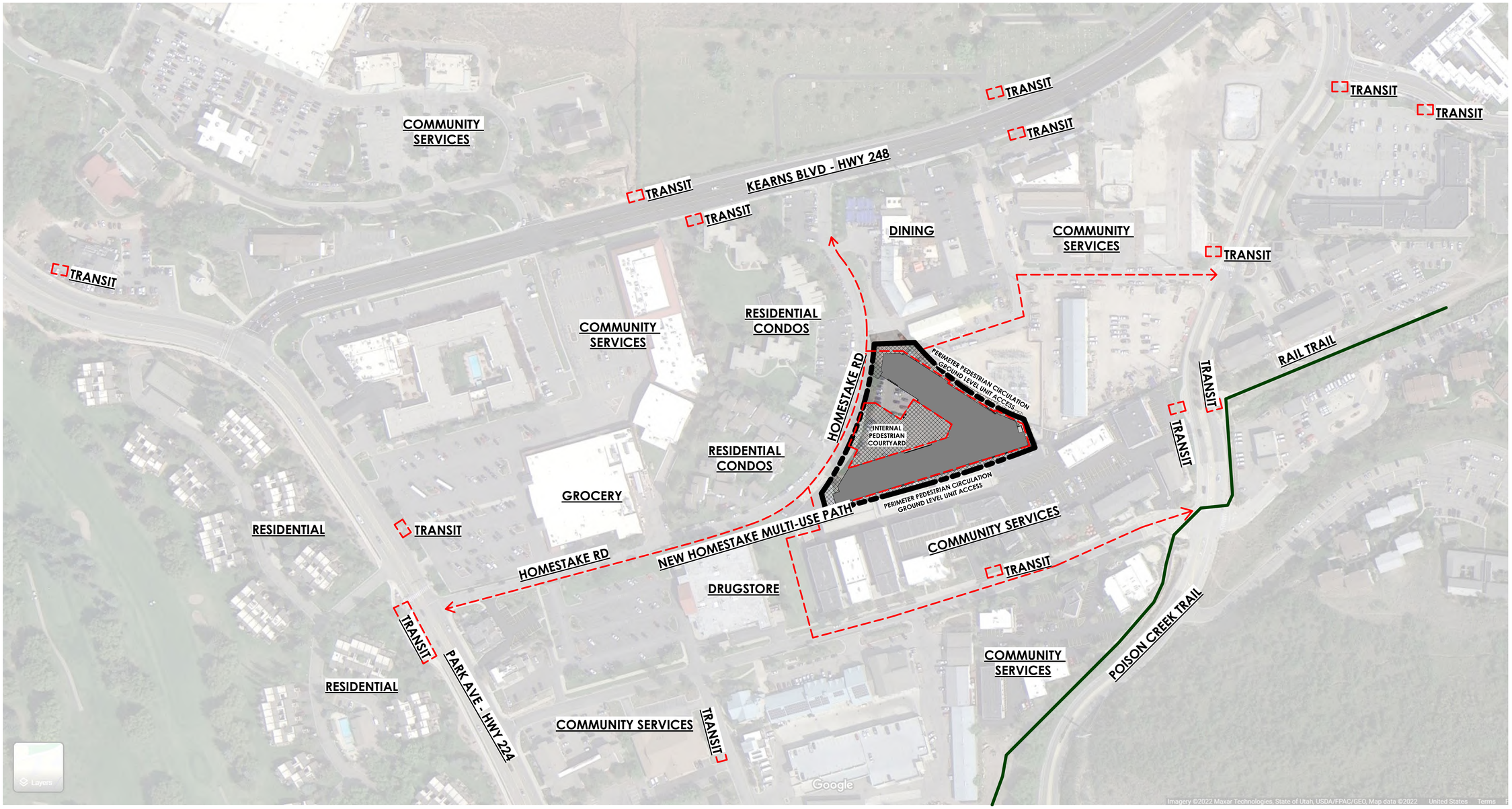

A1 ARCHITECTURAL SITE PLAN PEDESTRIAN/ COMMUNITY CONNECTIVITY
SCALE: 1" = 100'-0"

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LANDSCAPE: STB DESIGN
INTERIOR:

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PEDESTRIAN CIRCULATION PLAN

EXHIBIT G

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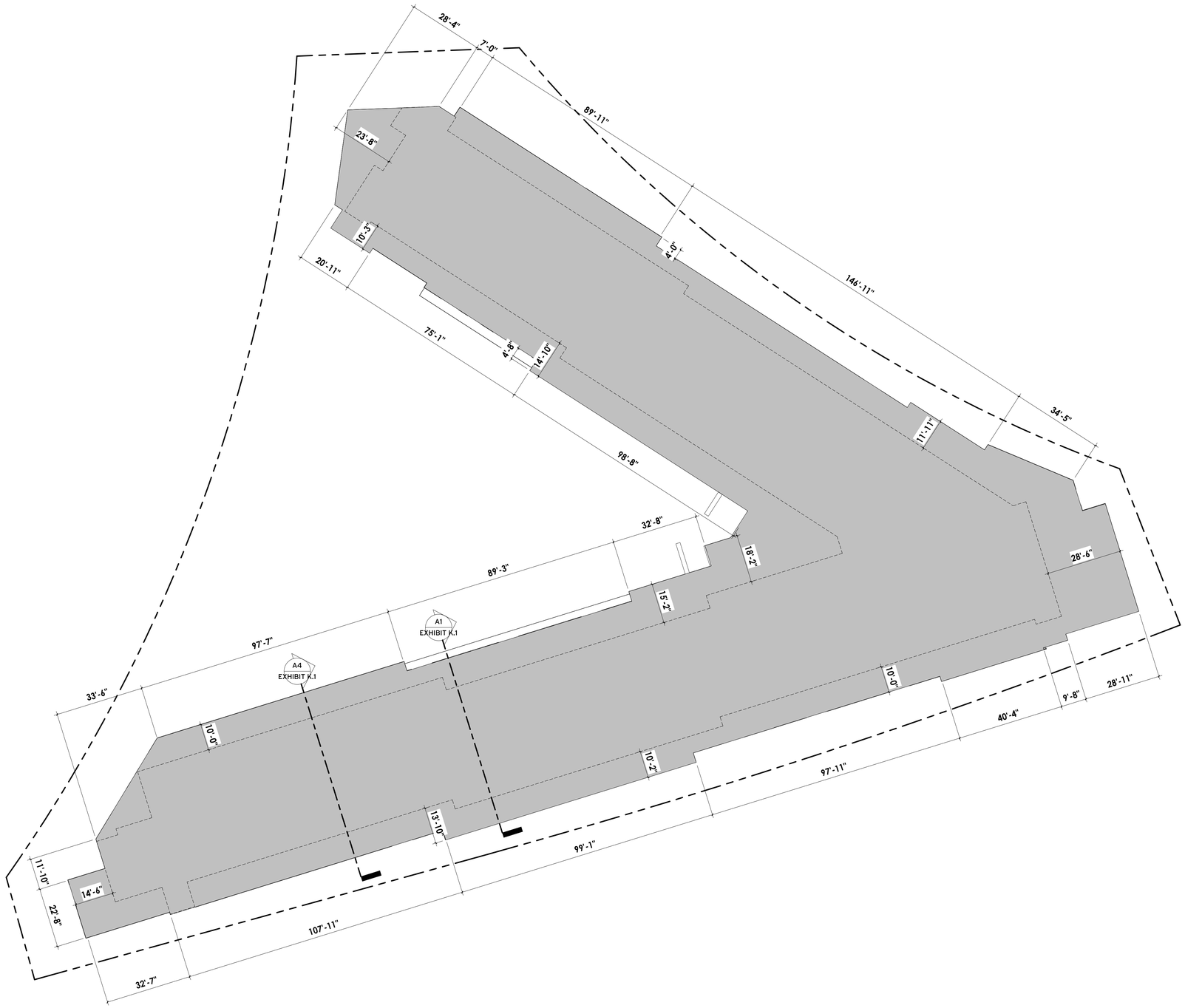

A2 FACADE STEPBACK DIAGRAM
SCALE: 1" = 20'-0"

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LANDSCAPE: STB DESIGN
INTERIOR:

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FACADE VARIATION EXHIBIT

EXHIBIT K

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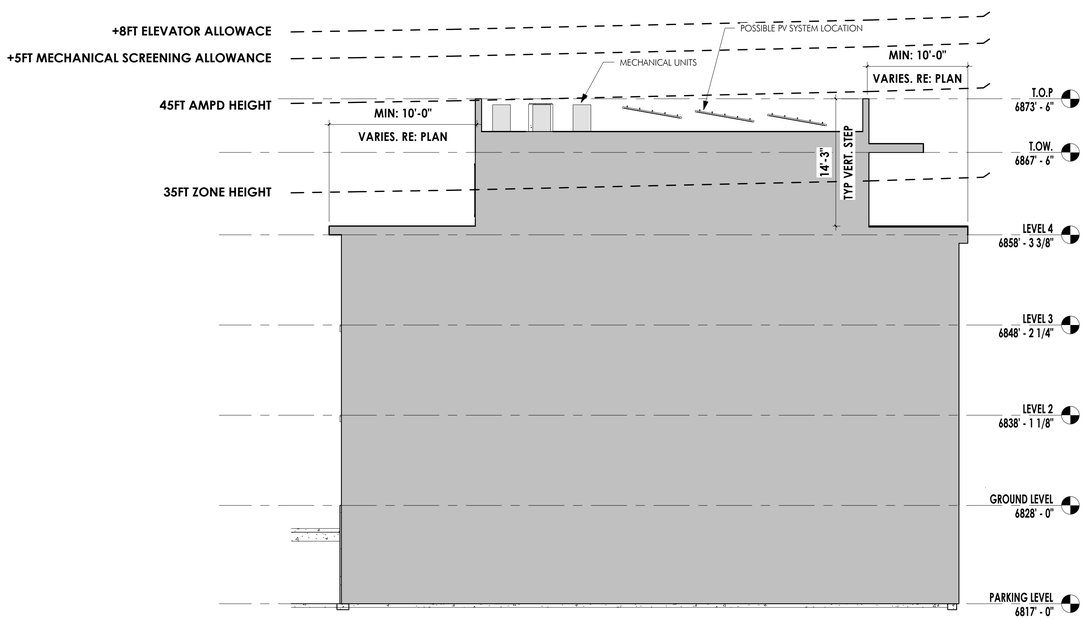
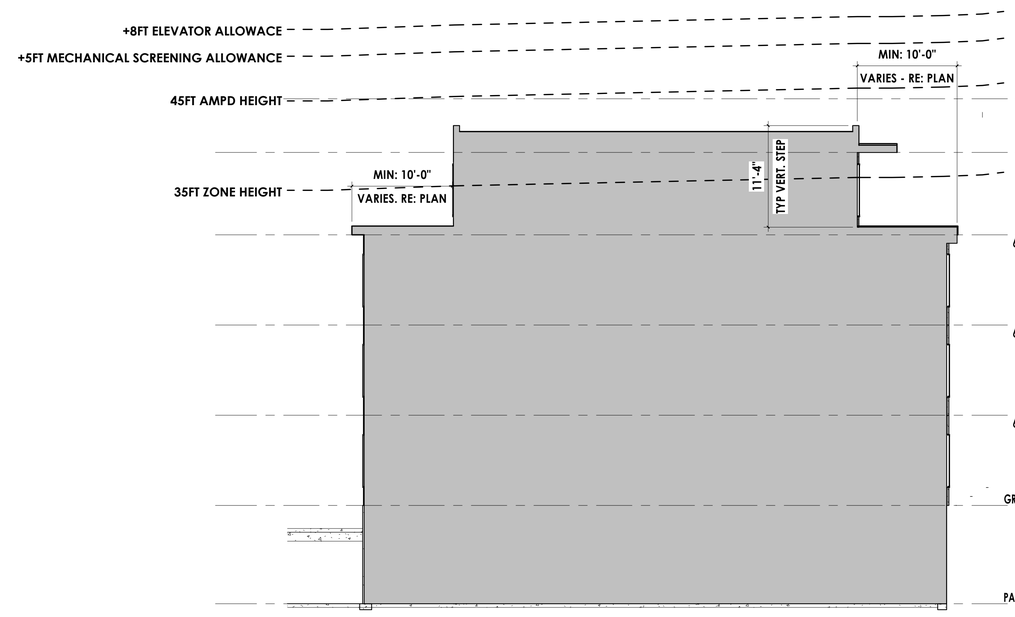


A1 FACADE STEPBACK SECTION @ MECH
SCALE: 1/8" = 1'-0"



A4 FACADE STEPBACK SECTION
SCALE: 1/8" = 1'-0"

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INTERIOR:

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FACADE VARIATION EXHIBIT

EXHIBIT K.1

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A1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 20'-0"

LEGEND

PROPERTY LINE

SETBACK LINE

EXTERIOR AMENITY/OPEN SPACE/ LANDSCAPE AREA

WOW

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ARCHITECTURAL SITE PLAN

AS-101

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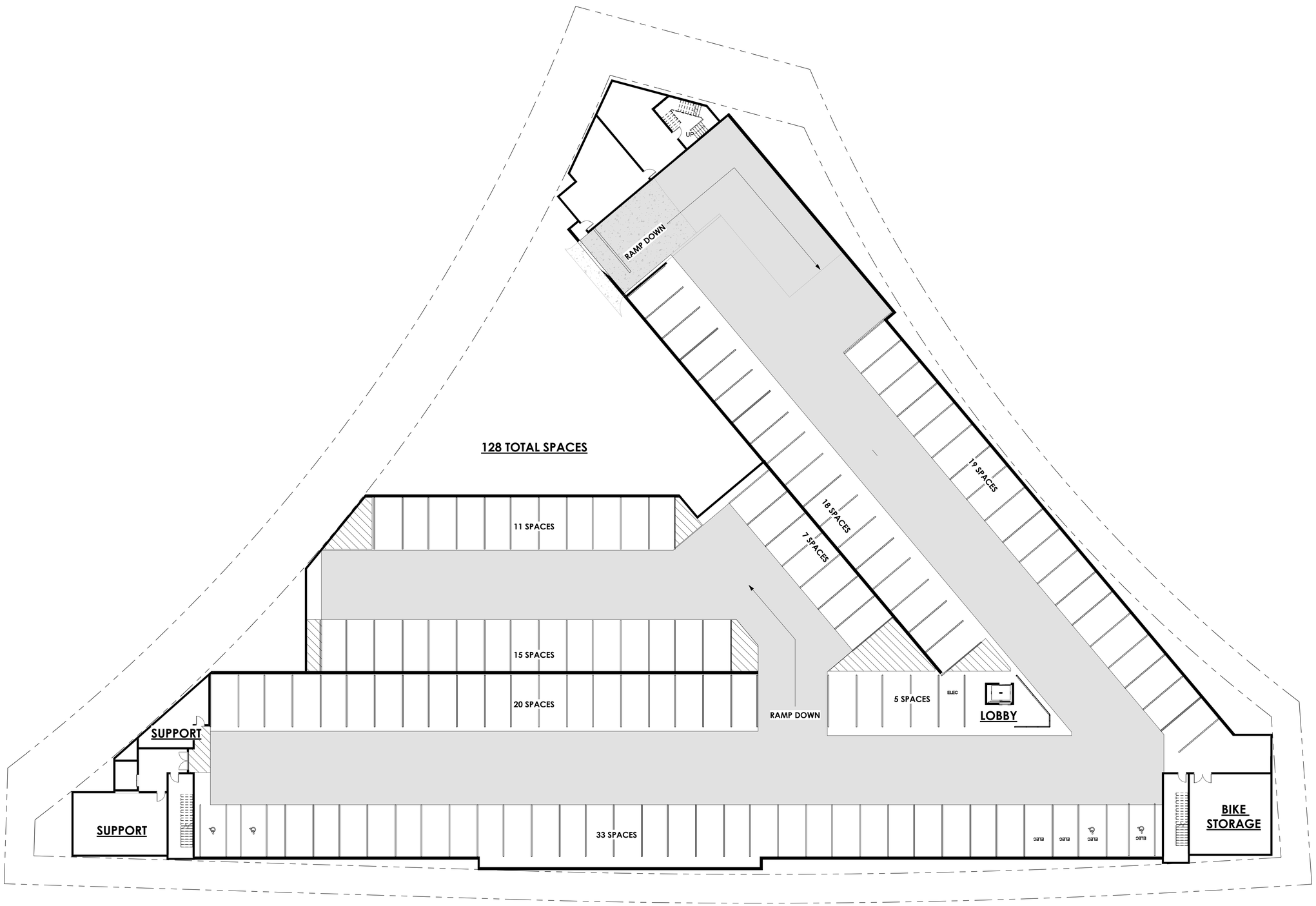

0 8' 16' 32 64'

A2 PARKING LEVEL
SCALE: NOT TO SCALE:

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PARKING LEVEL PLAN

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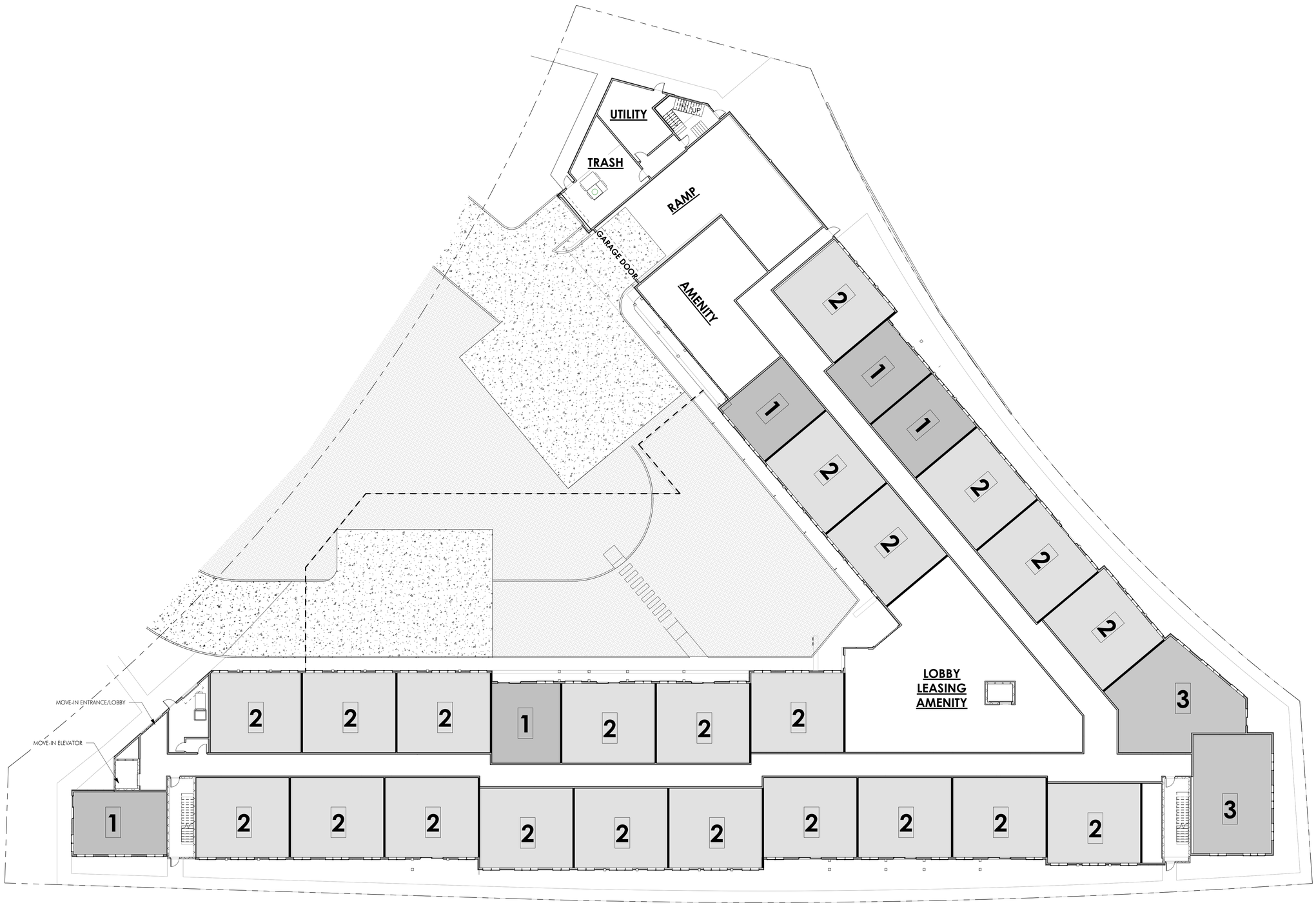

0 8' 16' 32' 64'

A2 GROUND LEVEL
SCALE: 1/16" = 1'-0"

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GROUND LEVEL FLOOR PLAN

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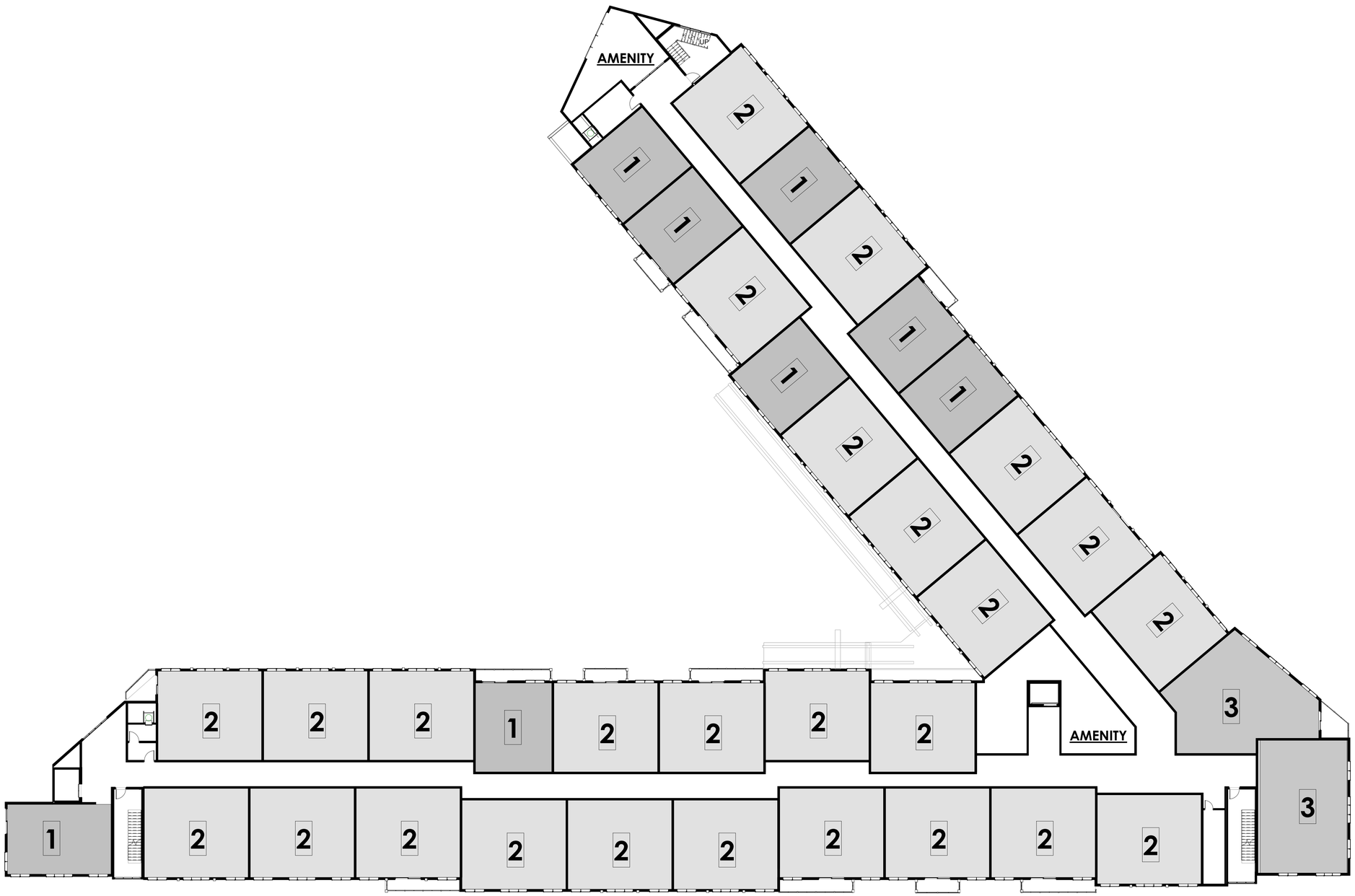

0 8' 16' 32 64'

A2 LEVEL 2
SCALE: 1/16" = 1'-0"

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LANDSCAPE: STB DESIGN
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SECOND LEVEL FLOOR PLAN

AE-103

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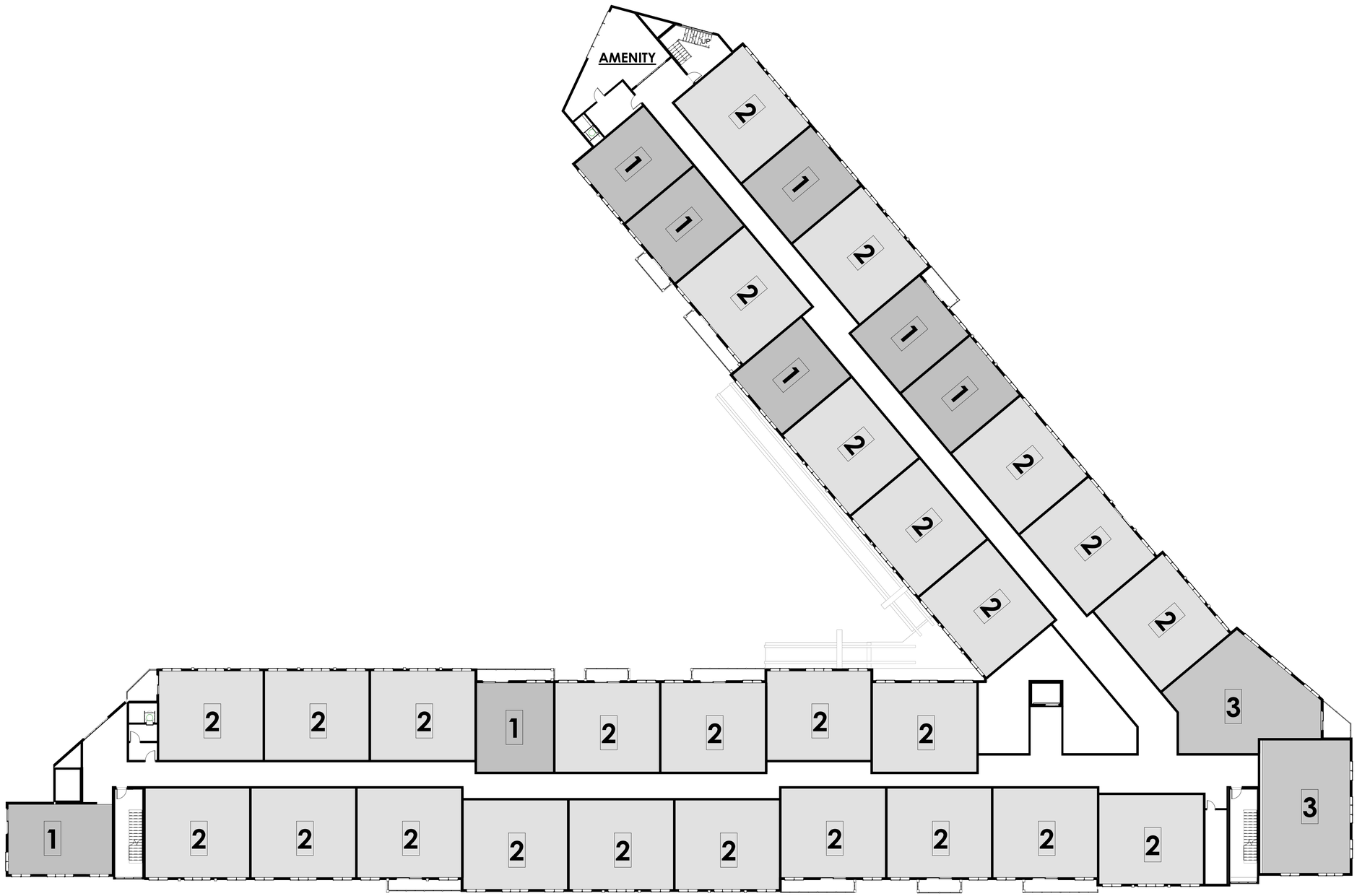

0 8' 16' 32' 64'

A2 THIRD LEVEL FLOOR PLAN
SCALE: 1/16" = 1'-0"

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THIRD LEVEL FLOOR PLAN

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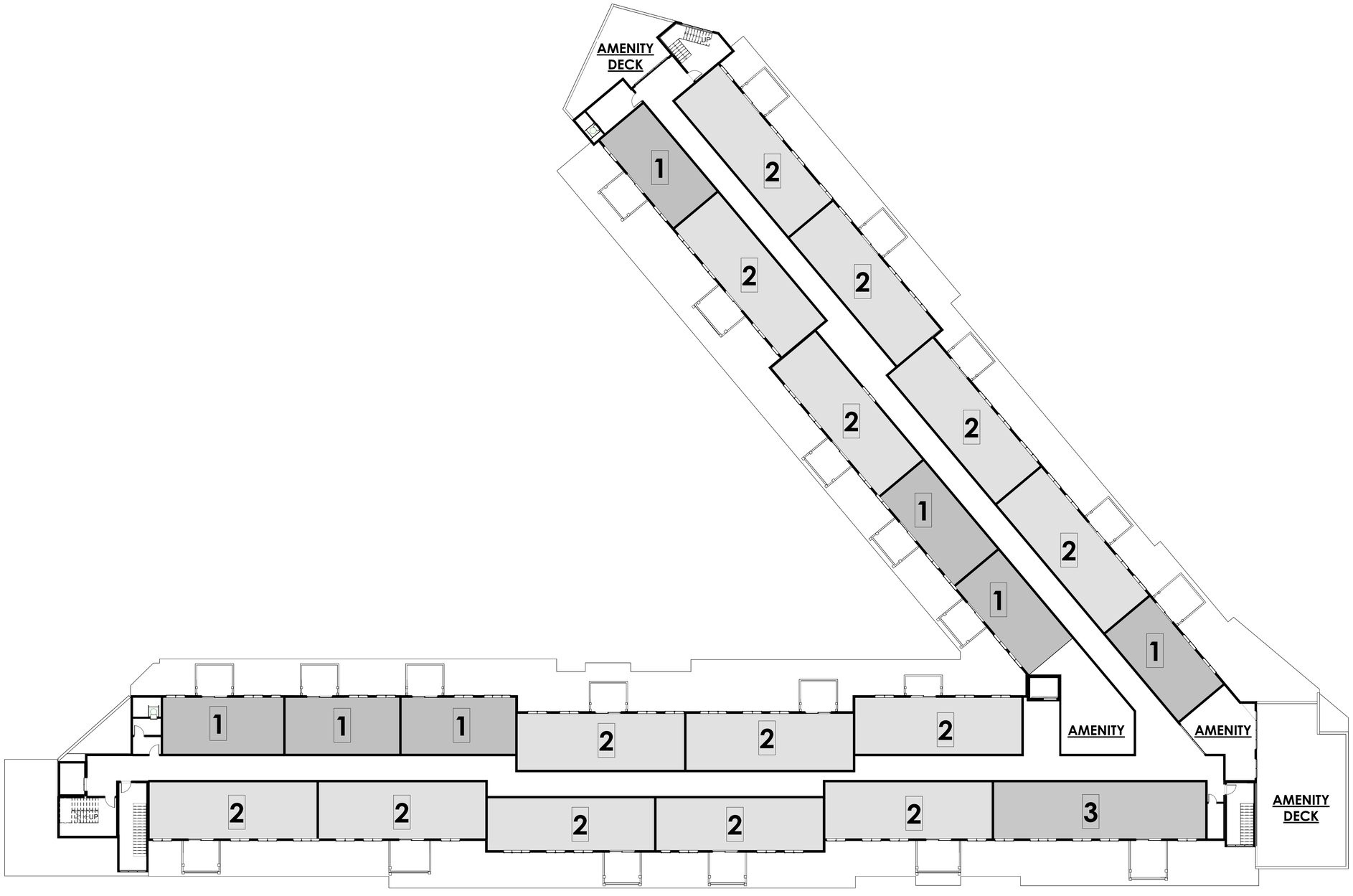

0 8' 16' 32' 64'

A2 FOURTH LEVEL FLOOR PLAN
SCALE: 1/16" = 1'-0"

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LANDSCAPE: STB DESIGN
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FOURTH LEVEL FLOOR PLAN

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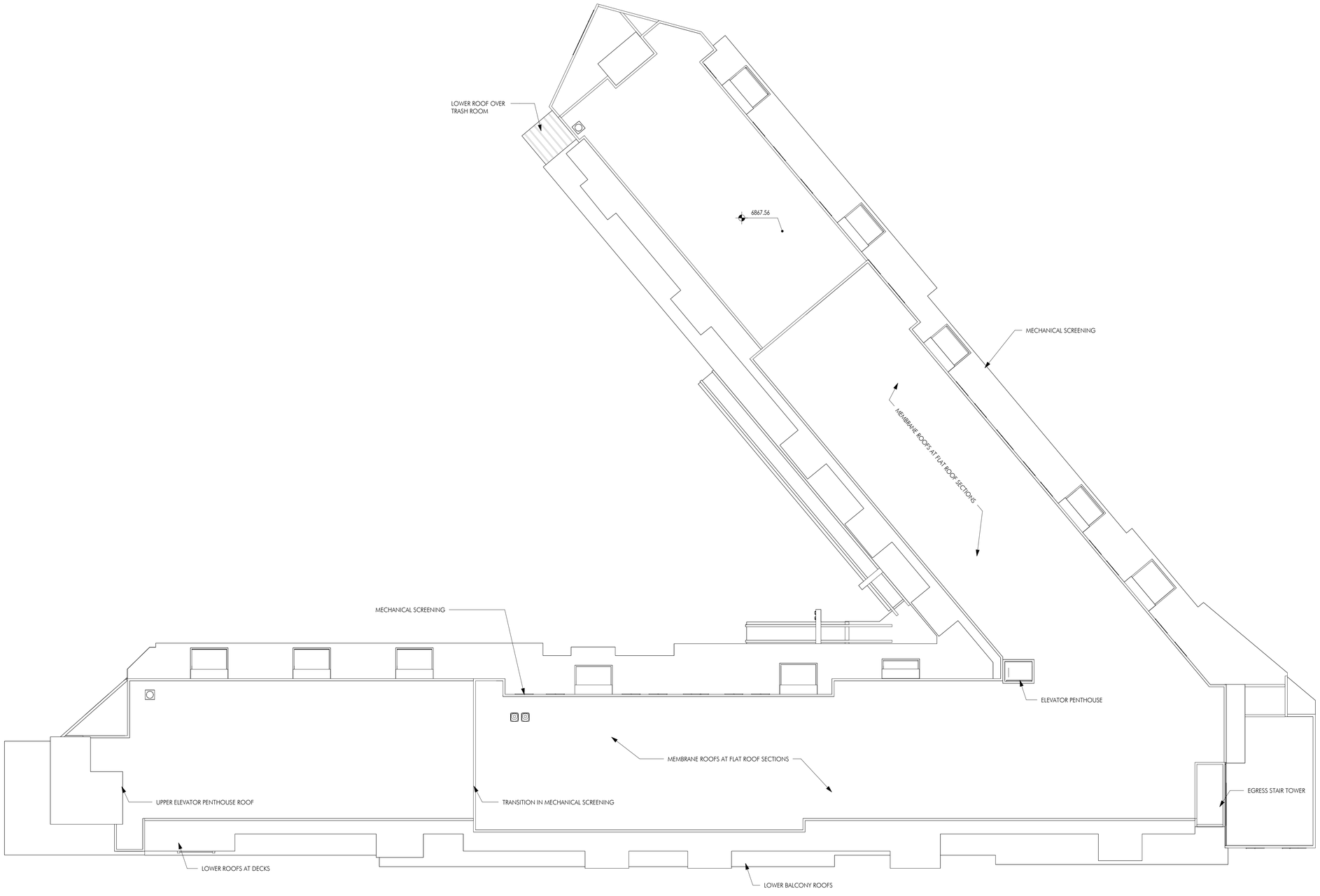

A2 ARCHITECTURAL ROOF PLAN
SCALE: 1/16" = 1'-0"

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ARCHITECTURAL ROOF PLAN

AE-109

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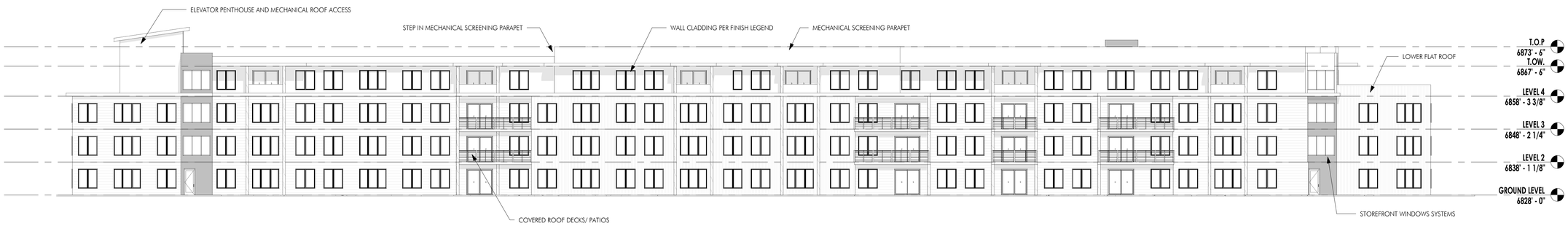
GENERAL NOTES

1. EXTERIOR METAL SPECIFICATIONS:

- HORIZONTAL SIDING -
- VERTICAL SIDING -
- CEMENTITIUOS SIDING -
- ACCENT STONE/MASONRY
- ROOFING: STANDING SEAM METAL ROOF

LEGEND

- 1i — WALL TYPE TAG. SEE AE-601, AE-602 & AE-603 FOR DETAILS
- 1i — STOREFRONT TAG. SEE AE-705 FOR DETAILS
- 1 — REVISION TAG
- ELEVATION TAG
- 1 A101 SIM — SECTION/ ELEVATION MARKER
- 1i — BUILT-IN / CASEWORK TAG
- 101 — DOOR TAG
- 1t — WINDOW TAG



B1 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

A1 NORTH ELEVATION
SCALE: 1/16" = 1'-0"

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ELEVATIONS

AE-201

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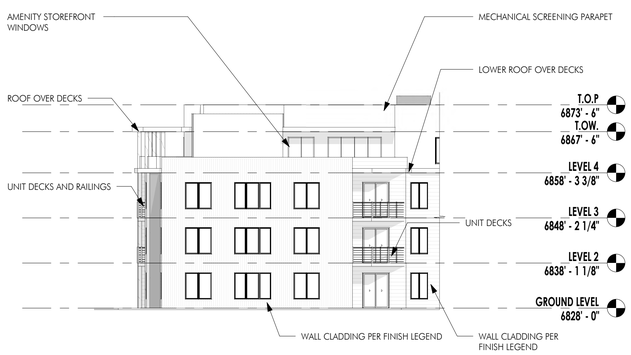
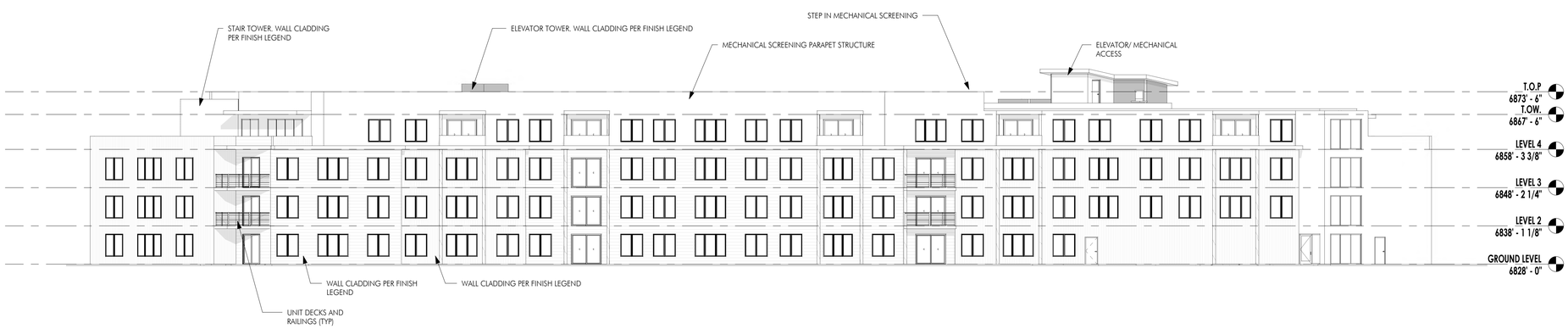
D1 NORTH INTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



B1 EAST PARTIAL ELEVATION
SCALE: 1/16" = 1'-0"

B3 WEST INTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



A1 EAST ELEVATION
SCALE: 1/16" = 1'-0"

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ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

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ELEVATIONS

AE-202

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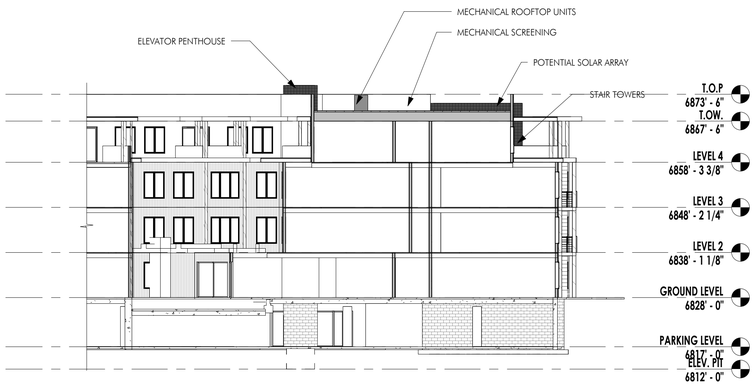
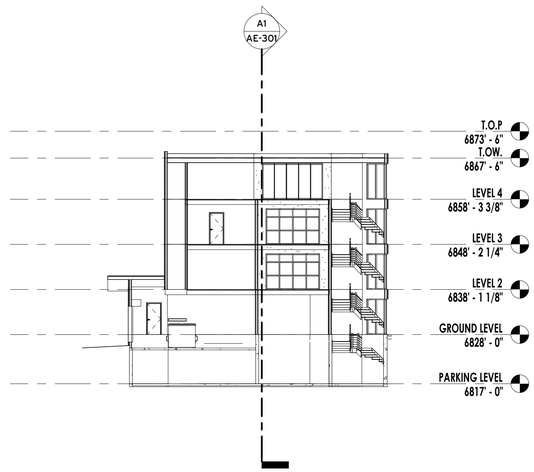
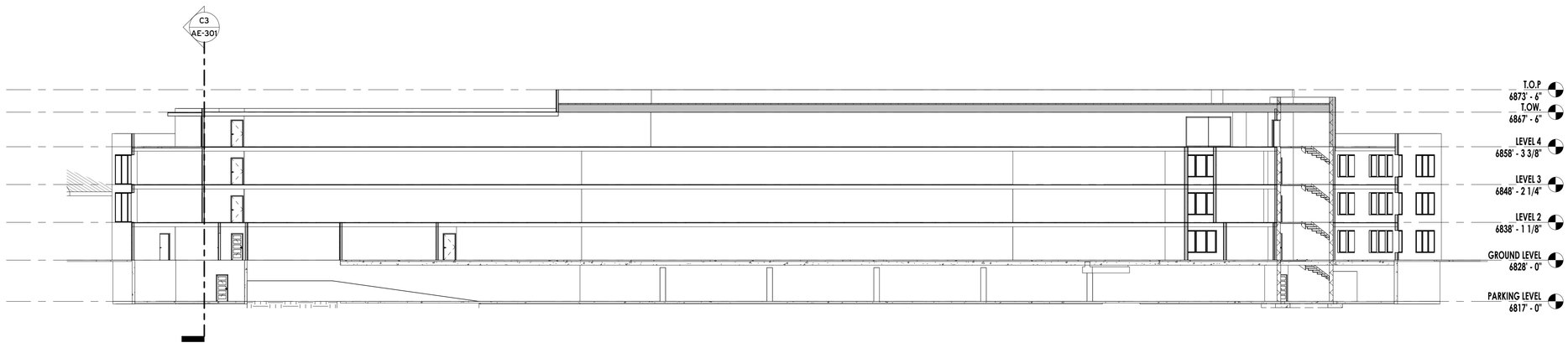


C1 SOUTH CROSS SECTION
SCALE: 1/16" = 1'-0"



C3 NORTH CROSS SECTION
SCALE: 1/16" = 1'-0"



A1 RAMP SECTION
SCALE: 1/16" = 1'-0"

the concepts, ideas, drawings and specifications herein are an original unpublished work and the property of WOW Atelier, LLC and shall not be used on any other work, do not scale drawings, all conditions shall be verified on site, discrepancies shall be brought to the attention of the architect before proceeding.
plot date: 10/14/2022 10:32:52 AM D:\Revit Local Files\Homestake_AMPD_CENTRAL_chimso@be-wow.com.rvt

WOW

PLANNING
MPD/ CUP
REVIEW ONLY
NOT FOR CONST.

CIVIL: TALISMAN
STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210036
ISSUE DATE: 10.14.2022
ISSUE: MPD-CUP APPLICATION
REVISIONS

BUILDING SECTIONS

AE-301

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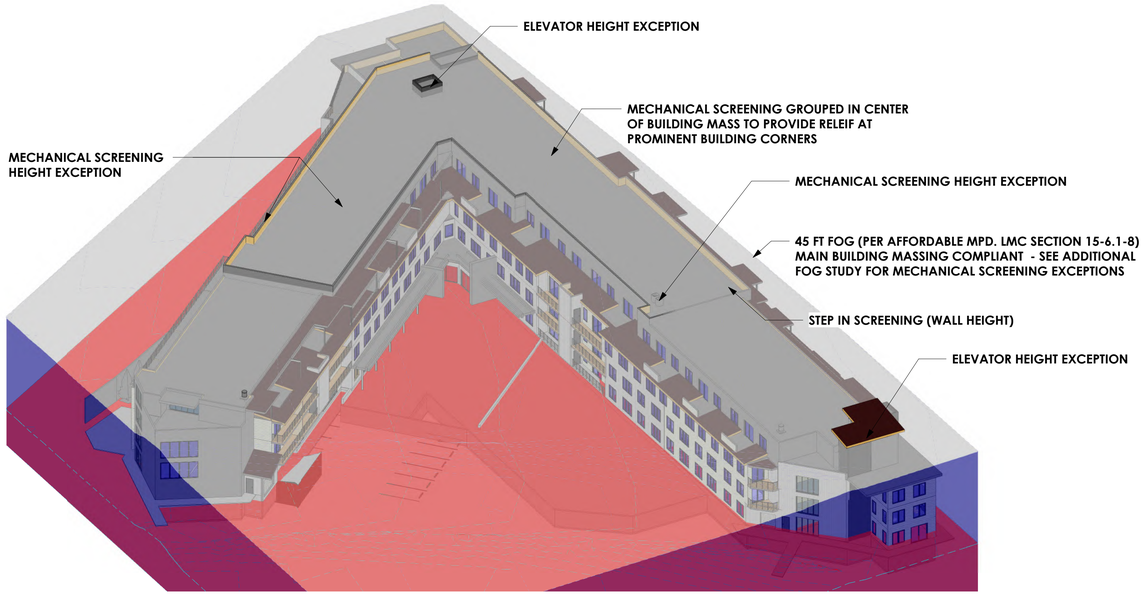
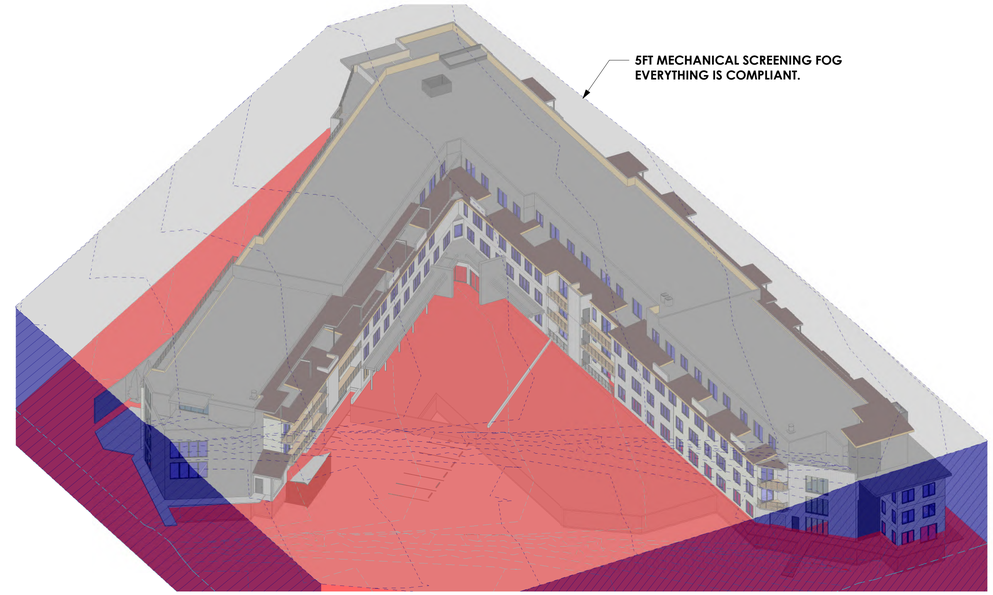
EXHIBIT K

BUILDING HEIGHT



C1 FOG STUDY
SCALE:



C4 FOG STUDY - EXCEPTION
SCALE:

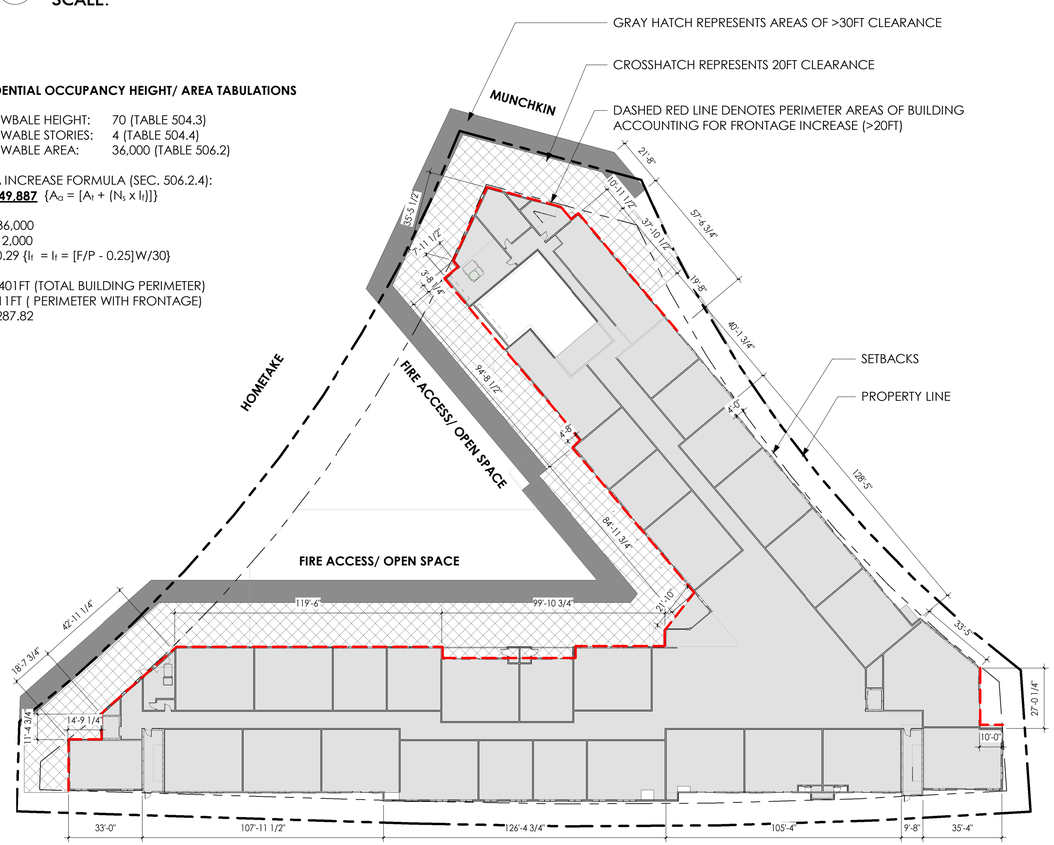
RESIDENTIAL OCCUPANCY HEIGHT/ AREA TABULATIONS

ALLOWBALE HEIGHT: 70 (TABLE 504.3)
ALLOWABLE STORIES: 4 (TABLE 504.4)
ALLOWABLE AREA: 36,000 (TABLE 506.2)

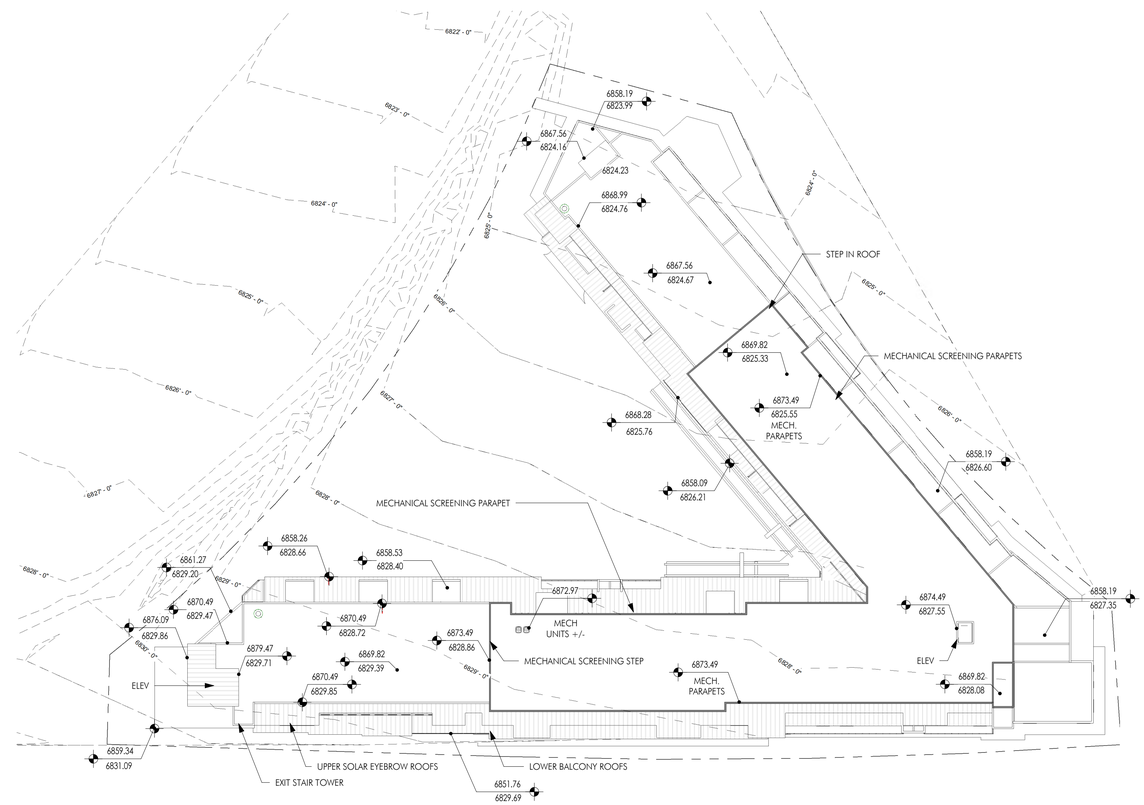
AREA INCREASE FORMULA (SEC. 506.2.4):
A_a = 49,887 $\{A_a = [A_t + (N_s \times I_f)]\}$

A_t = 36,000
N_s = 12,000
I_f = 0.29 $\{I_f = I_f = [F/P - 0.25]W/30\}$

P =1,401FT (TOTAL BUILDING PERIMETER)
F = 711FT (PERIMETER WITH FRONTAGE)
W = 287.82



A1 GROUND LEVEL - FLOOR AREA CALCULATION
SCALE: 1/32" = 1'-0"



A4 ROOF OVER EXISTING TOPOGRAPHY
SCALE: 1/32" = 1'-0"

WOW

PLANNING MPD/ CUP REVIEW ONLY NOT FOR CONST.

CIVIL: TALISMAN
STRUCTURAL:
MECHANICAL: PVE INC
ELECTRICAL: PVE INC
LANDSCAPE: STB DESIGN
INTERIOR:

HOMESTAKE MPD
AFFORDABLE HOUSING
1875 Homestake Road
Park City, Utah

PROJECT #: 210036
ISSUE DATE: 09.02.2022
ISSUE: MPD-CUP APPLICATION
REVISIONS

ALLOWABLE AREA - HEIGHT ANALYSIS

EXHIBIT D

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the concepts, ideas, drawings and specifications herein are an original unpublished work and the property of WOW Atelier, LLC and shall not be used on any other work, do not scale drawings. all conditions shall be verified on site, discrepancies shall be brought to the attention of the architect before proceeding.
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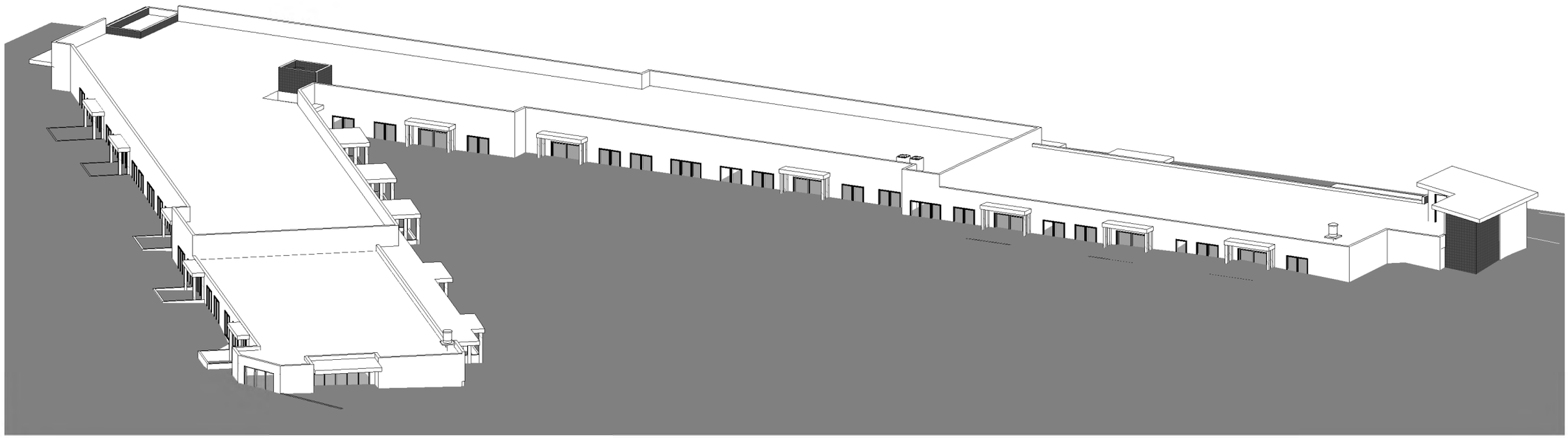

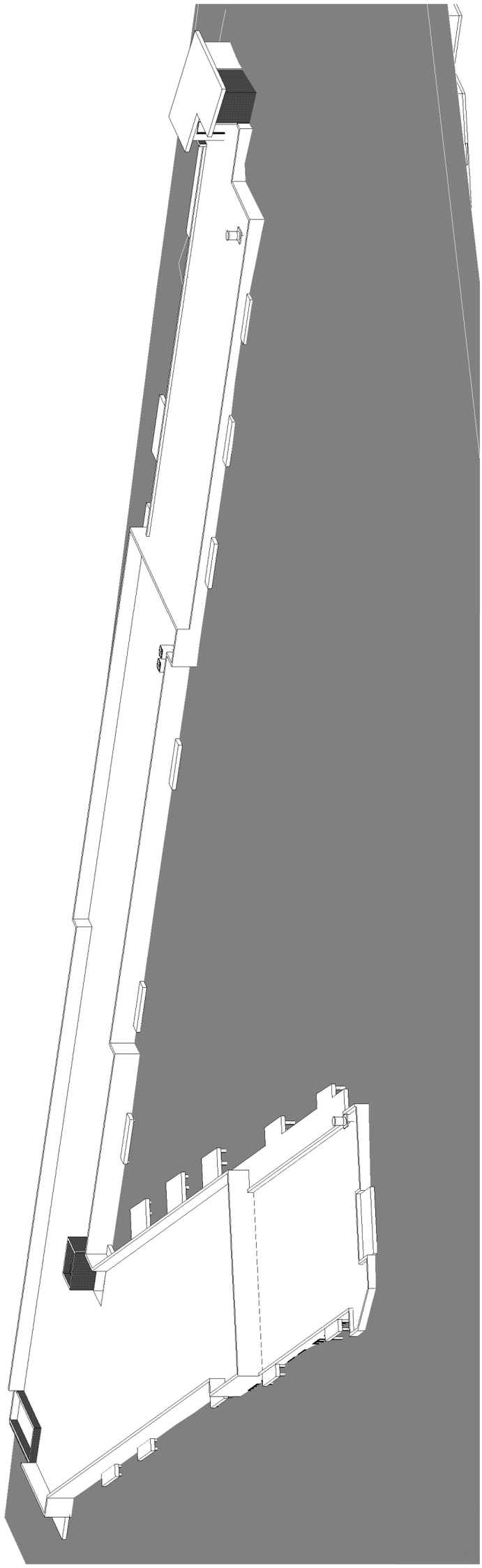

OLIVE WEST

PARKING MANAGEMENT PLAN
HOMESTAKE – PARK CITY, UT

Based on the current concept plans for the Homestake property, we would propose implementing the following parking recommendations and management plan:

- Use of a high-speed remote-controlled gate at the entrance to the parking structure. This will control access to the parking garage and the property. This will also offer an additional level of security for residents and personal property.
    - We use a parking access control system that is Bluetooth enabled. This is allows the residents to use their phone to open the garage door. This also allows management to grant and revote parking privileges remotely.
- Use of strategically positioned cameras in the parking structure. This will allow for remote monitoring of the parking area 24/7 by the management company.
- Engagement of a courtesy / security patrol service to patrol the property and parking structure several times a night.
- Use of parking permits / stickers for all vehicles authorized to be parked in the parking structure. Cars without stickers will be towed at the owner's expense.
- All parking stalls will be numbered, and it is anticipated that all residents will be granted at least one parking space in the parking structure.
- It is also anticipated that the property management company will have two parking spaces dedicated for the property manager and staff.
- The annual operating budget will include an allowance to sweep and clean the parking area on a semi-annual basis.

LEASE AGREEMENT
(Homestake Affordable Housing Development)

THIS LEASE AGREEMENT (as amended, modified or supplemented, this "**Lease Agreement**" or the "Lease") is dated as of _____ _____, 2023 (the "**Effective Date**"), between PARK CITY MUNICIPAL CORPORATION, a Utah municipal corporation (together with its permitted successors and assigns, the "**Landlord**"), and JF ENGINEHOUSE PARTNERS, LLC, a Utah limited liability company (together with its permitted successors and assigns, the "**Tenant**"). The Landlord and Tenant are referred to herein collectively as the "**Parties**".

PREAMBLE

A. Landlord is the owner of that certain 1.86-acre parcel of real property located at 1875 Homestake Road, Park City, Summit County, Utah, as more particularly described on **Exhibit A** attached hereto (the "**Premises**"), currently improved with a surface parking lot.

B. Landlord and Tenant desire that Tenant shall develop, own, and operate a mixed income affordable housing development with one hundred twenty-three (123) residential rental units (the "**Units**"), ninety-nine (99) of which will meet the affordability standards of the Park City Housing Resolution 05-2021 and will be designated as affordable units with rents priced to be affordable to households with incomes ranging up to sixty percent (60%) of the Area Medium Income ("**AMI**"), as determined and published annually by the US Department of Housing and Urban Development (the "**Affordable Units**"), with the remaining twenty-four (24) Units priced at market rates (the "**Project**"). The Project shall be known as "Engine House Apartments" and shall be located on the Premises, to be leased by Landlord to Tenant pursuant to this Lease Agreement.

C. Landlord desires to lease the Premises to Tenant pursuant to the terms and conditions of this Lease Agreement, and Tenant desires to lease the Premises from Landlord.

LEASE

In consideration of the foregoing preamble, the promises and mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant, with the intent to be legally bound, hereby agree as follows:

ARTICLE I - GRANT OF LEASED PREMISES; TERM; REQUIREMENTS

1.01 Grant of Lease; Term; Extension.

(a) Landlord hereby grants and demises the Premises to Tenant for a term commencing on the date hereof (the "**Commencement Date**") and expiring sixty-five (65) years from the Commencement Date, unless sooner terminated as provided herein (the "**Initial Term**"). The Initial Term, together with any Renewal Terms that take effect in accordance with the terms hereof, is referred to herein as the "**Lease Term**".

(b) Provided there is not an Event of Default by Tenant, beyond the applicable notice and cure periods set forth in Section 13.03, at the conclusion of the then-current

Lease Term, Tenant will have the right, at its option, to renew the Lease under the terms and conditions as provided in this Lease for up to three (3) consecutive periods consisting of one twelve (12) year period and two eleven (11) year periods, respectively (each time period a "**Renewal Term**"), resulting in a total Term of ninety-nine (99) years if all Renewal Terms take effect. Tenant shall have the right to request additional Renewal Terms. The then-current Lease Term will automatically renew pursuant to this Section 1.01(b), unless Tenant provides Landlord with written notice of its desire to not so exercise any such Renewal Term, which notice will be delivered to Landlord by one hundred eighty (180) days prior to the end of the then-existing Lease Term.

1.02 Applicable Requirements. The Premises are leased by Landlord to Tenant subject to the following requirements, as in effect from time to time:

(a) "**PAB Requirements**" shall mean all requirements applicable to the Private Activity Bonds Program, including, but not limited to, the U.S. Code Private Activity Bonds Section (26 U.S.C. § 142, *et seq.*), as amended, the Utah State Code Private Activity Bonds Section (35A-3-2102 *et seq*), as amended, and Utah Administrative Rule R990-200, as amended, notices and directives from the Utah Department of Workforce Services ("**DWS**") Housing and Community Development Division regarding the implementation of the PAB Program, and all applicable state statutory, executive order and regulatory requirements, as those requirements may be amended from time to time. The Units are subject to the PAB Requirements.

(b) "**Tax Credit Requirements**" shall mean any and all affordability and compliance, monitoring, reporting requirements and related matters required by Section 42 of the Internal Revenue Code of 1986, as amended (the "**Code**"), and the regulations thereunder, the Indenture of Restrictive Covenants (the "**Tax Credit Restrictive Covenant**"), the application submitted to the Utah Housing Corporation ("**UHC**") for low-income housing tax credits and the conditions imposed by the Qualified Allocation Plan promulgated by UHC (as may be amended from time to time), or any other signed agreement between Tenant and UHC as a condition of receipt of low income housing tax credits for the Project, and any deed restrictions in compliance with Utah Housing Authority Affordable Housing Guidelines. The Affordable Units are subject to the Tax Credit Requirements.

(c) "**City Requirements**" shall mean any and all requirements applicable to Park City Affordable Master Planned Developments, including, but not limited to, Park City Land Management Code § 15-6.1 *et seq*, the Park City Affordable Housing Guidelines Resolution 05-2021, Park City Planning Commission Approval dated October 26, 2022, the Park City Municipal Corporation Design Code, including building design that meets the International Energy Conservation Code 2021 standards, and Park City Municipal Corporation Sustainability Department's requirements as shown on the attached **Exhibit G**. The Units are subject to the City Requirements. For the avoidance of doubt, in the event of any conflict or inconsistency between the City Requirements and Tax Credit Requirements, the more restrictive requirement on the Tenant shall control, unless such requirement would violate the Fair Housing Act or otherwise cause the filing of Form 8823 to the Internal Revenue Service.

(d) The PAB Requirements, Tax Credit Requirements, and City Requirements are collectively the "**Applicable Requirements**".

1.03 Permitted Encumbrances. In addition to the Applicable Requirements, the Premises is leased by Landlord to Tenant subject to the Permitted Encumbrances identified on Schedule 1.03 attached hereto, and together with any rights appurtenant to the Premises.

ARTICLE II – DEVELOPMENT

2.01 Development. The "**Development**" consists of the Premises, together with all appurtenances, easements and rights of way related thereto, and the Improvements (as defined below) to be constructed thereon, including the Project, in accordance with this Lease Agreement.

2.02 Condition of the Premises. Subject only to the performance of the Required Landlord Remediation, Tenant acknowledges and agrees that Landlord has delivered possession of the Premises to Tenant, that the Premises are satisfactory to Tenant in all respects, and that Tenant leases the Premises "as is, where is and with all faults". Except as expressly set forth herein, Landlord makes no representation, express or implied, regarding the condition of the Premises, and Tenant hereby waives any claims against or liabilities of Landlord with respect to the condition of the Premises and any existing improvements thereon.

2.03 Landlord's Remediation Obligation. Landlord will be responsible, at its sole cost and expense, for performing the remediation work recommended by the Environmental Reports (as defined herein) in accordance with the schedule attached hereto as Schedule 2.03 (the "**Remediation Schedule**"), and will provide Tenant with evidence of completion of such remediation approved by the Authority Having Jurisdiction with respect to the remediation work ("**AHJ**"), including but not limited to a letter from the Park City Soil Ordinance in a form acceptable to Tenant. Any unforeseen pre-existing soil contamination on the Premises revealed during construction, and not caused by Tenant or its agents or contractors, will be managed through export or on-site containment as directed by the AHJ, at the Landlord's expense. Landlord's obligations pursuant to this paragraph are collectively the "**Required Landlord Remediation**". Employees and contractors of Landlord and its affiliates shall have the right to enter the Premises from and after the Effective Date as necessary to complete the Required Landlord Remediation, provided that Landlord and its affiliates shall use commercially reasonable efforts to minimize any interference with work by Tenant. If the Landlord fails to the complete the Required Landlord Remediation on or prior to the date set forth in the Remediation Schedule, then the Tenant and its contractors may perform such Required Landlord Remediation at the Landlord's sole cost and expense.

2.04 Construction of the Improvements.

(a) Tenant, at Tenant's sole cost and expense, shall construct the buildings, structures and other improvements on the Premises, including all walkway and road improvements, parking areas and facilities, landscaping improvements of whatever nature, all utility and sewage lines and the appurtenances of all of the foregoing ("**Improvements**") as more particularly described in **Exhibit B-1** attached hereto and incorporated herein, in substantial compliance with the construction plans and

specifications, including compliance with all terms and conditions of the Line Extension Agreement between Snyderville Basin Water Reclamation District and JF Development Group, LLC concerning the Premises (the "**Plans and Specifications**"), for the Improvements that have been previously approved by Landlord, and in accordance with the approved Construction Schedule, subject to any delays resulting from Force Majeure (as hereinafter defined). The current approved Plans and Specifications are attached hereto as **Exhibit B-2**. The current approved schedule for the construction of the Improvements (the "**Construction Schedule**") is attached hereto as **Exhibit B-3**. Tenant shall not make any Material Change (as hereinafter defined) to the Plans and Specifications without the advance written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed for longer than seven (7) days, and shall not make any other changes to the Plans and Specifications without advance written notice to Landlord. Tenant shall not make any changes to the Construction Schedule that would cause substantial completion of the Improvements to be delayed beyond the Outside Completion Date without the advance written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed for longer than seven (7) days, and shall not make any other material amendments, modifications or any other alterations to the Construction Schedule without advance written notice to Landlord. As used herein, a "**Material Change**" is any change that, as compared to the most recently approved Plans and Specification, (i) affects the number of Units, (ii) materially adversely affects any common spaces or amenities available to tenants, or (iii) violates any Applicable Laws or Applicable Requirements. Notwithstanding the foregoing, Landlord and its agents or employees shall not unreasonably interfere with the construction of the Improvements (a "**Landlord Delay**"), provided that reasonable review and approval periods by Landlord shall not constitute Landlord Delay. A failure to complete all or any part of the Required Landlord Remediation by the date set forth in the Remediation Schedule shall constitute a Landlord Delay.

(b) Any and all Improvements constructed by Tenant shall be constructed in a good and workmanlike manner, in compliance with all applicable laws, including, without limitation, all Park City Municipal Corporation Sustainability Department's requirements as set forth on **Exhibit G** attached hereto, and all laws, ordinances, codes, orders, rules, and regulations, including Applicable Requirements (collectively "**Applicable Laws**") of all governmental entities having jurisdiction over the Improvements (collectively the "**Governmental Authorities**"), including, but not limited to UHA and DWS.

(c) With the cooperation of Landlord, Tenant shall apply for and prosecute, with reasonable diligence, all necessary approvals, permits, and licenses required by applicable Governmental Authorities for the design, development, zoning, use, and occupation of the Improvements.

(d) In the event Tenant shall not (i) begin construction of the Improvements, as evidenced by a notice to proceed, within one (1) year after the date hereof, or (ii) complete construction of the Improvements, as evidenced by receipt of a certificate of substantial completion by the Project architect and a certificate of occupancy, and cause the Project to be placed in service for purposes of Section 42 of the Code, on or before the date that is [twenty-four (24) months] following the completion date identified on the Construction

Schedule as the same may be extended as provided for herein (the "**Outside Completion Date**"), Tenant shall be in default of this Lease Agreement, and, subject to the provisions of Sections 13.02 and 13.03 below and, Landlord shall have the right to pursue any remedies set forth in Section 13.04 below. Notwithstanding anything to the contrary contained in this Lease, if Tenant is prevented from, or delayed in, performing its obligations (including, without limitation, those obligations set forth in clause (i) and/or (ii) above) due to either (i) Landlord Delay or (ii) any delay due to strikes, lockouts, labor disputes, acts of God, pandemic/epidemic, general shortages of labor or materials, governmental shutdowns, civil commotions, fire or other casualty, and other causes that are not caused by Tenant and are beyond the reasonable control of Tenant ("**Force Majeure**"), the Outside Completion Date will be extended (a) in the event of a Landlord Delay, on a day-for-day basis equal to the duration of such Landlord Delay, (b) in the event of Force Majeure, for each day pursuant to which a delay is caused by an event of Force Majeure or (c) upon extension by the Permitted Leasehold Mortgagee of the completion timeline pursuant to the loan documents. Tenant shall notify Landlord within forty-five (45) days of any claimed event of Force Majeure with an estimate of the time period of anticipated delay, which estimate is for informational purposes only and will not be controlling, and a new Outside Completion Date. Under no circumstances shall Force Majeure excuse or delay any payment obligations of Tenant.

(e) Tenant shall provide Landlord a copy of the monthly written progress report detailing the status of construction, including without limitation (i) the construction schedule, and any deviations from the planned Construction Schedule in excess of sixty (60) days; (ii) the construction budget, and any deviations from the planned construction budget; (iii) any change orders; and (iv) any adverse conditions, including environmental matters, encountered during the course of construction. Tenant may satisfy the foregoing requirement by providing a copy of the monthly progress report provided to the Senior Mortgagee (as hereinafter defined) and/or tax credit partner in accordance with the standard protocol of Senior Mortgagee and tax credit partner. Landlord agrees that Tenant shall have the right to mark information contained in the monthly written progress report as proprietary in accordance with all loan documents and partnership agreements. Landlord may request other construction details from time to time. Landlord or its contracted third-party representative(s) may request to attend a construction meeting with Tenant to discuss construction progress and status (no more than once monthly), provided, that the Parties agree that Tenant will not be required to schedule its construction meetings based on Landlord's availability and Tenant will not be in breach of this Lease Agreement for failure to include Landlord in any construction meeting unless done in bad faith. Landlord shall have the right to inspect the status of construction from time to time not to exceed more than once monthly, by providing two (2) business days prior written notice to Tenant, so long as such inspection does not in any way interfere with the construction of the Project.

(f) During the course of construction of the Improvements, Landlord or its contracted third-party representative(s) shall have the right, but not the obligation, to inspect the Improvements for compliance with the approved Plans and Specifications, commissioning reports, and the terms of this Lease.

(g) Upon completion of the Improvements, Tenant shall complete as-built plans with respect to the Improvements, and shall provide Landlord with a copy of such plans.

2.05 Ownership of Improvements During Lease Term. The Improvements shall be the sole property of Tenant until the expiration or other termination of this Lease Agreement. Tenant alone shall be entitled to all of the tax attributes of ownership, including, without limitation, the right to claim depreciation or cost recovery deductions and the right to claim the low-income housing tax credit described in Section 42 of the Code, if applicable, and Tenant shall have the right to amortize capital costs and to claim any other federal or state tax benefits attributable to the Development. Landlord acknowledges and agrees that any and all depreciation, amortization, profits, losses, income, and tax credits for federal or state tax purposes relating to the Improvements located on the Development and any and all additions thereto, substitutions therefor, fixtures therein and other property relating thereto shall be deducted by or credited exclusively to Tenant during the term of this Lease Agreement.

2.06 Landlord's Line Extension Obligation. As part of the Improvements, Tenant will be responsible, at its sole cost and expense, for performing the construction of the "Private Lateral Wastewater Line" as referred to in that certain Line Extension Agreement by and between JF Development Group, LLC, a Utah limited liability company, and the Snyderville Basin Water Reclamation District, a local district of the State of Utah and attached hereto as **Exhibit C** (the "**Line Agreement**"), and will provide Landlord with evidence of completion of such construction approved by the AHJ. Within seven (7) days of request from Tenant, Landlord agrees to execute and enter into an easement over any property owned or controlled by Landlord and required for the installation of the facilities contemplated by the Line Agreement, pursuant to a separate recorded easement agreement in substantially the same form as the Snyderville Basin Grant of Easement attached hereto as **Exhibit D**.

2.07 Reports.

(a) Quarterly Operating Report. On a quarterly basis, Tenant will provide Landlord with an operating report throughout the Lease Term, including without limitation occupancy, rents, collections, maintenance activities and resident communications/complaint resolutions, and such other matters as Landlord may reasonably request from time to time. Tenant may satisfy the foregoing requirement by providing a copy of the periodic operating report provided to the Senior Mortgagee and/or tax credit partner in accordance with the standard protocol of Senior Mortgagee and tax credit partner. Any information provided to Landlord will be subject to the Confidentiality requirements as defined in Section 15.02 of this Lease and Landlord will limit distribution of Quarterly Operating Reports to full-time employees of Landlord, its duly elected government representatives, and third-party representative(s), all of whom will also be subject to the Confidentiality provisions in Section 15.02 of this Lease Agreement.

(b) Annual Compliance Report. Landlord will deliver all reports required by UHA and Park City Affordable Housing Department regarding tenant income and occupancy requirements.

ARTICLE III - REPRESENTATIONS AND WARRANTIES

3.01 Landlord's Representations and Warranties. Landlord hereby represents and warrants to Tenant as follows:

(a) Title. Landlord owns fee simple, good and marketable title to the Premises. However, during the Lease Term, Tenant alone shall be deemed to own the Improvements for federal income tax purposes and shall be entitled to all of the federal tax attributes of ownership of the Improvements, including, without limitation, the right to claim depreciation or cost recovery deductions and the right to claim the low-income housing tax credit described in Section 42 of the Code; and that Tenant shall have the right to amortize capital costs and to claim any other federal tax benefits attributable to the Improvements and the equipment therein.

(b) Landlord and Approvals. (i) Landlord has full right, power, and authority to make, execute, deliver, and perform its obligations under this Lease Agreement; (ii) Landlord has obtained and received all required and necessary consents and approvals to enter into this Lease Agreement with Tenant; and (iii) the entry by Landlord into this Lease Agreement with Tenant and the performance of all of the terms, provisions, and conditions contained herein does not and will not, violate or cause a breach or default under any agreement or obligation to which Landlord is a party or by which it is bound.

(c) Contractual Obligations. Landlord is not obligated under any contract, lease or agreement, materially affecting the ownership, use, operation, management, maintenance, or lease of the Development, or any portion thereof.

(d) Litigation. There is no action, suit, litigation, or proceeding pending or, to Landlord's knowledge, threatened against Landlord that could (i) prevent or impair Landlord's entry into this Lease Agreement or performance of its obligations hereunder, or (ii) impair Tenant's ability to construct the Improvements in accordance with the Plans and Specifications.

(e) Environmental.

(i) Environmental Reports. Landlord and Tenant acknowledge and agree that, prior to the date hereof, Tenant has been provided with the environmental reports listed on Schedule 3.01(e)(i) attached hereto (the "**Environmental Reports**").

(ii) For the purposes hereof "**Hazardous Substances**" includes any substances, chemicals, materials or elements that are prohibited, limited or regulated by any and all federal, state or commonwealth, and local laws, regulations, statutes, codes, rules, resolutions, directives, orders, executive orders, consent orders, guidance from regulatory agencies, policy statements, judicial decrees, standards, permits, licenses and ordinances, or any judicial or administrative interpretation of, any of the foregoing, pertaining to the protection of land, water, air, health, safety or the environment whether now or in the future

enacted, promulgated or issued (the "**Environmental Laws**"), or any other substances, chemicals, materials or elements that are defined as "hazardous" or "toxic," or otherwise regulated under the Environmental Laws, or that are known or considered to be harmful to the health or safety of occupants or users of the Development. The term Hazardous Substances shall also include, without limitation, any substance, chemical, material, or element (i) defined as a "hazardous substance" under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 USC §§ 9601, et seq.), as amended by the Superfund Amendment and Reauthorization Act of 1986, and as further amended from time to time and regulations promulgated thereunder; (ii) defined as a "regulated substance" within the meaning of Subtitle I of the Resource Conservation and Recovery Act (42 USC §6991-6991 i), as amended from time to time and regulations promulgated thereunder; (iii) designated as a "hazardous substance" pursuant to Section 311 of the Clean Water Act (33 USC §1321), or listed pursuant to Section 307 of the Clean Water Act (33 USC §1317); (iv) defined as "hazardous," "toxic," or otherwise regulated under any Environmental Laws adopted by the state in which the Development is located, or its agencies or political subdivisions; (v) which is petroleum, petroleum products or derivatives or constituents thereof, (vi) which is asbestos or asbestos-containing materials; (vii) the presence of which requires notification, investigation or remediation under any Environmental Laws or common laws; (viii) the presence of which on the Development causes or threatens to cause a nuisance upon the Development or to adjacent properties or poses or threatens to pose a hazard to the health or safety of persons on or about the Development; (ix) the presence of which on adjacent properties would constitute a trespass by the owner; (x) which is urea formaldehyde foam insulation or urea formaldehyde foam insulation-containing materials; (xi) which is lead-based paint or lead-based paint-containing materials; (xii) which are polychlorinated biphenyls or polychlorinated biphenyl-containing materials; (xiii) which is radon or radon-containing or producing materials; or (xiv) which by any laws of any governmental authority requires special handling in its collection, storage, treatment or disposal. Notwithstanding any contrary provision of this paragraph (g), the term Hazardous Substances shall not apply to such substances that would otherwise meet such definition as long as (i) the use of such substance in, on or under the Development is in compliance with all Environmental Laws and (ii) such substance is used in *de minimis* quantities incidental to the operation of the Development.

3.02 Tenant's Representations and Warranties. Tenant hereby warrants and represents to Landlord as follows:

(a) Existence. Tenant is a limited liability company presently subsisting under the laws of the State of Utah.

(b) Authority. Tenant (i) has the power and authority to own its properties and assets, to conduct its business as presently conducted and to execute, deliver, and perform its obligations under this Lease Agreement and (ii) has obtained all authorizations and

approvals which are necessary for it to execute, deliver, and perform its obligations under this Lease Agreement.

(c) Binding Obligation. This Lease Agreement has been duly and validly executed and delivered by Tenant and constitutes a legal, valid, and binding obligation of Tenant enforceable in accordance with its terms.

(d) Litigation. There is no pending and served or, to the best of Tenant's knowledge, threatened investigation, action, or proceeding by or before any court, any governmental entity or arbitrator which (i) questions the validity of this Lease Agreement or any action or act taken or to be taken by Tenant pursuant to this Lease Agreement or (ii) is likely to result in a material adverse change in the authority, property, assets, liabilities or condition, financial or otherwise, of Tenant which will materially impair its ability to perform its obligations hereunder.

(e) Full Disclosure. No representation, statement, or warranty by Tenant contained in this Lease Agreement or in any exhibit attached hereto contains any untrue statement of a material fact or omits a material fact necessary to make such statement of fact therein not misleading.

ARTICLE IV - RENT

4.01 Base Rent. As consideration for this Lease Agreement, Tenant shall pay to the Landlord the amount of One Dollar ($1.00) per year (the "**Base Rent**"). Tenant may prepay any amount of the Base Rent at any time. Landlord and Tenant acknowledge and agree that, taking into account the obligations of Tenant with respect to the Project, and the restrictions imposed on the use of the Development, the Base Rent constitutes adequate and fair consideration for the lease of the Premises.

4.02 Additional Rent. All other amounts, other than Base Rent, payable by Tenant to Landlord under the terms of this Agreement, shall constitute "**Additional Rent.**"

4.03 Payments by Tenant. Other than as expressly set forth in this Lease Agreement, all costs expenses, liabilities, charges or other deductions whatsoever with respect to the Development or with respect to any interest of Landlord in the Development, the Improvements, or this Lease Agreement shall be the responsibility of Tenant.

ARTICLE V - TAXES, OPERATING EXPENSES, INSURANCE REQUIREMENTS, AND RESTORATION

5.01 Taxes. Tenant will pay any payments in lieu of real estate taxes, any real estate taxes and personal property taxes and assessments assessed, levied, confirmed, or imposed on the Development during the Lease Term, whether or not now customary or within the contemplation of Landlord and Tenant, on or before the earlier to occur of (i) the date such payment is due, or (ii) the date on which the Senior Mortgagee would provide notice of default to Tenant for the same and provide evidence of such payment to Landlord prior to the foregoing date, provided that a failure to provide such evidence shall not constitute a default as long as taxes are paid when due (prior to a property tax sale). Landlord shall pay all local, state, or federal net income taxes

assessed against Landlord; local, state, or federal capital levy of Landlord; or sales, excise, franchise, gift, estate, succession, inheritance, or transfer taxes of Landlord. Landlord shall: (i) cause any tax bills to be sent directly to Tenant or (ii) provide copies of all bills directly to Tenant promptly after receipt.

5.02 Operating Expenses. Subject to the availability of net cash flow generated from the operation of the Project, Tenant will pay or cause to be paid directly to the providers of such services all costs and expenses attributable to or incurred in connection with the ownership, use, leasing, occupancy, operation, maintenance, and repair of the Development, except for utilities paid directly by residents occupying units within the Project who receive a utility allowance, including without limitation (i) all energy sources for the Improvements, such as propane, butane, natural gas, steam, electricity, solar energy, and fuel oil; (ii) all water, sewer and trash disposal services; (iii) all construction, maintenance, repair, replacement and rebuilding of the Improvements including, without limitation, all mechanical, electrical, HVAC, telecommunications and security systems within the Improvements, and all structural and non-structural components of the Improvements, both interior and exterior; (iv) all landscaping, snow removal, maintenance, repair and striping of all parking areas of the Improvements; (v) all insurance premiums relating to the Development, including fire and extended coverage, public liability insurance, rental insurance and all risk insurance; and (vi) the costs and expenses of all capital improvements or repairs (whether structural or non-structural) required to maintain the Improvements in good order and repair or required by any Governmental Authority having jurisdiction over the Development necessary for the safe, sanitary operation of the Development to keep it in good working order and habitable condition. Notwithstanding the foregoing, no Senior Mortgagee shall be obligated in any instance, including but not limited to any circumstance pursuant to which a Senior Mortgage or any designee thereof becomes the tenant hereunder, to cure the foregoing obligations of Tenant.

5.03 Permits and Licenses. Tenant will procure, or cause to be procured, any and all necessary permits, licenses, or other authorizations required for the ownership, use, leasing, occupancy, operation, maintenance, and repair of the Development, including without limitation the installation and maintenance of wires, pipes, conduits, equipment, and appliances for use in supplying any utility service to and upon the Development. Landlord, upon request of Tenant, and at the sole expense and liability of Tenant, will join with Tenant in any application required for obtaining or continuing any such services.

5.04 Insurance. Tenant shall maintain and keep in force insurance in the type and for the amounts specified in **Exhibit E**. All public liability, property damage liability, and casualty policies maintained by Tenant will be written as primary policies, not contributing with and not secondary to insurance coverage that Landlord may carry, and shall name Landlord as an additional insured or loss payee, as applicable. It is the specific intent of the Parties that all insurance held by Landlord shall be excess, secondary, and non-contributory. If Tenant fails to maintain such insurance, at its election, and upon twenty (20) business days' prior written notice to Tenant, Landlord may procure such insurance as may be necessary to comply with the insurance requirements of this Section 5.03 (but shall not be obligated to procure same), and Tenant shall repay to Landlord the cost of such insurance as Additional Rent. Tenant shall furnish to Landlord certificates of insurance upon written request by Landlord.

(a) Insurance Proceeds Upon Damage or Destruction.

(i) If the Improvements shall be damaged or destroyed in whole or in part, Tenant shall give prompt notice thereof to Landlord. If during the Lease Term, the Improvements shall be damaged or destroyed by Casualty (as defined in Section 11.01), Tenant shall repair or restore the Improvements as required by this Lease Agreement or the Applicable Requirements, subject to the terms and requirement of the Senior Mortgagee, it being understood that Tenant's obligation to rebuild the Improvements shall be limited to the amount of available casualty/hazard insurance proceeds. In such event neither Landlord nor Tenant shall have the right to terminate this Lease Agreement, and this Lease Agreement shall continue in effect.

(ii) To the extent required by the terms of any Senior Mortgage (as hereinafter defined) the Senior Mortgagee shall have the right to participate in adjustment of losses as to any casualty or hazard insurance proceeds. To the extent required by the terms of any Senior Mortgage, the Senior Mortgagee shall have the right to hold and disburse Net Proceeds resulting from any Casualty event in accordance with this Agreement. The party responsible for holding and disbursing such Net Proceeds (the "**Disbursing Party**") shall, promptly and with all due diligence, apply for and collect all applicable insurance proceeds recoverable with respect to such Casualty, for the benefit of Tenant and if applicable, any Permitted Leasehold Mortgagee (as such term is defined in Section 7.05(b)(i)), but contemplated to be the Senior Mortgagee. Subject to the requirements of the Senior Mortgage, the net amount of all insurance proceeds received by Tenant with respect to such damage or destruction, after deduction of the reasonable costs and expenses incurred in collecting the same (the "**Net Proceeds**"), shall be disbursed in accordance with the terms and conditions set forth herein to pay for the costs and expenses of the Restoration (defined below), provided that (i) no Event of Default (defined below) has occurred and remains uncured under this Lease Agreement, (ii) Tenant shall proceed promptly after the insurance claims are settled with the restoration, replacement, rebuilding or repair of the Improvements as nearly as possible to the condition the Improvements were in immediately prior thereto, subject to any alterations agreed to by Landlord (the "**Restoration**"), (iii) the Restoration shall be done in compliance with all Applicable Laws, (iv) the plans and specification for the Restoration, to the extent that they materially deviate from the Approved Plans and Specifications under this Lease, shall be submitted in advance to Landlord, and shall be satisfactory to Landlord in its commercially reasonable discretion not to be unreasonably withheld, conditioned or delayed for longer than seven (7) days, and Landlord shall not unreasonably interfere with the Restoration, and (v) all costs and expenses incurred in connection with making the Net Proceeds available for the Restoration, including, without limitation, reasonable counsel fees and inspecting engineer fees incurred by Senior Mortgagee, shall be paid out of the Net Proceeds. Notwithstanding anything to the contrary contained herein, the foregoing shall be subject to the terms of the loan documents evidencing and securing the Senior Mortgagee's loan to the Tenant.

(iii) Subject to the terms of the Senior Mortgage, the Net Proceeds shall be held in trust with interest thereon from the date of deposit and shall be paid by the Disbursing Party to, or as directed by, Tenant from time to time during the course of the Restoration upon the written request of Tenant if the work for which payment is requested has been done in a good and workmanlike manner and substantially in accordance with the plans and specifications thereof, if any.

(iv) Any amount of the Net Proceeds received and not required to be disbursed for the Restoration pursuant to the provisions of subsections (i) through (iii) above may in Senior Mortgagee's discretion be either (a) retained by Senior Mortgagee and applied to the payment of the loan secured by the Senior Mortgage, or (b) paid in whole or in part to Tenant for such purposes as Senior Mortgagee shall designate. If Senior Mortgagee shall receive and retain such Net Proceeds pursuant hereto, the lien of any mortgage held by Senior Mortgagee shall be reduced by the amount received and retained by Senior Mortgagee which shall be applied by Senior Mortgagee to the reduction of the obligations secured by such mortgage.

(v) Notwithstanding the above, for so long as any Senior Mortgage is outstanding, all approvals, agreements and determinations made by Landlord as set forth above with respect to the Restoration of the Improvements and the Net Proceeds in this Section 5.04(a) shall be subject to the terms of the Senior Mortgage and the approval of the Senior Mortgagee and the other parties required under the Senior Mortgage.

(vi) As used herein, "**Senior Mortgage**" shall means the senior most Permitted Leasehold Trust Deed that encumbers the Premises from time to time; and "**Senior Mortgagee**" shall mean, collectively, the holder(s) of any Senior Mortgage from time to time.

ARTICLE VI - USE OF PREMISES; COVENANTS RUNNING WITH THE LAND

6.01 Permitted Use. During the Lease Term, the Premises shall be used solely for the purpose of multi-family housing in compliance with the Applicable Requirements, including ancillary parking and other uses ancillary to multi-family housing (the "**Permitted Use**"), and for no other use whatsoever. Tenant shall not use or permit the Premises or any portion of the Premises to be improved, developed, used, or occupied in any manner or for any purpose that is in any way in violation of any valid law, ordinance, or regulation of the Applicable Requirements or any federal, state, county, or local governmental agency, body or entity. All such foregoing requirements and the restrictions with respect to the Premises shall be binding upon Tenant and Landlord and each of their respective successors and assigns, including, without limitation, any

Person which succeeds to Tenant's interest in the Premises by foreclosure or an instrument in lieu of foreclosure for the entirety of the Lease Term.

6.02 Compliance with Laws. Tenant shall not use or occupy, or suffer or permit any portion of the Development to be used or occupied in violation of any Applicable Law, certificate of occupancy, or other governmental requirement.

6.03 Special Provisions Relating to Compliance with Environmental Laws.

(a) Tenant's Environmental Covenants. Without limitation of any of Tenant's other covenants, agreements and obligations under this Lease Agreement, and subject to Landlord's obligation to complete the Required Landlord Remediation, Tenant hereby specifically covenants and agrees to fulfill the responsibilities set forth below with respect to environmental matters:

(i) Tenant shall comply with all Environmental Laws applicable to Tenant in connection with the development, ownership, operation and maintenance of the Project, except the Required Landlord Remediation. Tenant shall identify, secure, and maintain all required governmental permits and licenses as may be necessary for the Development or otherwise required by Tenant's activities. Tenant shall maintain such permits and licenses in effect and shall renew them in a timely manner, and Tenant shall comply and cause all third parties to comply with the terms of such permits and licenses. All Hazardous Substances present, handled, generated or used by Tenant on the Development will be managed, transported and disposed of in a lawful manner.

(ii) Tenant shall provide Landlord with copies of all forms and other information concerning any releases, spills or other incidents relating to Hazardous Substances or any known violations of Environmental Laws promptly upon the discovery of such releases, spills, or incidents.

(b) Landlord's Environmental Covenants. Landlord shall perform the Required Landlord Remediation at its sole cost and expense in accordance with this Lease Agreement. Without limitation of any of Landlord's other covenants, agreements, and obligations under this Lease Agreement, Landlord hereby specifically covenants and agrees to provide Tenant with copies of all forms and other information received by Landlord concerning any releases, spills, or other incidents relating to Hazardous Substances or any violations of Environmental Laws with respect to the Development of which Landlord has actual knowledge.

6.04 Tenant's Environmental Indemnity. Tenant covenants and agrees to indemnify, defend, and hold Landlord free and harmless from and against any and all losses, liabilities, penalties, claims, fines, litigation, demands, costs, judgments, suits, proceedings, damages, disbursements, or expenses (including reasonable attorneys' fees) which may at any time be imposed upon, reasonably incurred by, or asserted or awarded against Landlord in connection with or arising from:

(a) the existence of any Hazardous Substances which are first placed on, in, or under all or any portion of the Development during the Lease Term except to the extent so placed by Landlord or its employees, members, or agents; or

(b) any violation of any Environmental Laws by Tenant at or relating to the Development which does not arise out of conditions existing prior to the Commencement Date.

Notwithstanding the foregoing, Tenant's indemnity shall be limited to matters that occur during the Lease Term and that are directly or indirectly caused by Tenant's usage of the Development including acts of Tenant's residents, agents, or employees and not caused by Landlord, its employees, or agents. In no event shall Tenant be liable to Landlord hereunder for (i) any environmental contamination or hazardous materials conditions existing prior to the commencement of this Lease Agreement, or (ii) any item caused by Landlord, its employees, or agents.

6.05 Landlord's Environmental Indemnity. Landlord covenants and agrees to indemnify, defend, and hold Tenant free and harmless from and against any and all losses, liabilities, penalties, claims, fines, litigation, demands, costs, judgments, suits, proceedings, damages, disbursements, or expenses (including reasonable attorneys' fees) which may at any time be imposed upon, reasonably incurred by, or asserted or awarded against Tenant in connection with or arising from:

(a) the existence of any Hazardous Substances which are first placed on, in, or under all or any portion of the Development prior to the Lease Term, except to the extent so placed by Tenant or its residents, employees, members or agents;

(b) any violation of any Environmental Laws by Landlord or its contractors or agents at or relating to the Development; or

(c) any work or capital improvements required in connection with, arising from or relating to the Required Landlord Remediation.

In no event shall Landlord be liable to Tenant hereunder for (i) any environmental contamination or hazardous materials conditions first arising from and after the commencement of this Lease Agreement (except to the extend caused by Landlord, its contractors or agents), or (ii) any item caused by Tenant or its residents, employees, members or agents.

6.06 Restrictions Applicable to Development. The provisions of this Section 6.06 are intended to create a covenant running with the land during the Lease Term, and shall be binding upon Landlord and Tenant and each of their respective successors and assigns and subtenants and all subsequent owners of the Development, including, without limitation, any entity which succeeds to Tenant's interest in the Development until the termination thereof.

(a) Tenant shall operate and maintain the Development in compliance with the Applicable Requirements, which impose certain restrictions on the use of the Development.

(b) Tenant shall not execute any agreement, lease, conveyance or other instrument whereby the Development or any part thereof is restricted upon the basis of race, color, creed, religion, ancestry, national origin, handicap, age, sex, familial or marital status, in the sale, lease, rental, use, or occupancy of the Development.

(c) Tenant shall not discriminate in the use, sale, lease, or occupancy of the Development against any person upon the basis of race, color, creed, religion, ancestry, national origin, handicap, age, sex, familial or marital status.

(d) Tenant shall comply with all state, federal and local laws, rules, and regulations in effect from time to time, prohibiting discrimination or segregation by reason of race, color, creed, religion, ancestry, national origin, handicap, age, sex, familial or marital status in the sale, lease, use, or occupancy of the Development.

(e) Tenant shall devote the Development and any part thereof to uses consistent with the requirements of the Tax Credit Restrictive Covenant as long as it is in effect.

(f) Tenant, to the extent required under or in connection with the Tax Credit Restrictive Covenant or the requirements under Section 42 of the Code, shall only lease the Affordable Units to qualified households as defined in the UHC's Land Use Restrictive Agreement and in the Affordable Housing Plan, as defined in **Exhibit H** Resident Selection Plan, for the duration of the Lease Term.

(g) Tenant shall not permit short-term or nightly rentals in the Development, and the minimum initial lease term at the Development shall be six (6) months. The foregoing requirement shall be specifically included as a covenant in all residential leases at the Development.

(h) Landlord shall not impose any requirements or policies affecting the Development that contravene or conflict with the Applicable Requirements or any federal law, statute, regulations or guidance, including but not limited to any FHA or fair housing laws, statutes, regulations or guidance.

6.07 No Further Encumbrances. Tenant agrees that, with the exception of (i) the Permitted Leasehold Mortgages (as defined in Section 7.04) or any other Permitted Encumbrances (as defined in Section 1.03 and (ii) encumbrances granted in the ordinary course of the development and operation of the Project (including without limitation utility easements), neither the Project nor any portion thereof shall be encumbered in any way, nor the assets of the Project pledged as collateral for a loan, without the prior written approval of Landlord and the Senior Mortgagee (if required pursuant to Applicable Requirements).

ARTICLE VII - CONVEYANCES, ASSIGNMENTS AND TRANSFERS

7.01 Assignment, Subletting, and Encumbrances. Except for Permitted Transfers (as defined below) and Permitted Leasehold Mortgages, Tenant shall not voluntarily or involuntarily assign, transfer, mortgage, pledge, or encumber this Lease or any interest therein, and shall not sublet all or any portion of the Premises, or assign, transfer or pledge any direct or indirect or beneficial interest in the entity that constitutes Tenant (each a "**Transfer**"), without the written

consent of Landlord. Subject to any provisions of the Permitted Leasehold Mortgages to the contrary, if the consent of Landlord is required for a Transfer and is not obtained, then any person to whom any Transfer is attempted without the consent of Landlord shall have no claim, right, or remedy whatsoever hereunder against Landlord, and Landlord shall have no duty to recognize any person claiming under or through the same. Landlord's consent to one conveyance, assignment, or transfer will not waive the requirement of their consent to any subsequent conveyance, assignment, or transfer.

7.02 Request for Consent. If Tenant requests Landlord's consent to a specific conveyance, assignment, or transfer, Tenant shall provide to Landlord (a) the name and address of the proposed transferee; (b) a copy of all proposed conveyance, assignment, or transfer instruments and other legal agreements involved in effecting a transfer; (c) reasonably requested information about the nature, business, and business history of the proposed transferee; (d) banking, financial, or other credit information, and references about the proposed person or entity sufficient to enable Landlord to determine the financial responsibility and qualifications of the proposed transferee; and (e) an instrument in writing reasonably satisfactory to Landlord and in recordable form wherein the proposed transferee expressly assumes all of the obligations of the transferor arising after the transfer date. Upon the granting of any consent by Landlord with respect to a conveyance, assignment, or transfer by Tenant, this Lease Agreement shall be binding upon and inure to the benefit of Landlord, the transferee of Tenant, and their respective successors and permitted assigns.

7.03 Permitted Transfers. Notwithstanding the foregoing, except to the extent that any of the following constitutes a Prohibited Transfer, no consent of the Landlord shall be required for any of the following Transfers (each a "**Permitted Transfer**"), and none of the following shall constitute a default hereunder, provided that:

(a) A Transfer to a Qualified Transferee, provided that reasonable documentation showing that the requirements for a Qualified Transferee are satisfied has been provided to Landlord at least thirty (30) days prior to the effective date of such Transfer, together with the materials required under Section 7.02 above. As used herein, a "**Qualified Transferee**" means a Person that, at the time of such Transfer:

(i) has a tangible net worth together with its Affiliates (determined in accordance with GAAP consistently applied) that is not less than the greater of (A) Tenant's tangible net worth as of the date hereof; (B) Tenant's tangible net worth as of the effective date of such Transfer; or (C) $100 Million each as adjusted for any increase in the CPI every five (5) Lease Years;

(ii) together with its Affiliates, has been engaged in the ownership and management of multi-family properties similar to the Premises for a period of at least five (5) years, and owns or operates a portfolio of multi-family properties similar to the Premises with an aggregate total of at least 250,000 rentable square feet of space or 250 units (not including the Premises);

(iii) neither the transferee, nor any Affiliate of the transferee, nor any principal or executive officers of the transferee, is a Prohibited Person (as defined herein);

(iv) agrees to a mutually acceptable five-year capital expenditure plan for the Development that is consistent with or better than the five-year capital expenditure plan existing as of the Transfer date;

(v) expressly agrees to assume the obligations of the Tenant under this Lease, and to operate the Premises according to the Permitted Use.

(b) An assignment of all or part of this Lease Agreement, or a sublease of all or a part of the Development, to (i) any entity that Controls (as defined below in Section 7.08), is Controlled by, or is under common Control with Tenant; or (ii) any entity in which or with which Tenant is merged or consolidated, in accordance with applicable statutory provisions for merger or consolidation, so long as the liabilities of the entities participating in such merger or consolidation are assumed by the entity surviving such merger or created by such consolidation.

(c) A Transfer permitted pursuant to the Amended and Restated Operating Agreement of Tenant ("Operating Agreement"), a Transfer of an indirect ownership interest in Tenant to any Affiliate of such transferee, or any Transfer that does not result in a change in Control of Tenant, but excluding any Transfer that is a Prohibited Transfer under Section 7.04 below.

(d) The removal and replacement of the manager or managing member of Tenant for cause by the tax credit investor pursuant to the Operating Agreement.

(e) Subleases to residential tenants for the occupancy of Units within the Project.

(f) Granting of a purchase option by the Tenant in favor of the managing member of the Tenant pursuant to the terms of the Tenant's Operating Agreement; or

(g) (i) Any Permitted Leasehold Mortgage, (ii) any transfer of the interests of Tenant under this Lease which results from foreclosure proceedings related to a Permitted Leasehold Mortgage (including any arrangement, proceeding, assignment or transfer which occurs in lieu of foreclosure), or (iii) any transfer of the interests of Tenant under this Lease by a party which acquired the interests of Tenant hereunder through or as a result of foreclosure proceedings (including any arrangement, proceeding, or transfer which occurred in lieu of foreclosure), (iv) any conversion or refinancing of construction to permanent financing, including but not limited to Citibank, N.A. or (v) any other financing of the Project; provided, however, that the grant of a Leasehold Mortgage and any subsequent foreclosure proceedings (including any arrangement, proceeding, assignment or transfer which occurs in lieu of foreclosure), are not part of any plan or scheme to avoid restrictions and/or requirements relative to Tenant's sale of, or Tenant's right or ability to convey, transfer, or assign its interests and/or estate herein granted.

7.04 Prohibited Transfers. Notwithstanding anything to the contrary contained herein, the following Transfers (even if they otherwise meet the definition of "Permitted Transfer") shall

not be permitted without the written consent of Landlord, which may be granted, withheld or conditioned in Landlord's sole discretion (each a "**Prohibited Transfer**"):

(a) A Transfer to a Prohibited Person. As used herein, a "**Prohibited Person**" means a Person that, taken together with its Affiliates and their respective principals and executive officers, at the time of such Transfer:

(i) Is listed on Schedule 7.04 attached hereto, or is a successor to any entity listed thereon;

(ii) Has previously been convicted, or is under indictment, in a criminal proceeding for a felony related to moral turpitude or fraud or financial mismanagement or under any Anti-Terrorism Law;

(iii) Has previously been subjected to any civil or criminal penalties or judgment (excluding those where no fault is determined) related to state or federal fair housing requirements;

(iv) Is or has previously been adverse to Landlord in any lawsuit;

(v) Is not currently debarred from doing business with Landlord or any other governmental entity; provided that the Parties acknowledge that the Tenant will be and is authorized to rely on a prospective transferee's representation that it is not debarred as set forth above with such reliance not imposing any liability or adverse consequence against Tenant by Landlord; or

(vi) Has attempted to invalidate, terminate or impede, failed to permit, or otherwise challenged or unreasonably delayed the exercise of a right of first offer or purchase option with a sponsor or governmental entity pursuant to the terms of any written agreement for such right of first offer or purchase option.

(b) Any Transfer prohibited by Applicable Law or the Applicable Requirements.

(c) Any Transfer that would result in the Premises being used for any purpose other than the Permitted Use.

7.05 Permitted Leasehold Mortgages. Tenant shall not, without the prior written consent of Landlord not to be unreasonably withheld, conditioned or delayed for more than seven (7) days, engage in any financing or any other transaction creating any mortgage or other encumbrance or lien upon the Development, whether by express agreement or operation of law, or suffer any encumbrance or lien to be made on or attach to the Development (each a "**Leasehold Mortgage**"). Any Leasehold Mortgage that is consented to by Landlord, or that is otherwise expressly permitted hereunder as described below, is referred to herein as a "**Permitted Leasehold Mortgage**", and the mortgagee thereunder is a "**Permitted Leasehold Mortgagee**".

(a) Notwithstanding the foregoing, Landlord consent is not required for any Leasehold Mortgage if it is a Qualified Leasehold Mortgage. A "**Qualified Leasehold Mortgage**" means a Leasehold Mortgage that:

(i) Is held by an Institutional Lender (as herein defined) that is actively engaged in commercial real estate or corporate financing with Persons other than Tenant, is not an affiliate of Tenant (but "affiliate" of Tenant shall not constitute any such Institutional Lender that is, or an affiliate of which is, a low income housing tax credit or opportunity zone credit investor in the Tenant), and is not prohibited from doing business in the State of Utah;

(ii) Is held by a Lender with a credit rating of "AA" or better;

(iii) Is financed, assisted or guaranteed by any FHA, Fannie Mae, Freddie Mac or other federally-assisted or -insured financing program;

(iv) Secures the repayment of sums borrowed by Tenant, which by its terms is required to be paid in full no later than the expiration date of this Lease; or

(v) Encumbers only the leasehold estate created by the Lease, and does not encumber Landlord's fee simple estate.

(b) With respect to any Permitted Leasehold Mortgage and the Investor Member, the following provisions shall apply:

(i) Landlord will send a copy of any Original Default Notice to each Permitted Leasehold Mortgagee and Investor Member, provided that each such Permitted Leasehold Mortgagee or Investor Member shall have delivered to Landlord in writing a notice naming itself as the holder of a Permitted Leasehold Mortgage or the Investor Member and registering the name and address to which all notices and other communications to it may be addressed. An initial list of each Permitted Leasehold Mortgagee and Investor Member is set forth on Schedule 7.05(b)(i).

(ii) Each Permitted Leasehold Mortgagee and Investor Member shall be permitted to cure any default by Tenant under this Lease Agreement, as more fully set forth in Section 13.03, and Landlord shall accept cures performed by a Permitted Leasehold Mortgagee and/or the Investor Member (as applicable).

(iii) Landlord agrees to accept payment or performance by any Permitted Leasehold Mortgagee or the Investor Member as though the same had been done by Tenant.

(iv) In the case of a default by Tenant other than in the payment of money, and provided that a Permitted Leasehold Mortgagee or the Investor Member has commenced to cure the default and is proceeding with due diligence to cure the default, Landlord will refrain from terminating this Lease Agreement for a reasonable period of time (not to exceed the time periods set forth in

Section 13.03, plus an additional thirty (30) days) within which time the Permitted Leasehold Mortgagee and/or the Investor Member may cure or cause to be cured the default by Tenant; provided, however, that if such cure requires possession of the Premises by the Permitted Leasehold Mortgagee (or the removal of the managing member of the Tenant by the Investor Member) or otherwise requires additional time due to the nature of the default being cured, then (a) Permitted Leasehold Mortgagee's cure period shall be extended for such additional time as is reasonably necessary to allow Permitted Leasehold Mortgagee to (i) obtain possession of the Development (including possession by receiver); (ii) institute foreclosure proceedings and diligently pursue to conclusion such foreclosure; or (iii) otherwise acquire Tenant's interest under this Lease Agreement, and thereafter to cure or cause to be cured the default by Tenant; provided, however, that Landlord acknowledges and agrees hat the Permitted Leasehold Mortgagee shall have the right for an initial one hundred twenty (120) day period to attempt to resolve the default via a work-out of the transaction prior to having to commence any foreclosure proceedings ("**Initial 120-Day Cure Period**") and (b) Investor Member's cure period shall be extended for up to an additional ninety (90) days to allow Investor Member to remove and replace the managing member of Tenant. The Permitted Leasehold Mortgagee nor the Investor Member shall be required; provided, however, that Landlord acknowledges and agrees that the Permitted Leasehold Mortgagee shall have the right for an initial 120 day period to attempt to resolve the default via a work-out of the transaction prior to having to commence any foreclosure proceedings and/or (b) Investor Member's cure period shall be extended for up to an additional ninety (90) days to allow Investor Member to remove and replace the managing member of Tenant. The Permitted Leasehold Mortgagee nor the Investor Member shall be required to continue such possession or continue such foreclosure proceedings if the default which was the subject of the notice shall have been cured. Notwithstanding anything to the contrary contained herein, in no event shall a Permitted Leasehold Mortgagee (or its designee) have any obligation to cure any Tenant default hereunder that is not capable of being cured or that is personal to Tenant. For a reasonable time after the expiration of the foregoing Initial 120-Day Cure Period, if Permitted Leasehold Mortgagee have commenced foreclosure or other appropriate proceeding in the nature thereof within such Initial 120-Day Cure Period and is diligently prosecuting the same, within which to endeavor to cure such default; and notwithstanding any other provision of this Lease Agreement, all rights of Landlord to terminate this Lease Agreement upon the default by Tenant are and shall continue to be at all times while Tenant is indebted to Permitted Leasehold Mortgagee, subject to and conditioned upon Landlord's first having given Permitted Leasehold Mortgagee written notice of such default and Permitted Leasehold Mortgagee's failure to cure such default within the time and upon the conditions stated above after receiving such written notice of default. Notwithstanding anything contained herein to the contrary, Landlord's right to terminate this Lease Agreement shall be postponed indefinitely if the default which gives rise to such termination right is of such a nature that the same is not susceptible of being cured by Permitted Leasehold Mortgagee and Leasehold Mortgagee shall institute foreclosure proceedings and diligently

prosecute the same to completion, subject to any stay in any proceedings involving the insolvency of Tenant or other proceeding or injunction (unless, in the meantime, Permitted Leasehold Mortgagee shall acquire Tenant's estate hereunder, either in its own name or through a nominee, by assignment in lieu of foreclosure). The Permitted Leasehold Mortgagee shall not be required to continue such possession or continue such foreclosure proceedings if the default which was the subject of the notice shall have been cured.

(v) A Permitted Leasehold Mortgagee may become the holder of Tenant's leasehold estate and succeed to Tenant's interest in this Lease Agreement by foreclosure of its Permitted Leasehold Mortgage or as a result of the assignment of this Lease Agreement in lieu of foreclosure, and any purchaser at a foreclosure proceeding undertaken in regard to a Permitted Leasehold Mortgage may become the holder of Tenant's leasehold estate and succeed to Tenant's interest in this Lease Agreement by such foreclosure proceedings, other than a Prohibited Person.

(vi) In the event of a termination of this Lease Agreement prior to its stated expiration date by reason of the bankruptcy of Tenant or any default by Tenant, Landlord will enter into a new lease for the Premises with the Permitted Leasehold Mortgagee or its designee, for the remainder of the term, effective as of the date of such termination, and otherwise subject to the same covenants and agreements, terms, provisions, and limitations herein contained (as a "**New Lease**"), provided that:

A. Landlord receives the Permitted Leasehold Mortgagee's written request for such New Lease within sixty (60) days from the date of such termination (provided that the sixty (60) day period shall commence to run from the date of receipt by the Permitted Leasehold Mortgagee of the written termination notice from Landlord) and such written request is accompanied by payment to Landlord of all amounts then due and owing to Landlord under this Lease Agreement;

B. The Permitted Leasehold Mortgagee or its designee shall perform and observe all covenants in this Lease Agreement to be performed by Tenant and shall further remedy any other defaults under covenants which Tenant was obligated to perform under the terms of this Lease Agreement that are capable of being remedied by the Permitted Leasehold Mortgagee or its designee, but excluding any defaults that are personal to the Tenant and not susceptible to remedy by the Permitted Leasehold Mortgagee or its designee;

C. Upon the execution and delivery of the New Lease at the time payment is made in (A) above, all subleases which thereafter may have been assigned and transferred to Landlord shall thereupon be assigned and transferred

without recourse by Landlord to the Permitted Leasehold Mortgagee, as the new Tenant.

D. The tenant under the New Lease shall have no greater right, title or interest in and to the Premises than the Tenant has under this Lease Agreement.

(vii) A Permitted Leasehold Mortgagee shall have the right to assume this Lease Agreement as tenant in its own name or in the name of a nominee upon foreclosure or assignment in lieu of foreclosure.

(viii) No Permitted Leasehold Mortgagee shall be or become liable to Landlord as an assignee of this Lease Agreement or otherwise unless it expressly assumes by written instrument executed by Landlord and Permitted Leasehold Mortgagee such liability, and no assumption shall be inferred from or result from foreclosure or other appropriate proceedings in the nature thereof or as the result of any other action or remedy provided for by such Permitted Leasehold Mortgagee or other instrument or from a conveyance from Tenant pursuant to which the purchaser at foreclosure or Tenant shall acquire the rights and interest of Tenant under the terms of this Lease Agreement. The liability of any Permitted Leasehold Mortgagee that assume liability under this Lease Agreement shall be limited to the value of such Permitted Leasehold Mortgagee's interest in this Lease Agreement. Permitted Leasehold Mortgagee, its nominee or assignee shall automatically be released from liability to Landlord hereunder upon subsequent assignment of this Lease Agreement.

(ix) Any Permitted Leasehold Mortgagee or its designee that becomes the tenant under this Lease or a New Lease shall only have obligation under this Lease or the New Lease, as may be applicable, while it is the tenant thereunder and its liabilities hereunder or under a New Lease shall be limited to its interests in the Project.

(x) Landlord shall not be entitled to share in the proceeds of any loan obtained as a result of any financing or refinancing undertaken by Tenant that is secured by a Permitted Leasehold Mortgage.

(xi) No Leasehold Mortgage shall encumber Landlord's fee simple estate in the Premises, and Landlord shall not be required to subordinate its interest in the Premises to any Leasehold Mortgage.

(xii) Two or More Permitted Leasehold Mortgagees. Any Permitted Leasehold Mortgages permitted hereunder may consist of two (2) or more separate loans or other financing arrangements from two (2) or more Permitted Leasehold Mortgagees. In the event two (2) or more Permitted Leasehold Mortgagees each exercise their rights under the Lease and there is a conflict that renders it impossible to comply with all requests of Permitted Leasehold Mortgagees, the Permitted

Leasehold Mortgagee whose Permitted Leasehold Mortgage would have senior priority in the event of a foreclosure shall prevail.

7.06 Transfer or Encumbrance by Landlord; No Amendment or Surrender. Landlord may not transfer its interest in the Premises, except to an Affiliate thereof or another governmental entity that is experienced with low income housing tax credits (i.e., a housing authority), without the prior written consent of Tenant, Investor Member and all of the Permitted Leasehold Mortgagees. Landlord shall not (i) encumber its fee interest in the Premises, (ii) enter into an amendment of this Lease, or (iii) accept a surrender or other voluntary termination of this Lease without, in each case, the prior written consent of the Tenant, the Permitted Leasehold Mortgagee (so long a Permitted Leasehold Mortgage exists) and the Investor Member of Tenant (the "Investor Member") (so long as an Investor Member is a member of the Tenant). Landlord represents and warrants that there are no existing mortgages, deeds of trust, easements, liens, security interests, encumbrances and/or restrictions encumbering Landlord's fee interest in the Premises other than the Permitted Encumbrances. Landlord's fee interest shall not hereafter be subordinated to, or made subject to, any mortgage, deed of trust, easement, lien, security interest, encumbrance and/or restriction except for an encumbrance that expressly provide that it is and shall remain subject and subordinate at all times in lien, operation and otherwise to the Lease and to all renewals, modifications, amendments, consolidations and replacements hereof.

7.07 Purchase Option. Notwithstanding anything to the contrary contained herein, any proposed Transfer, other than a Permitted Transfer, shall be subject to the Landlord's Purchase Option (as defined herein).

7.08 Defined Terms. As used herein, the following terms shall have the meanings set forth below:

(a) "**Affiliate**" means, with respect to any Person, another Person that Controls, is Controlled by, or is under common Control with the subject Person.

(b) "**Control**" means the ability to direct the day-to-day operations and policy of a Person, whether by contract, ownership of voting securities, or otherwise.

(c) "**Institutional Lender**" means one or more commercial or savings banks, savings and loan associations, trust companies, credit unions, industrial loan associations, insurance companies, pension funds, governmental entities, quasi-governmental entities, government sponsored entities (e.g., Fannie Mae or Freddie Mac) or business trusts including but not limited to real estate investment trusts, any other lender regularly engaged in financing the purchase, ownership, leasing, construction, or improvement of real estate, or any assignee of loans made by such a lender, or any combination of any of the foregoing entities.

ARTICLE VIII – MAINTENANCE, REPAIR AND MANAGEMENT

8.01 Tenant's Obligations. Tenant will, at its sole cost and expense, maintain the Development in good order and repair, at least to the standard required by any Governmental Authority having jurisdiction over the Development necessary for the safe, sanitary operation of

the Development to keep it in good working order and habitable condition, and shall make repairs, restorations, and replacements to the Improvements, including without limitation the landscaping; heating, ventilating, air conditioning, mechanical, electrical, elevator, and plumbing systems; structural roof, walls, and foundations; and the fixtures and appurtenances as and when needed to preserve them in good working order and condition, and regardless of whether the repairs, restorations, and replacements are ordinary or extraordinary, foreseeable or unforeseeable, capital or non-capital, or the fault or not the fault of Tenant, its agents, employees, invitees, visitors, and contractors. All such repairs, restorations, and replacements will be in quality and class equal to or better than the original work or installations, as determined in the reasonable discretion of the Tenant.

(a) Management. At all times during the Lease Term, Tenant will notify Landlord, in accordance with the requirements of Section 15.15, of any appointment, termination, change or replacement of Tenant's management agent ("Agent") at least 15 days before such action is effective.

(b) Reports. Upon Tenant's receipt of a notice of default or noncompliance from Senior Mortgagee, UHC, or other lender or regulatory body, Tenant will promptly provide a copy thereof to Landlord in accordance with the notice requirements of Section 15.13. Prior to Tenant's obligation to provide a copy of the applicable notice to Landlord, Tenant, in its reasonable discretion, shall have the right to redact and protect any personal financial or other sensitive information contained therein.

8.02 No Obligation of Landlord. Except as expressly provided in this Agreement (including, without limitation, Landlord's Required Remediation), Landlord shall not be required to perform or to pay for any maintenance, or make or pay for any repairs, replacements or improvements of any kind whatsoever to the Development or any part thereof during the Lease Term, unless any such maintenance, repairs, replacements, or improvements are to repair damages caused solely by Landlord's gross negligence or willful misconduct, in recognition that this Lease Agreement shall be net in all respects to Landlord.

ARTICLE IX - ALTERATIONS

9.01 Consent Required. Once the construction of the Improvements has been completed in accordance with the Plans and Specifications in accordance with Section 2.02 hereof, Tenant may not make any alterations, additions, or improvements to the Development without Landlord's prior written consent, which consent shall not be unreasonably withheld; provided, however, that Tenant may make alterations, additions, or improvements without Landlord's consent so long as such alterations, additions, or improvements (i) do not materially affect the exterior appearance of the Development; (ii) do not reduce the number of Units or Affordable Units in the Development; (iii) are in compliance with all Applicable Laws and the Applicable Requirements; and (iv) do not cost in excess of $500,000 within any twelve (12) month period. Notwithstanding anything to the contrary set forth herein, Tenant shall be permitted to repair and restore any damage to the Premises without Landlord's consent. Any construction activities related to alterations shall comply with the requirement of this Lease, including insurance requirements, during construction.

9.02 No Liens. Tenant shall not have any right, authority, or power to bind Landlord, the Development or any other interest of Landlord in the Development and will pay or cause to be paid all costs and charges for work done by it or caused to be done by it, in or to the Development, for any claim for labor or material or for any other charge or expense, lien or security interest incurred in connection with the development, construction or operation of the Improvements or any change, alteration or addition thereto. Tenant shall not permit to remain any encumbrances of the Improvements, except the Permitted Leasehold Mortgages and the Permitted Encumbrances. Tenant shall comply with all laws which provide for the waiver of liens which may arise under any contract for labor or materials for the Improvements and Tenant shall cause no lien agreements to be executed and filed of record before any work is commenced upon the Development. NOTICE IS HEREBY GIVEN THAT LANDLORD SHALL NOT BE LIABLE FOR ANY LABOR, SERVICES, OR MATERIALS FURNISHED OR TO BE FURNISHED TO TENANT OR TO ANYONE HOLDING ANY OF THE PREMISES THROUGH OR UNDER TENANT, AND THAT NO MECHANICS' OR OTHER LIENS FOR ANY SUCH LABOR, SERVICES, OR MATERIALS SHALL ATTACH TO OR AFFECT THE INTEREST OF LANDLORD IN AND TO ANY OF THE PROJECT. LANDLORD SHALL BE PERMITTED TO POST ANY NOTICES ON THE PREMISES REGARDING SUCH NON-LIABILITY OF LANDLORD; PROVIDED THAT LANDLORD RECEIVES TENANT'S PRIOR WRITTEN APPROVAL, WHICH APPROVAL SHALL NOT BE UNREASONABLY DELAYED OR DENIED.

ARTICLE X – SURRENDER

10.01 Expiration of Term. Upon the expiration or earlier termination of the Lease Term, Tenant will surrender the Development in good working order and habitable condition. Tenant may not remove from the Development any fixtures, equipment, or furniture without the approval of Landlord except in the ordinary course of business and for repair or replacement by items of comparable utility and value. Tenant covenants and agrees to give up quiet and peaceful possession and to surrender the Development together with all the Improvements thereon and appurtenances upon expiration of the term or earlier termination of this Lease Agreement without further notice from Landlord.

10.02 Reversion of Rights to Landlord. Tenant acknowledges and agrees that upon the expiration or earlier termination of the Lease Term, any and all rights and interests it may have either at law or in equity to the Development shall immediately cease, and all Improvements shall automatically become the property of Landlord, and all rights and interests of Tenant in and to the Premises (but excluding any personal property of Tenant not used in the ownership, operation or maintenance of the Development, and any personal property of subtenants) shall be automatically transferred and assigned to Landlord, including without limitation all then-existing subleases and all appurtenant rights and privileges associated with the Premises, all without any requirement of compensation to Tenant. The foregoing transfer and assignment shall be automatic and shall not require any further affirmative conveyance or assignment by Tenant, but Tenant shall cooperate in executing and delivering any documentation required to confirm the foregoing transfer of rights to the Premises and the Improvements.

ARTICLE XI - CASUALTY; CONDEMNATION

11.01 Damage or Destruction.

(a) Tenant shall give prompt written notice to Landlord and Senior Mortgagee after the occurrence of any fire, earthquake, act of God, or other casualty to or in connection with the Development or any portion thereof (each a "**Casualty**"), and whether such Casualty, in Tenant's reasonable opinion, constitutes a Major Casualty. As used herein, a "**Major Casualty**": a Casualty that: (i) renders twenty-five percent (25%) or more of the Improvements (by square footage) not capable of being used or occupied; or (ii) occurs less than four (4) years before the end of the Term and renders ten percent (10%) or more of the Improvements (by square footage) not capable of being used or occupied; or (iii) requires restoration in an amount that exceed Tenant's insured costs, assuming full compliance with all insurance coverage requirements of this Lease, by more than $500,000 (excluding any deductible or self-insured retention); or (iv) pursuant to Applicable Law, prevents the Improvements from being restored to the same bulk, and for the same uses, as before the Casualty.

(b) Except as otherwise required by Senior Mortgagee, if during the Lease Term, the Improvements shall be damaged or destroyed by Casualty, Tenant shall repair or restore the Improvements so long as it is lawful to do so. Upon the occurrence of any such Casualty, the Net Proceeds shall be applied as set forth in Section 5.04(a) above. However, if the Casualty is a Major Casualty, **or** if the Investor does not permit restoration pursuant to the terms of the organizational documents of Tenant or Senior Mortgagee does not permit restoration pursuant to the terms of the Senior Mortgage, then Tenant may, by notice to Landlord given after the Major Casualty, elect to terminate this Lease effective thirty (30) days after such Notice; provided, however, this Lease may not be terminated in the event of damage or destruction unless Senior Mortgagee has been paid in full. No Rent shall abate in the event of a Casualty.

(c) Net Proceeds of a Casualty shall be disbursed in accordance with Section 5.04 of this Lease. If during the Lease Term following payment in full of the Senior Mortgagee, Tenant elects to terminate this Lease pursuant to the foregoing paragraph, then the Net Proceeds shall be allocated between the Landlord and the Tenant according to the respective fair market values of Tenant's leasehold estate in the Premises and the Development and Landlord's reversionary estate in the Premises and the Development. Unless Tenant has validly elected to terminate this Lease pursuant to the foregoing paragraph, this Lease shall not terminate and Tenant shall be solely responsible for restoring the Improvements, subject however to the requirements of the Senior Mortgage.

(d) Any settlement of any insurance claim pertaining to a Casualty shall be subject to the terms and conditions of the Senior Mortgage.

11.02 Condemnation.

(a) If, by exercise of the right of eminent domain or by conveyance made in response to the threat of the exercise of such right (in either case a "**Taking**"), all of the Development are taken, or if so much of the Development is taken that it is impossible or economically impractical for the Development to be used for the purposes for which they were used immediately before the Taking, then this Lease Agreement shall terminate on the earlier of the vesting of title to the Development in the condemning authority, or the

taking of possession of the Development by the condemning authority provided, however, this Lease may not be terminated in the event of a Taking unless Senior Mortgagee has been paid in full.

(b) Landlord and Tenant agree that, in the event of a Taking that does not result in the termination of this Lease Agreement pursuant to subsection (a) above, this Lease Agreement shall continue in effect as to the remainder of the Development, and the net amounts owed or paid to Landlord or pursuant to any agreement with any condemning authority which has been made in settlement of any proceeding relating to a Taking, less any costs and expenses incurred by Landlord in collecting such award or payment (the "**Net Condemnation Award**"), will be disbursed in accordance with subsection (d) below to Permitted Leasehold Mortgagee, Landlord and/or Tenant. Tenant and the Permitted Leasehold Mortgagee shall have the right to participate in negotiations of and to approve any such settlement with a condemning authority (which approval shall not be unreasonably withheld).

(c) If there shall be a temporary Taking with respect to all or any part of the Development or of Tenant's interest in this Lease Agreement, then this Lease shall not be terminated and the Lease Term shall not be reduced; provided that Tenant shall be excused from performing such obligations that Tenant is prevented from performing by reason of such temporary Taking.

(d) Subject to the terms of the Permitted Leasehold Mortgages, if there is a complete or partial Taking which affects only the use of the Development during the Lease Term, Tenant shall be entitled to receive and retain the Net Condemnation Award. If there is a complete or partial Taking that results in the termination of this Lease Agreement, or which affects the use of the Development after the Lease Term, the Net Condemnation Award shall be apportioned between Tenant and Landlord according to the respective fair market values of Tenant's leasehold estate in the Development and Landlord's reversionary estate in the Development. In the case of a partial taking, Tenant shall rebuild and restore the improvements on the Premises, unless the Permitted Leasehold Mortgagee whose lien is most senior requires or consents to distribution of the proceeds. In such event, the proceeds must be applied first toward reduction of the loan held by the Permitted Leasehold Mortgagee whose lien is most senior. Proceeds from a partial condemnation shall held by the Permitted Leasehold Mortgagee as condemnation trustee, and disbursed between Landlord and Tenant equitably according to the value of the land and improvements taken. Tenant is to use the proceeds of partial takings for restoration, subject to the terms of the senior Permitted Leasehold Mortgage; and

(e) Notwithstanding any provision herein to the contrary, Landlord shall be entitled to receive and retain any portion of the Net Condemnation Award apportioned to the land upon which the Improvements are located. Furthermore, any agreement pertaining to the settlement of any Taking, including agreement with respect to the Net Condemnation Award, shall be subject to the prior written consent of the Senior Mortgagee and such Senior Mortgagee shall have the right to participation in any such agreement.

ARTICLE XII - QUIET ENJOYMENT

12.01 Quiet Enjoyment. So long as Tenant is not in default hereunder beyond any grace period applicable thereto, Tenant's possession of the Development will not be disturbed by Landlord, its successors or assigns.

12.02 Landlord's Right of Inspection. Notwithstanding Section 12.01 above, authorized representatives of Landlord, upon no less than two (2) business days prior notice to Tenant, shall have the right to enter upon the Development (not to exceed once quarterly) for purposes of reasonable inspections performed during reasonable business hours in order to assure compliance by Tenant with its obligations under this Lease Agreement.

ARTICLE XIII - DEFAULT; REMEDIES

13.01 Landlord's Right to Perform. If Tenant fails to pay when due amounts payable under this Lease Agreement or to perform any of its other obligations under this Lease Agreement within the time permitted for its performance, then Landlord, after thirty (30) days' prior written notice to Tenant without waiving any of its rights under this Lease Agreement, may (but will not be required to) pay such amount or perform such obligation.

13.02 Events of Default. The occurrence of any of the following events shall constitute an "**Event of Default**" by Tenant:

(a) Tenant vacates or abandons the Development or any substantial part thereof for a period of more than sixty (60) consecutive days and has not cured such default to Landlord's satisfaction within 60 days after receiving notice from Landlord; provided, however, that a temporary pause in construction activities due to inclement weather or other Force Majeure events will not be considered abandonment;

(b) Except as provided in Article XI, this Lease Agreement, the Development or any part thereof are taken upon execution or by other process of law directed against Tenant, or are taken upon or subjected to any attachment by any creditor of Tenant or claimant against Tenant, and such attachment is not discharged or stayed within one hundred eighty (180) days after its levy;

(c) Tenant makes any sale, conveyance, assignment or Transfer in violation of this Lease Agreement;

(d) Tenant violates, breaches or fails to comply with any of the other material agreements, terms, covenants, or conditions which this Lease Agreement requires Tenant to perform (including, without limitation, the obligation to construct the Improvements and operate the Improvements as required herein), and such default continues for thirty (30) days after written notice from Landlord; provided, however, that if the nature of such breach or default is such that it cannot be cured within thirty (30) days no default shall be deemed to have occurred if Tenant commences the curing of such default or breach within such period of thirty (30) days, and diligently and continuously prosecutes in good faith the curing of same until the breach or default is, in fact, cured. Notwithstanding the

foregoing, in no event may Tenant have more than one hundred eighty (180) days to cure a default;

(e) Intentionally Omitted;

(e) Tenant fails to perform any of its duties and obligations set forth in the Applicable Requirements, which failure continues beyond the expiration of any applicable notice and cure period specified therein;

(f) Tenant is unable to pay Tenant's debts as the same shall mature, subject to any applicable notice and cure rights;

(g) Tenant files a voluntary petition in bankruptcy or a voluntary petition seeking reorganization or to effect a plan or an arrangement with or for the benefit of Tenant's creditors; or

(h) Tenant applies for or consents to the appointment of a receiver, trustee, or conservator for any portion of Tenant's property or such appointment shall be made without Tenant's consent and shall not be removed within ninety (90) days.

13.03 Right to Cure under Lease.

(a) If an Event of Default by Tenant occurs, as set forth in Section 13.02 above, Landlord shall give written notice of such Event of Default (the "**Original Default Notice**") to Tenant, each Permitted Leasehold Mortgage and Investor Member. Tenant, shall have the right to cure the Event of Default; provided that if the nature of such Event of Default is such that it cannot be cured within one hundred twenty (120) days, Landlord will have no right to exercise its remedies under Section 13.04 if Tenant or any Permitted Leasehold Mortgagee commences the curing of such Event of Default within such period of one hundred twenty (120) days, and diligently and continuously prosecutes in good faith the curing of same until the Event of Default is, in fact, cured. Notwithstanding the foregoing, in no event may Tenant have more than one hundred eighty (180) days to cure the Event of Default. Notwithstanding the foregoing, each Permitted Leasehold Mortgagee and Investor Member shall have the rights to cure any Event of Default (but in no event shall a Permitted Leasehold Mortgagee or an Investor Member have the obligation to cure such Event of Default) in the same manner as each Permitted Leasehold Mortgagee and Investor Member has the right to cure any default of Tenant as set forth in Section 7.05(b)(iv) of this Lease Agreement.

(b) If an Event of Default by Tenant occurs under Section **Error! Reference source not found.**, (e), or (h) of this Lease Agreement, beyond the notice and cure period as set forth in the applicable agreement, Tenant, each Permitted Leasehold Mortgagee and Investor Member shall have in addition to the applicable notice and cure period as set forth in the applicable agreement, an additional ninety (90) days to cure the Event of Default under Section **Error! Reference source not found.**, (e), or (h) of this Lease Agreement. Landlord agrees that it shall confirm or deny that such cure has taken place within forty-five (45) days of receipt of written notice by Tenant, Permitted Leasehold Mortgagee

and/or Investor Member that cure of the Event of Default of Section **Error! Reference source not found.**, (e), or (h) of this Lease Agreement has been made. In the event that Landlord denies that such a cure has taken place within such forty-five (45) day period, Landlord shall provide Tenant, each Permitted Leasehold Mortgagee and Investor Member a written notification specifying in detail the item(s) of default or breach which were not cured and Tenant shall have an additional thirty (30) days from the date of receipt of Landlord's written notification to cure or remedy the item(s) of default or breach which were not cured. Notwithstanding the foregoing, each Permitted Leasehold Mortgagee and Investor Member shall have the rights to cure any Event of Default (but in no event shall a Permitted Leasehold Mortgagee or an Investor Member have the obligation to cure such Event of Default) in the same manner as each Permitted Leasehold Mortgagee and Investor Member has the right to cure any default of Tenant as set forth in Section 7.05(b)(iv) of this Lease Agreement

(c) Landlord shall give each Permitted Leasehold Mortgagee and the Investor Member a copy of all notices of default or other notices that Landlord may give to or serve in writing upon Tenant pursuant to the terms of this Lease Agreement. A Permitted Leasehold Mortgagee and/or Investor Member, at its option, may pay any amount or do any act or thing required of Tenant by the terms of this Lease Agreement. All payments made and all acts performed by a Permitted Leasehold Mortgagee and/or an Investor Member shall be as if they had been performed by Tenant.

13.04 Remedy. If any one or more Events of Default set forth in Section 13.02 occurs and is continuing beyond the additional notice and cure period set forth in Section 13.02 above, subject to the terms of Section 7.05(b)(vi), then Landlord may terminate this Lease Agreement by written notice to Tenant of its intention to terminate this Lease Agreement on the date of such notice or on any later date specified in such notice subject to the right of Tenant to cure such Event of Default as provided in this Lease Agreement or other applicable agreements, and, on the date specified in such notice, Tenant's right to possession of the Development will cease and the estate conveyed by this Lease Agreement shall revest in Landlord, but subject to the right of any Permitted Leasehold Mortgagee to request a new lease pursuant to Section 7.05(b)(vi) above.

ARTICLE XIV – LANDLORD'S PURCHASE OPTION [under tax review]

14.01 Landlord's Purchase Option Regarding Tenant's Interest. Landlord shall have the option to purchase Tenant's interest under this Lease if Tenant or its successor, assignee or transferee elects to Transfer the same, or to market the same for Transfer ("**Purchase Option**"). If Tenant desires to Transfer its interest under this Lease, Tenant shall first provide written notice to Landlord (the "**Transfer Notice**") identifying the desired price for such interest (the "**Specified Price**"), which in no event shall be less than the fair market value of the Project (including, among other things, the value of any remaining tax credits). If Tenant has received an award of federal low-income housing tax credits for the Project from UHC, any Transfer Notice required after the conclusion of the "compliance period", as defined under Section 42(i)(1) of the Code, shall also include the "minimum purchase price" as defined under Section 42(i)(7)(B) of the Code (the "**Minimum Purchase Price**"). The Transfer Notice shall be accompanied by such other information regarding the proposed Transfer or the transferee as Landlord may reasonably require in order to verify the bona fide nature of the offer.

14.02 Election. Landlord shall have thirty (30) days after receipt of the Transfer Notice to notify Tenant of its election to exercise its Purchase Option to effect the Transfer upon the same terms and conditions set forth in the Transfer Notice and as otherwise agreed to by Landlord and Tenant ("**Acceptance**"); it being agreed that if the terms and conditions set forth in such offer contemplate that the offeror will assume the loan secured by a Permitted Leasehold Mortgage, then the applicable Permitted Leasehold Mortgagee shall permit Landlord to assume the loan provided that Landlord complies with the applicable provisions of the loan documents and qualifies under the Permitted Leasehold Mortgagee's then current underwriting criteria applied in a commercially reasonable manner. Once Landlord has delivered Acceptance to Tenant, the Landlord has ten (10) business days to execute a mutually agreed purchase and sale contract with Tenant, which will include at a minimum a non-refundable earnest money deposit of $100,000 due within five (5) business days of execution of the purchase and sale contract. Notwithstanding the fact that Landlord may elect from time to time not to deliver an Acceptance under this Section 14.02 or under the terms of Section 14.03, Tenant and all successors-in-interest shall not be relieved of their obligation to provide Landlord with a Transfer Notice with respect to any future Transfer.

14.03 Disposition. In the event that Landlord does not deliver an Acceptance and execute a purchase and sale contract within the time designated in Section 14.02, then Tenant may (a) market and solicit offers from third party transferees at or above the Specified Price, and (b) enter into and close on a purchase and sale agreement with the selected transferee on terms and conditions not materially less favorable to Tenant than those specified in the Transfer Notice, provided that the purchase and sale agreement is fully executed within six (6) months of the date of the Transfer Notice, and the closing thereunder occurs within twelve (12) months of the date of the Transfer Notice. If, in the event that Tenant elects to market its interest according to subsection (a) hereof but receives an offer below the Specified Price, then Tenant shall provide an additional Transfer Notice to Landlord notifying Landlord of such offer below the Specified Price, pursuant to which Landlord shall have thirty (30) days after receipt of such Transfer Notice to deliver an Acceptance according to the same provisions in Section 14.02. In the event that Landlord does not does not deliver an Acceptance and execute a purchase and sale contract within the time designated in Section 14.02, then Tenant may enter into and close on a purchase and sale agreement with the selected transferee on terms and conditions not materially less favorable to Tenant than those specified in the additional Transfer Notice, provided that the purchase and sale agreement is fully executed within six (6) months of the date of the additional Transfer Notice, and the closing thereunder occurs within twelve (12) months of the date of the additional Transfer Notice. For purposes of this Section 14.03, a reduction in the purchase price of five percent (5%) or less shall not be deemed to be materially less favorable to Tenant. If Tenant does not enter into a purchase and sale agreement within the time periods set forth herein, or does not close on the Transfer within the time periods set forth herein, then Landlord's Purchase Option shall be revived, and Tenant shall be required to deliver a new Transfer Notice to Landlord before entering into any purchase and sale agreement or closing on any Transfer. If Landlord exercise a Purchase Option and executes a purchase and sale contract hereunder, but fails for any reason to close on the sale, then Landlord's Purchase Option shall thereafter be null and void for the remaining term of this Lease Agreement.

14.04 Limitation. The foregoing Purchase Option shall not apply to, and Tenant shall not be required to deliver a Transfer Notice with respect to, (a) any Permitted Transfer, or (b) any foreclosure sale, or transfer by a deed or assignment in lieu of foreclosure to a Permitted Leasehold

Mortgagee or its nominee and shall not apply to said Permitted Leasehold Mortgagee or nominee or any affiliate thereof to whom said Permitted Leasehold Mortgagee or nominee deeds or assigns the lease in lieu of foreclosure (for the initial sale to a Person that is not a Permitted Leasehold Mortgagee, its nominee or any affiliate of a Permitted Leasehold Mortgagee) after foreclosure if it shall be the purchaser at the foreclosure sale, or (for the initial sale to a Person that is not a Permitted Leasehold Mortgagee, its nominee or any affiliate of a Permitted Leasehold Mortgagee) after a deed or assignment in lieu of foreclosure.

14.05 Survival. The foregoing Purchase Option shall survive any Transfer of Tenant's interest, including any Permitted Transfer, and shall continue to apply to any future Transfer.

14.06 Subordination of Landlord's Purchase Option. Landlord hereby unconditionally subordinates the Landlord's Option to (a) the lien, security interest and rights granted by the Permitted Leasehold Mortgage, (b) all advances or charges made or accruing under or secured by the Permitted Leasehold Mortgage, and (c) any extensions, modifications or renewals of the indebtedness secured by the Permitted Leasehold Mortgage. Leasehold Mortgagee may, without notice to Landlord hereunder, amend or modify the Permitted Leasehold Mortgage and all agreements executed in connection therewith or otherwise relating thereto (the "Related Documents"), release any or all parties liable for the indebtedness secured by the Permitted Leasehold Mortgage, and release all or any security for the indebtedness secured by the Permitted Leasehold Mortgage. Landlord acknowledges that Leasehold Mortgagee has no obligation to Landlord to advance any funds under the Permitted Leasehold Mortgage or to insure that the funds are used for any specific purpose. Any application or use of the funds advanced by Leasehold Mortgagee for purposes other than those provided for in the Permitted Leasehold Mortgage shall not impair the effectiveness of this subordination in any way. Landlord acknowledges that the foregoing subordination of the Landlord's Option is a condition to the making of the loans secured by the Permitted Leasehold Mortgage. The parties agree that the memorandum of the Lease shall set forth the terms and conditions of the foregoing subordination of the Landlord's Option. Landlord further agrees and acknowledges that notwithstanding anything to the contrary in the Lease, the Landlord's Option may not be exercised prior to the repayment in full of the indebtedness secured by the Permitted Leasehold Mortgage.

ARTICLE XV - MISCELLANEOUS

15.01 No Brokers. Neither Landlord nor Tenant has dealt with any broker or finder with regard to the Development or this Lease Agreement. Both Landlord and Tenant will indemnify, defend, and hold the other harmless from and against any loss, liability and expense (including attorneys' fees and court costs) arising out of claims for fees or commissions in connection with this Lease Agreement.

15.02 Confidentiality. Landlord hereby acknowledges that any and all information disclosed by Tenant to Landlord in connection with the Development or otherwise in connection with the Premises is to remain confidential to the fullest extent of the law, including but not limited to full compliance with the Government Records Access and Management Act ("**GRAMA**"). Without the prior approval of Tenant, Landlord and its Representatives will not disclose or discuss the terms and conditions of this Lease Agreement with any persons other than its attorneys, accountants, employees or agents as may be required in order to implement the provisions of this

Lease Agreement, except as may be required by GRAMA and other Applicable Laws. Tenant shall have the right to mark any information disclosed to Landlord as "confidential" or "proprietary" as permitted by and in compliance with GRAMA. In addition, Tenant shall have the right to limit the disclosure of confidential or proprietary information related to the Development to the examination of records by Landlord or its agents at Tenant's offices.

15.03 Exclusivity. Each Party agrees that, upon execution of this Lease and for so long as this Lease remains in effect, the other Party is the exclusive counterparty with respect to the matters addressed by this Lease, including the lease of the Premises and the development of the Improvements thereon. Each Party and its managers, directors, officers, partners, affiliates, attorneys or accountants (collectively, "**Representatives**") agrees that it will not directly or indirectly solicit, negotiate, or enter into any agreement with any person or entity other than the other Party hereto with respect to the matters addressed by this Lease, including the lease of the Premises and the development of the Improvements thereon, that would violate or undermine the rights of the other Party in this Lease.

15.04 Access. Upon five (5) business days' written notice and during Tenant's normal business hours not to exceed once each calendar quarter, Tenant agrees to grant a right of access to Landlord and/or its authorized representatives, with respect to any books, documents, papers, or other records related to this Lease Agreement in order to make reasonably necessary audits and examinations. Tenant agrees to keep safe and intact all such books, documents, papers, and records for 12 months. Landlord agrees that it shall keep, and cause its authorized representatives to keep, the contents of Tenant's books, documents, papers, or other records in strict confidence. The term "authorized representatives" for purposes of this Section 15.04 means Landlord's contracted financial, legal, and development consultants.

15.05 Estoppel Certificates. Landlord and Tenant agree, within ten (10) days of request by Tenant or Permitted Leasehold Mortgagee, to execute, acknowledge and deliver to the requesting party a statement in writing certifying: (i) that this Lease Agreement is unmodified and in force and effect (other than changes that have been approved in accordance with this Lease Agreement), and if there have been modifications, that this Lease Agreement is in force and effect as modified, and identifying the modification agreement, or if this Lease Agreement is not in force and effect the certificate shall so state; (ii) identify the terms of this Lease Agreement and all documents evidencing and otherwise relating to this Lease Agreement; (iii) the date through which rent and all other amounts payable hereunder have been paid under this Lease Agreement; (iv) whether there is an existing default by Tenant in the payment of any rent or other sum of money under this Lease Agreement; (v) whether there is any other existing default by either party under this Lease Agreement with respect to which a notice of default has been served (or any existing condition which would be a default but for the passage of time or the giving of notice), and if there is any such default or condition, specifying the nature and extent thereof; (vi) whether there are any set-offs, defenses or counterclaims against enforcement of the obligations of Landlord hereunder known to it; (vii) if such certificate is requested by any Permitted Leasehold Mortgagee, that Landlord consents to the applicable Permitted Leasehold Mortgage; (viii) and such other information as may be reasonably requested by Tenant or Permitted Leasehold Mortgagee.

15.06 Renewal Option. If the Lease grants the Tenant an option to renew the term of the Lease, the Landlord shall provide the Permitted Leasehold Mortgagee notice in the event the

Tenant fails to exercise such option upon its expiration and, notwithstanding the expiration of Tenant's right to exercise such option under the Lease, the Permitted Leasehold Mortgagee shall have the right to exercise such option on behalf of the Tenant during the 30 day period following Permitted Leasehold Mortgagee's receipt of such notice.

15.07 Recordation. Landlord and Tenant shall record a Memorandum of Lease Agreement as shown on the form attached hereto as **Exhibit F** in the appropriate office of public record of Summit County. At the expiration or earlier termination of this Lease Agreement, Tenant shall execute a quit claim termination of its interest in this Lease Agreement.

15.08 Time of Essence. Time is of the essence of each and every provision of this Lease Agreement.

15.09 No Waiver. No waiver of any condition or agreement in this Lease Agreement by either Landlord or Tenant will imply or constitute a further waiver by such party of the same or any other condition or agreement. No act or thing done by Landlord or Landlord's agents during the Lease Term will be deemed an acceptance of a surrender of the Development, and no agreement to accept such surrender will be valid unless in writing signed by Landlord. No endorsement or statement on any check, or any letter accompanying any check or payment as Base Rent, will be deemed an accord and satisfaction. Landlord will accept such check for payment without prejudice to Landlord's right to recover the balance of such Base Rent or to pursue any other remedy available to Landlord. If this Lease Agreement is assigned, or if the Development or any part of the Development are sublet or occupied by anyone other than Tenant, Landlord may collect rent from the assignee, subtenant, or occupant and apply the net amount collected to the Base Rent reserved in this Lease Agreement. No such collection will be deemed a waiver of the covenant in this Lease Agreement against assignment and subletting, or the acceptance of the assignee, subtenant, or occupant as Tenant, or a release of Tenant from the complete performance by Tenant of its covenants in this Lease Agreement.

15.10 Captions, Exhibits, Gender, Etc. The captions inserted in this Lease Agreement are only for convenience of reference and do not define, limit, or describe the scope or intent of any provisions of this Lease Agreement. The exhibits to this Lease Agreement are incorporated into the Lease Agreement. Unless the context clearly requires otherwise, the singular includes the plural, and vice versa, and the masculine, feminine, and neuter adjectives include one another.

15.11 Entire Agreement. This Lease Agreement and the exhibits hereto contain the entire agreement between Landlord and Tenant with respect to its subject matter and may be amended only by subsequent written agreement between them. Except for those that are specifically set forth in this Lease Agreement, Landlord or Tenant has made no representations, warranties, or agreements to one another with respect to this Lease Agreement.

15.12 Amendment. This Lease Agreement may be amended only by a written document signed by Landlord and Tenant and with the prior written approval of the Permitted Leasehold Mortgagees. No amendment shall impair the obligations of Tenant to develop and operate the Project in accordance with the Applicable Requirements.

15.13 Conflicts. In the event of a conflict between any requirement contained in this Lease Agreement (or between any requirement contained in any document referred to in this Lease Agreement, including any Mortgage), and the Applicable Requirements, the Applicable Requirements shall in all instances be controlling.

15.14 Severability. If any provision of this Lease Agreement is found by a court of competent jurisdiction to be illegal, invalid, or unenforceable, the remainder of this Lease Agreement will not be affected, and in lieu of each provision which is found to be illegal, invalid, or unenforceable, there will be added as a part of this Lease Agreement a provision as similar to such illegal, invalid, or unenforceable provision as may be possible and be legal, valid, and enforceable.

15.15 Notices. Any notice, request, demand, consent, approval, or other communication required or permitted under this Lease Agreement shall be in writing and shall be given by either (a) hand-delivery, (b) first class, certified or registered mail return receipt requested (postage prepaid), (c) reliable overnight commercial courier, or (d) telecopy or other means of electronic transmission (including via email to the email addresses set forth herein), if confirmed promptly by any of the methods specified in clauses (a), (b) and (c) of this sentence to the other party at its address set forth below. Notice by telecopy or other means of electronic transmission shall be deemed to have been given and received when sent. Notice by overnight courier service shall be deemed to have been given and received upon delivery. A party may change its address or email address by giving written notice to the other party as specified herein.

If to Landlord:

Park City Municipal Corporation
445 Marsac Ave.
Park City, Utah 84060
Attention: Jason Glidden, Housing Development Manager
Email: jglidden@parkcity.org

With a copy to:

Email: pcmcattorney@parkcity.org

If to Tenant:

JF EngineHouse Developer, LLC
1216 W. Legacy Crossing Blvd., Suite 300
Centerville, Utah 84014
Attn: Ryan Davis & Tony Hill
Email: ryan.davis@jfisherco.com
tony@jfisherco.com

With a copy to:

JF Counsel
Email: bsiglin@fennemorelaw.com

With a copy to Investor Member:

GSB LIHTC Investor LLC
c/o Goldman Sachs Bank USA
200 West Street
New York, New York 10282
Attention: Urban Investment Group Portfolio Manger
Email: gs-uig-docs@gs.com
gs-uig-portfolio-manager@gs.com

with a copy to:

GSB LIHT Investor LLC
Urban Investment Group
c/o Goldman Sachs Bank USA
200 West Street
New York, NY 10282
Attention: Scott Maxfield
Email: scott.maxfield@gs.com

with a copy to:

GSB LIHTC Investor LLC
Urban Investment Group
c/o Goldman Sachs Bank USA
2001 Ross Avenue #2800
Dallas, TX 75201
Attention: Kelly Turner
Email: Kelly.turner@gs.com

15.16 Governing Law. This Lease Agreement shall be governed by the law and construed in accordance with the laws of the State of Utah, without regard to principles of conflict of laws.

15.17 Binding Effect. This Lease Agreement will inure to the benefit of, and will be binding upon, Landlord's successors and assigns except as otherwise provided in this Lease Agreement. This Lease Agreement will inure to the benefit of, and will be binding upon, Tenant's successors and assigns so long as the succession or assignment is permitted pursuant to the terms of this Lease Agreement.

15.18 Effect of Exhibits. Each and every exhibit referred to or otherwise mentioned in this Lease Agreement is attached to this Lease Agreement is and shall be construed to be made a part of this Lease Agreement by such reference or other mention at each point at which such reference or other mention occurs, in the same manner and with the same effect as if each exhibit were set forth in full at length every time it is referred to and otherwise mentioned.

15.19 Cumulative Rights. Except as expressly limited by the terms of this Lease Agreement, all rights, powers, and privileges conferred hereunder shall be cumulative and not restrictive of those provided at law or in equity.

15.20 Non-Merger. Except upon expiration of the term or upon termination of this Lease Agreement pursuant to an express right of termination set forth herein, there shall be no merger of either this Lease Agreement or Tenant's estate created hereunder with the fee estate of the Development or any part thereof by reason of the fact that the same person may acquire, own or hold, directly or indirectly, (a) this Lease Agreement, Tenant's estate created hereunder or any interest in this Lease Agreement or Tenant's estate (including the Improvements), and (b) the fee

estate in the Development or any part thereof or any interest in such fee estate (including the Improvements), unless and until all persons, including any assignee of Landlord, having an interest in (i) this Lease Agreement or Tenant's estate created hereunder, and (ii) the fee estate in the Development or any part thereof, shall join in a written instrument effecting such merger and shall duly record the same.

15.21 Counterparts. This Lease Agreement may be executed in counterparts and all such counterparts shall be deemed to be originals and together shall constitute but one and the same instrument.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Lease Agreement as of the day and year first above written.

LANDLORD:

PARK CITY MUNICIPAL CORPORATION,
a Utah municipal corporation

By: _____

Nann Worel, Mayor

TENANT:

JF ENGINEHOUSE PARTNERS, LLC,
a Utah limited liability company

By: JF ENGINEHOUSE MEMBER, LLC,
a Utah limited liability company
Its: Managing Member

By: J. FISHER COMPANIES, LLC,
a Utah limited liability company
Its: Manager

By:_____
Name:_____Owen Fisher_____
Its:_____Manager_____

EXHIBIT A
LEGAL DESCRIPTION

Legal Description: LOT B THE YARD SUBDIVISION FIRST AMENDED; ACCORDING TO THE OFFICIAL PLAT ON FILE IN THE SUMMIT COUNTY RECORDERS OFFICE. CONT 1.86 AC. 2408-4

Exhibit B-1

DESCRIPTION OF THE IMPROVEMENTS

The buildings, structures, additions and improvements to be constructed on the Premises according to the attached Plans and Specification, including:

- 123 rental housing units
- The project is to comply with the City's AMPD code as adopted by Ordinance No. 2021-10 which is designed to incentivize affordable housing through increased height, reduced setbacks, and reduced parking.
- Building design must meet the International Energy Conservation Code (IECC) 2021 standards
- Improvements to comply with PCMC Sustainability Guidelines including targeted Energy Use Intensity of [28]kW/ft2 with common areas contemplated to be Net Zero Energy, with no onsite combustion of fossil fuels.
- Indoor Bike parking for not less than 50 bicycles including facilities for e-bike charging and repair, along with outdoor guest bike parking, accommodation of potential bike and car share facilities;
- Installation of two, dual-port Level Two Electric Vehicle Charging stations with conduit and facilities to accommodate at least 50 future charging stations.
- Other specific City Requirements referenced in the Planning Commission Conditional Approval dated October 26, 2022

Exhibit B-2

APPROVED PLANS AND SPECIFICATIONS

Exhibit B-3

CONSTRUCTION SCHEDULE

[Targeted Financial Close in Fall 2023, Construction Start in Fall 2023, Substantial completion, and issuance of Certificate of Completion, in mid 2025. More detailed schedule to be attached to final agreement]

[to be updated]

Exhibit C

Extension Line Agreement

Exhibit D

When recorded return to:
Snyderville Basin Water Reclamation District
2800 Homestead Road
Park City, Utah 84098

GRANT OF EASEMENT
FOR CONSTRUCTION AND MAINTENANCE OF WASTEWATER COLLECTION AND TRANSPORTATION PIPELINE(S) AND APPURTENANCES

_____, a(n) _____
Grantor, does hereby convey and warrant to the Snyderville Basin Water Reclamation District, a local District of the State of Utah, (the District) Grantee, of Summit County, Utah, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, a permanent non-exclusive easement and right-of-way for the purpose of constructing, operating and maintaining one or more underground pipelines and appurtenances in the easement granted herein for the collection and transportation of wastewater as permitted by the District in the exclusive discretion of the District, over, across, through and under the premises of the Grantor situated in Summit County, Utah which are more specifically described as follows:

(LEGAL DESCRIPTION OF EASEMENT)

This easement is contained within Parcel(s) (*Insert Parcel Serial Numbers*)

Also granting to the Snyderville Basin Water Reclamation District a perpetual right of ingress and egress to and from and along said right-of-way and with the right to operate, maintain, repair, replace, augment and/or remove the pipelines and appurtenances deemed necessary by the District for the collection and transportation of wastewater; also the right to trim, clear or remove, at any time from said right-of-way any tree, brush, structure or obstruction of any character whatsoever, which in the sole judgment of the Grantee may endanger the safety of or interfere with the operation of Grantee's facilities. The Grantor and its successors in interest hereby forever relinquish the right to allow or construct any surface or underground improvement which would interfere with the operation, replacement or repair of the pipelines constructed and maintained under the provisions of this easement and covenant and agree that no underground or surface improvement, trees or structures will be constructed under or over the surface of the easement granted herein, without the express written consent in advance of the Grantee, which would

interfere with the exercise of the rights of the Grantee to operate, maintain, repair or replace the sewer pipeline constructed by or for the Grantee.

The easement granted herein is subject to the condition that the Grantee shall indemnify and hold harmless, the Grantor, its heirs and successors against any and all liability caused by the acts of the Grantee, its contractors or agents, during the construction, operation or maintenance of the sewer pipeline provided for in this easement; the Grantor's right to indemnification or to be held harmless by the Grantee under the terms of this paragraph are expressly conditioned upon prompt and immediate notice to the Grantee of any claim or demand which would cause a claim against the Grantee and upon the Grantees right to defend any claim against the Grantor which would cause a claim of indemnification against the Grantor, except to the extent of any negligence or willful misconduct of Grantor. This provision shall not be interpreted or construed to waive the rights of the Grantee to the affirmative defenses to claims provided under the Utah Governmental Immunity Act.

WITNESS the hand of said Grantor this _____ day of _____ , 20 .

(Grantor's Name)

By: _____

Name: _____

Title:

STATE OF UTAH)
: ss.
COUNTY OF SUMMIT)

On this_____ day of _____, 20 , personally appeared before me _____ , who being duly sworn, did say that he/she is the signer of the within instrument, and that the within and foregoing Grant of Easement was signed on behalf of _____ , with actual and requisite authority, and said signer acknowledged to me that he/she executed the same.

S
E
A
L

Notary Public

Exhibit E

INSURANCE

[SUBJECT TO FURTHER REVIEW AND APPROVAL]

Tenant to Insure. Tenant must be covered by insurance for the Tenant's operations and for contractors, subcontractors, and for all other parties for whom the Tenant is legally liable. Tenant, at its own cost and expense, shall secure and maintain the following policies of insurance:

Commercial general liability insurance. Tenant shall provide and maintain commercial general liability insurance written on an occurrence basis, and add Landlord as an additional insured on coverage, equal to or broader than, form CG 2010 Additional Insured—Owner, Tenants, or Contractor—Scheduled Person Organization endorsement, or similar endorsement including Landlord as additional insured on a primary and non-contributory basis in comparison to all other insurance including Landlord's own policy or policies of insurance, for all claims against Landlord described herein. Commercial general liability insurance shall include coverage for bodily injury and property damage, products and completed operations liability, premises operations, acts of independent contractors, and such other coverage as may be necessary to protect Landlord herein from such claims and actions. Said insurance shall have limits of not less than *$5,000,000* per occurrence limit of liability and *$10,000,000.00* in the aggregate.

Auto Liability. Automobile Liability insurance with a combined single limit of not less than Two Million Dollars ($2,000,000) each accident for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of owned, hired, and non-owned motor vehicles. This policy must not contain any exclusion or limitation with respect to loading or unloading of a covered vehicle.

Professional Liability (Errors and Omissions) insurance. If applicable, Professional Liability insurance with annual limits no less than One Million Dollars ($1,000,000) per occurrence. Tenant agrees to continue to procure and maintain professional liability insurance coverage meeting these requirements for the applicable period of statutory limitation of claims (or statute of repose, if applicable) after the completion of construction of the Improvements. If written on a claims-made basis, Tenant warrants that the retroactive date applicable to coverage precedes the effective date of this Lease; and that continuous coverage will be maintained for an extended reporting period endorsement (tail coverage) will be purchased for a period of at least three (3) years beginning from the time that work under this Lease is terminated.

Workers Compensation insurance and Employers Liability coverage. Workers Compensation limits complying with statutory requirements, and Employer's Liability Insurance limits of at least $1,000,000 each accident, One Million Dollars ($1,000,000) for bodily injury by accident, and One Million Dollars ($1,000,000) each employee for injury by disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Park City Municipal Corporation for all work performed by the Service Provider, its employees, agents and subcontractors.

Casualty Insurance. Tenant shall cause the Development to be insured against loss or damage by fire and the perils commonly covered under the standard extended coverage endorsement, it being understood that Landlord shall not carry any such insurance, and if a casualty occurs that is not insured or is under insured under Tenant's policy, there may not be sufficient funds available to repair or rebuild the Development, which would then result in the Development being uninhabitable.

Property Insurance during construction. Tenant shall maintain property insurance in the amount of the fair market value of the Development including construction of the Improvements (including any increase in price based on change orders) on a replacement cost basis without voluntary deductibles in excess of $50,000. Such property insurance shall be maintained, unless otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made to the contractor for the construction of the Improvements. Landlord shall be named as an additional named insured of such insurance policy. Such insurance shall include the interests of Landlord, Tenant, contractor and any sub-tier contractors engaged in the construction of the Improvements. Such property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, flood, earthquake, theft, vandalism, malicious mischief, collapse, false work, temporary buildings and debris removal, including demolition occasioned by enforcement of any applicable requirements, and shall cover reasonable compensation for the architect's services and expenses required as a result of such insured loss.

Contractor's Insurance. Tenant shall cause its contractor to maintain insurance with at least the following minimum insurance coverages:

(a) Workers' compensation insurance in the amount of the statutory limit;

(b) Employers' liability insurance in an amount not less than $1,000,000; and

(c) Contractor's Comprehensive Automobile Liability Insurance, including coverages of owned, non-owned and hired vehicles, shall be written with combined single limits (including personal injury liability, bodily injury liability, and property damage liability) of not less than $3,000,000 per each occurrence during the policy year.

(d) Contractor's General Liability Insurance shall be written on a Commercial General Liability coverage form, which coverages shall include Independent Contractor's Liability coverage, Blanket Contractual Liability Endorsement, premise and operation coverage, Broad Form Property Damages Endorsement, explosion, collapse and underground hazard coverage, fire legal liability coverage, Product-Completed Operations coverage (which shall be kept in effect for

two years after the completion of the Improvements) and Personal Advertising Injury Coverage. The coverage limits shall be not less than the following:

(i) Each Occurrence limit - $3,000,000
(ii) General Aggregate - $3,000,000
(iii) Product/Completed Operations Aggregate - $3,000,000
(iv) Personal and Advertising Injury Limit - $3,000,000

Landlord and Tenant shall be additional named insureds on the Contractor's General Liability Insurance and Comprehensive Automobile Liability Insurance. The Contractor's General Liability Insurance and Comprehensive Automobile Liability Insurance shall be provided on an "occurrence" form and not on a "claims made" form.

Architect's Insurance. Tenant shall cause the architect to continuously maintain insurance during the course of its performance of professional services as follows:

(a) General Liability Insurance written on an occurrence basis with per claim and aggregate annual limits of liability of not less than $1,000,000 and with a deductible or self-insured retention of not greater than $10,000; and

(b) Professional liability insurance with per claim and aggregate annual limits of liability of not less than $1,000,000 and with a deductible or self-insured retention of not greater than Fifty Thousand Dollars ($50,000).

The Professional Liability Insurance shall be maintained without interruption for a period of two (2) years after the date of the completion of the Improvements. Landlord and Tenant shall be additional named insureds on the Architect's General Liability Insurance.

Performance and Payment Bonds. A performance bond and a payment bond from the contractor, naming the contractor as principal and the Landlord and Tenant as dual obligees, jointly and severally (except that Landlord is under no circumstances assuming affirmative obligations under the construction contracts), written on bond forms, approved by the Landlord and Tenant in an amount of not less than the full amount of the contract price for the construction of the Improvements, together with (i) a certified and current copy of the power of attorney for the attorney-in-fact who executes the bonds on behalf of the surety and (ii) evidence that the penal sum shall be within the maximum specified for such surety; provided, however, that if the construction financing documents require payment and performance bonds and the requirements for such bonds are reasonably acceptable to the Landlord, then Landlord will accept such bonds to satisfy the requirements of this Lease.

Insurance Requirements Generally.

(a) Each insurance policy and bond required hereunder must be issued by a company lawfully authorized to do business in the State of Utah rated A- or better with a financial size category of class VIII or larger by A.M. Best Company and, in the case of the bonds, from a surety holding a certificate of authority as an acceptable surety on federal bonds as listed by the United States

Department of Treasury (Circular 570, as amended) in its most recent list at the time of issuance of the applicable bond.

(b) Certificates of insurance verifying that the insurance required hereunder has been obtained. Copies of the required additional insurance endorsements along with the Schedule of Forms and Endorsements page of the policy listing the required endorsements as issued modifications to the policy shall be attached to the certificate of insurance provided by Tenant to Landlord.

(c)Tenant shall obtain the agreement of the contractor and the architect to permit Landlord upon request to examine the original insurance policies required hereby along with any endorsements thereto. Tenant shall provide in its contracts with the contractor and the architect that if the contractor or the architect at any time neglects or refuses to provide the insurance required herein, or should such insurance be canceled, Tenant shall have the right, but not the obligation, to procure the same at the cost and expense of the contractor and the architect, and the cost thereof may be deducted by Tenant from any monies then due or thereafter to become due to the contractor and the architect.

Exhibit F

FORM MEMORANDUM OF LEASE

Exhibit G

Park City Municipal Corporation Sustainability Department Requirements

Exhibit H

Resident Selection Plan

I. POLICY ON NON-DISCRIMINATION

A. Management Agent's Policy. With respect to the treatment of applicants, Olive West, LLC, ("Management Agent") will not discriminate against any individual or family because of race, color, creed, national or ethnic origin or ancestry, religion, sex, sexual preference, gender identity, age, disability, military status, source of income, marital status or familial status, acquired immune deficiency syndrome ("AIDS") or AIDS-related conditions ("ARC"), or any other arbitrary basis. No criteria will be applied or information considered pertaining to attributes of behavior that may be imputed by some to a particular group or category. All criteria shall be applied equitably and all information considered on an applicant shall be related solely to the attributes and behavior of individual members of the household as they may affect residency.

II. PROGRAM DESCRIPTION AND POPULATION SERVED

A. Program Guidelines and Income Limits. The property is subject to Low Income Housing Tax Credit ("LIHTC") guidelines and income limits.

III. POLICY ON PRIVACY

A. Federal Privacy Act. It is the policy of the Management Agent to guard the privacy of applicants as conferred by the Federal Privacy Act of 1974, and to ensure the protection of such applicants' records maintained by the Management Agent.

B. Non-Disclosure, Consent and Information Collection. Neither the Management Agent nor its agents or employees, shall disclose any personal information contained in its records to any person or agency unless the individual about whom information is requested shall give written consent to such disclosure or without a court order. This privacy policy in no way limits our ability to collect such information as it may be needed to determine eligibility, compute rent or determine an applicant's suitability for tenancy.

IV. WAITING LIST, PRE-LEASING, AND LEASE-UP

A. Application. Each application will be date and time stamped when received and then processed. Waitlist preference will be given to Employment Qualified Applicants. If there are no Employment Qualified Applicants, units will be made available to general applicants. Units will be made available to Employment Qualified Applicants and, when applicable, general applicants on a first-come, first-served basis.

B. Waiting List. Once the property requires a waitlist, the Management Agent will maintain a waitlist for future available units. Employment Qualified Applicants will be given a preference on the waitlist.

C. Periodic Status Updates. Periodically, letters will be sent to applicants to update their information and confirm they remain interested in applying for a unit. Failure to

respond to the Management Agent's notice to contact the project will result in removal from the waiting list. It is the obligation of the applicant to notify Management Agent in writing of any changes to their address or phone number.

D. Pre-Leasing & Lease-Up. In anticipation of the Certificate of Occupancy ("C of O"), the project owner will open pre-leasing to future residents as follows:

1. Owner will begin marketing the project at least one hundred and eighty (180) days in advance of the anticipated C of O.

E. Priority of Processing. Preference will be given in admission to Employment Qualified Applicants on a first-come, first-served basis and, when appropriate, then to all remaining applicants that will also be evaluated on a first-come, first-served basis.

F. Changes to Affordable Housing Resolution Guidelines. In the event Park City Municipal Corporation makes changes to its affordable housing resolution guidelines, the project owner and Management Agent will work in good faith to accommodate any commercially reasonable changes in the tenant selection plan through an amendment to the ground lease. Any tenant selection plan changes will be applied to new applicants. Any existing waitlist applicants will be grandfathered into the existing and unchanged tenant selection plan. In the event the project owner cannot accommodate affordable housing resolution guideline changes into its tenant selection plan, then the tenant selection plan, existing prior to the applicable affordable housing resolution guideline change(s), will remain in place.

G. Definitions.

1. "Employment Qualified Applicant" shall mean and refer to the following:

(a) Each Employment Qualified Applicant household must include a minimum of one (1) adult that meets the following criteria:

- A full-time (aggregate of 30 hours of employment per calendar week) employee of an entity or entities located within the Park City School District boundaries; or
- An owner of a business or entity with a primary place of business within the Park City School District boundaries; or
- A full-time (aggregate of 30 hours of employment per calendar week) worker who is self-employed or works out of their home and can provide proof that a minimum of seventy-five percent (75%) of their clients and/or customers are based within the Park City School District boundaries.

(b) Any individual determined to be a Qualified Retired or Qualified Disabled (each as defined below) prior to application for ownership or rental, as well as immediate family of an Employment Qualified Applicant are exempt from the required employment hours set forth above.

2. "Qualified Disabled" shall mean and refer to a person who is unable to work or does not have a work history required due to a disability as defined by the Americans with Disabilities Act.

3. "Qualified Retired" shall mean and refer to a person who is sixty-five (65) years of age or older.

V. UNIT SIZE AND OCCUPANCY STANDARDS

A. Housing Criteria. An appropriately sized unit must be available within the property. Families will be housed in accordance with the following criteria:

UNIT SIZE	MINIMUM	MAXIMUM
Studio	1	2
1-Bedroom	1	3
2-Bedroom	2	5
3-Bedroom	3	7

VI. FAIR HOUSING

A. Compliance with Fair Housing Law. The Property will comply with all Federal, State, or local fair housing and civil rights laws and with all equal opportunity requirements set forth in the Fair Housing Act.

B. Compliance with the Federal Privacy Act. It is the policy of the Property to guard the privacy of individuals conferred by the Federal Privacy Act of 1974, and to ensure the protection of such individuals' records maintained by the Property.

C. Section 504 and Reasonable Accommodations. The Property will seek to identify and eliminate situations or procedures which create a barrier to equal housing opportunity for all. In accordance with Section 504 of The Rehabilitation Act of 1973, the Property will make reasonable accommodation for individuals with disabilities (applicants or residents). Such accommodations may include changes in the method of administering policies, procedures, or services.

D. Consideration of Extenuating Circumstances. The Property may consider extenuating circumstances in evaluating information obtained during the screening process to assist in determining the acceptability of an applicant for tenancy. If the applicant is a person with disabilities, the Property will consider extenuating circumstances where this would be required as a matter of reasonable accommodation.

VII. ELIGIBILITY

A. Eligibility and Statutory Requirements.

1. Verifying Income. All income will be verified in writing from the income source on appropriate project income verification forms.

2. Verifying Assets. All assets, including bank accounts, will be verified.

3. Income Eligibility. The applicant must have an eligibility income equal to or less than the HUD- established income limit.

B. Credit and Criminal Screening. Credit and criminal reports will be obtained for each

applicant 18 years of age and over. Applicants will be denied based on failure to meet the credit and criminal criteria.

C. Consideration of Income and Expenses. Gross income and gross expenses will be used to determine an individual's actual ability to pay his/her monthly rent while meeting his/her other monthly obligations.

D. Contacting Applicant Landlords. Previous landlords may be contacted for a reference concerning payment records as well as the history of complying with lease requirements and housekeeping habits.

VIII. GENERAL PROGRAM REQUIREMENTS

HUD specifies that applicants be made aware of program requirements, including (but not limited to) the following:

A. Agreement to Pay the Rent. The applicant must agree to pay the rent required by the formula used in the subsidy program under which the applicant will be admitted.

B. Obligation to Fulfill the Terms of the Lease. All applicants must fulfill the terms of the lease (with or without 3rd party assistance), particularly concerning:

1. Timely payment of rent and other charges.

2. Maintaining premises in safe and sanitary condition.

3. Not interfering with management or quiet enjoyment of the property by others.

IX. REJECTED APPLICATIONS

A. If an applicant is rejected, the screening company will promptly notify the applicant in writing explaining with specificity the stated reason(s) for the rejection.

X. VIOLENCE AGAINST WOMEN ACT

A. Background. The Final Rule of Violence Against Women Reauthorization Act of 2013 (VAWA) protects applicants and residents who are victims of domestic violence, dating violence, stalking or sexual assault from being denied housing, evicted or terminated from housing assistance when the Adverse Factors leading to such denial, eviction or termination are the direct result of the domestic violence, dating violence, stalking, or sexual assault they have suffered.

B. Notices of Occupancy Rights and Responsibilities Under VAWA.

1. Notice of Occupancy Rights. The O/A will provide the Notice of Occupancy Rights

under VAWA, which outlines their rights and obligations under VAWA, at the following points in time:

(a) When an individual is denied residency.

(b) When an individual is admitted to a dwelling unit.

(c) With any notification of eviction (not including Notices to Pay or Quit) or termination of assistance.

C. Confidentiality of Information. The identity of the applicant and all information provided to owners relating to the incident(s) of domestic violence, dating violence, sexual assault, or stalking must be retained in confidence in a separate file secured in a secured location by the O/A and must not be entered into any shared database or provided to a related entity, except to the extent that the disclosure is:

1. Requested or consented to by the individual in writing

2. Required for use in an eviction proceeding; or

3. Otherwise required by applicable law.

D. All Adults Must Sign the Addendum. All family members, 18 and over, must sign the VAWA lease addendum. The HUD-approved certification form provides notice to the applicant of the confidentiality of the form and the limits thereof.

E. Emergency Transfer Plan for Victims of Domestic Violence, Dating Violence, Sexual Assault or Stalking. An "Emergency Transfer Plan for Victims of Domestic Violence, Dating Violence, Sexual Assault or Stalking" has been drafted for the Property. This plan identifies tenants who are eligible for an emergency transfer, the documentation needed to request an emergency transfer, confidentiality protections, how an emergency transfer may occur, and guidance to tenants on safety and security. This plan is based on a model emergency transfer plan published by the U.S. Department of Housing and Urban Development (HUD), the Federal agency that oversees that the Management Agent is in compliance with VAWA. It is available in the Management office with a list of available referral agencies.

Schedule 1.03

PERMITTED EXCEPTIONS

[To reflect existing title encumbrances as of Effective Date, based on title commitment]

Schedule 2.03

LANDLORD'S REMEDIATION SCHEDULE

[need]

Schedule 3.01(e)(i)

ENVIRONMENTAL REPORTS

[need this list to confirm agreement prior to signing off on Ground Lease]

Schedule 7.04

PROHIBITED PERSONS

- Alden Torch Financial LLC
- Hunt Capital Partners
- Hallkeen Management
- [ ]

Schedule 7.05(b)(i)

Initial List of Permitted Leasehold Mortgagees and Investor Member

Utah Housing Corporation
2479 South Lake Park Blvd.
West Valley City, Utah 84120
Attention: Claudia O'Grady
Email: cogrady@uthc.org

Citi Community Capital
325 East Hillcrest Drive, Suite 160
Thousand Oaks, CA 91360
Attention: Tim Lohmann
Email: Timothy.lohmann@citi.com

GSB LIHTC Investor LLC
c/o Goldman Sachs Bank USA
200 West Street
New York, New York 10282
Attention: Urban Investment Group Portfolio Manger
Email: gs-uig-docs@gs.com
gs-uig-portfolio-manager@gs.com
Attention: Scott Maxfield
Email: scott.maxfield@gs.com

2001 Ross Avenue #2800
Dallas, TX 75201
Attention: Kelly Turner
Email: Kelly.turner@gs.com

Olene Walker
350 North State Street, 120 State Capitol
Salt Lake City, Ut 84114
Attention: Jess Peterson
Email: jesspeterson@utah.gov

Intermountain Health Corporation ("IHC")
36 South State Street
Salt Lake City, UT 94111
Attention: David Wilkins
Email: David.wilkins@imail.org
Attention: Nick Fritz
Email: Nicholas.fritz@imail.org

City Council
Staff Report

Subject:	**543 Park Avenue, Washington School House**
Application:	**PL-22-05306, Appeal of Conditional Use Permit PL-20-04477**
Authors:	**Virgil Lund, Planner I** **Lillian Zollinger, Planner II**
Date:	**July 13, 2023**
Type of Item:	**Appeal of a Conditional Use Permit Denial**

Recommendation
Review the appeal of the Planning Commission's denial of the Washington School House (543 Park Avenue) Conditional Use Permit (CUP) for a Minor Hotel.

Summary
On June 15, 2023, the City Council closed the public hearing and continued the Appeal of the CUP to July 13, 2023 (Audio, 5:33).

The Council requested more information regarding the parking passes detailed in Exhibit F.

Additional Information Regarding Parking

The Park City Parking Manager noted that he inherited a program whereby the Washington School House (WSH) received 40-50 temporary parking residential permits every six months for the past several years. The parking passes appear to have been used for conciergerie vehicles or employees to park in the surrounding residential area. The parking permits were not considered in the Hales Engineering Parking Study. The Applicant stated the parking permits are irrelevant because they will no longer use them.

The Applicant's Management Plan does not mention Special Events and refers to "small gatherings." However, the Parking Study has a specific analysis section on Special Events at the Washington School Inn and the impacts of such an event on the site. Regarding non-resident guest parking, the Applicant's Management Plan states, "Non-resident guests must arrive by private shuttle, ride share, taxi, public transit, or on foot."

Wherein the Parking Study states, "If 25% of the overnight guests use parking spaces, then only 3 of the 12 spaces on the property are being used by these guests. That leaves more than adequate parking capacity for non-overnight, special event guests…"

The plan also states, "If vehicles in excess of the Washington School House's 11 available parking spots arrive, staff will direct the vehicles to park at the lots shown on the Public Parking Lots Maps, or other City-approved lots."

The Council's role is to determine whether the Applicant has sufficient (or an excess of, as they claim) parking for the existing overnight guests **and** their proposed non-resident guests, and does not need additional mitigation for more parking **OR** the Applicant does not have sufficient parking for their guests, non-resident guests, and employees and requires additional parking mitigation and additional parking stalls.

The Applicant must show that they have sufficient parking on site for their proposed Use, as required by the LMC. The Planning Commission determined requiring non-resident guests to use public parking as a mitigation tactic is not a sufficient solution for an excess in parking need. The plan also does not account for the parking need of their three concierge vehicles used, typically parked in 3 of the 11 parking stalls they currently have.

Pursuant to LMC § 15-3-6(B), a Minor Hotel Use requires 12 parking spots. The Applicant has proposed one spot on the adjacent parcel or two "compact" parking spots in front of the existing garage.

The single parking spot would first require a Plat Amendment, Steep Slope Conditional Use Permit, and Historic District Design Review before approval. Additionally, parking spaces remove vegetation.

The driveway in front of the garage is approximately 14 feet deep by 9 feet wide, partially in the Right-of-Way, and not code-compliant. Pursuant to LMC § 15-3-3(F), parking spaces must be nine feet wide by 18 feet long. Additionally, "compact spaces with dimensions of nine feet (9') wide by sixteen feet (16') long may be provided. **These spaces are not Code spaces for the purpose of satisfying parking requirements**."

See the Staff Report for the full analysis of the Appeal.

See Exhibit A for updated public input.

Alternatives:

1. Deny the Appeal. Direct the preparation findings and conclusions upholding the Planning Commission's denial.
2. Grant the Appeal. Direct the preparation of findings and conclusions approving the CUP. Use the original recommendation and draft a final Action Letter as amended by the City Council and reflective of Council's determination.
3. Remand to Planning Commission. The Council may remand the matter to the Planning Commission for further evaluation as specified by the Council or consistent with the State Ombudsman opinion described in the appeal?
4. Continue to a date certain and request additional information.
5. Consider a request from the Applicant to continue the matter to entertain a settlement proposal. Consider providing further direction regarding parameters or additional mitigation any settlement proposal must address, different from what the Applicant already proposed.

Exhibits

Exhibit A: Public Input
Exhibit B: June 27, 2022 543 Park Avenue CUP Final Action Letter
Exhibit C: Applicant's Appeal Letter Dated J-
uly 6, 2022
Exhibit D: Property Rights Ombudsman Advisory Opinion
Exhibit E: Hales Engineering Parking Study
Exhibit F: Residential Parking Permits Obtained by WSH
Exhibit G: Applicant's Conditions and Management Plan for WSH Hotel
Exhibit H: 1983 Bed and Breakfast CUP Approval Letter
Exhibit I: 1984 Parking Easement Agreements
Exhibit J: City Engineer's Parking Space Size Determination

From: Michael Kirby[redacted]
Sent: Tuesday, June 6, 2023 10:42 AM
To: Virgil Lund
Subject: [External] Letter to City Council Regarding Washington School Inn

[CAUTION] This is an external email.

Hi Virgil,

Thanks for taking my call yesterday. Please see below our letter to Park City Council. Please share this letter with our Council Members and add it to the public record in advance of the June 15 meeting.

Best wishes,

Michael Kirby
[redacted]

—

Re: Washington School Inn
Meeting Date: June 15, 2023

Dear Council Members,

As homeowners on upper Park Avenue since 2017, we have a lot of experience living in the Washington School Inn neighborhood. We actually stayed at the Washington School Inn in 2016, when we were searching for an old house in Old Town - it's lovely. After we purchased our Park Avenue home in 2017, we lived three doors down from the Inn in an old miner's home for two years as we renovated our old home at the top of the street. Now we have lived in our renovated home, at the top of Park Avenue across from Utah's oldest Catholic Church, since 2021.

Michael spoke at the public hearing the night that City Planning denied Washington School Inn's request to expand its business. We think City Planning made the right choice. Here's why:

There is no shortage of restaurants in Old Town. There is no shortage of wedding venues in Park City. But there is a shortage of livable historic neighborhoods. It has taken decades of hard work - by Park City Planning, Council, homeowners, and craftspeople - to create the historic and livable neighborhood of upper Park Avenue and upper Woodside Avenue. To be sure, the Washington School Inn is a key part of that historic neighborhood.

But size of operation matters. Approved from the beginning as a bed and breakfast, Washington School Inn has existed as a quiet commercial business within its otherwise residential neighborhood, thanks to the restrictions on guest use and parking.

To add a restaurant open to non-guests and to add events would erode the living experience of residents across more than a dozen historic city blocks. It has taken decades to create this livable historic neighborhood; it would take just this one night to ruin it.

We encourage Council to protect the public good that is rare and hard to reproduce. Please uphold Planning's denial of this request to become a hotel with a dining business. Washington School Inn can continue to run their business consistent with the original development agreement with the City, at a scale that suits the residential neighborhood in which it operates.

Respectfully,

Michael Kirby + Aimée Wolfson
[redacted]
Park City

From: John Plunkett[redacted]
Sent: Tuesday, June 6, 2023 5:50 PM
To: Becca Gerber; Tana Toly; Max Doilney; Ryan Dickey; Jeremy Rubell; Nann Worel
Cc: Virgil Lund; Rebecca Ward; Jennifer McGrath
Subject: [External] Public Comment re: Washington School June 15 Appeal

[CAUTION] This is an external email.

Dear City Council and Staff,

We are the 28 residential property owners on Woodside and Park Avenues who stood opposed to the Washington School's request last year to expand its commercial business in our Historic Residential, HR-1 zone.

We were grateful that the Planning Commission denied their application last June. Now that the School has filed an appeal, we ask that City Council affirm the Planning Commission's decision and deny this appeal.

We believe the Planning Commission made the right decision to deny this Hotel c.u.p. application, as per LMC 15–1-10:

"There are certain Uses that, because of unique characteristics or potential impacts on the municipality, surrounding neighbors, or adjacent land Uses, may not be Compatible in some Areas…"

"If the reasonable anticipated detrimental effects of a proposed Conditional Use cannot be substantially mitigated by the proposal or imposition of reasonable conditions to achieve compliance with applicable standards, the Conditional Use may be denied."

Equally important, the School's proposed Conditional Use was not consistent with surrounding Structures in Use, scale, mass and circulation. Enlarging the currently approved use from 30 overnight B&B guests to over 50 nightly diners is not at all compatible with the surrounding residential uses and properties. These incompatibilities cannot be adequately mitigated.

For these reasons, we ask City Council to Deny the School's Appeal — Surely the rights of one (commercial) property owner do not outweigh the rights of the many (residential) property owners who would be directly affected in this Residential HR-1 zone.

We neighbors have had few problems with the Washington School as it has been quietly run (and Conditioned) since 1983. We look the other way at most parking and noise violations. But if ever there was a commercial c.u.p. in Park City that should be denied, for the greater livability of the residential neighborhoods in our historic core, this is it.

Thank-you for your consideration,

John Plunkett & Barbara Kuhr,
564 Woodside & 557 Park, representing:

Kevin Efrusy, 503 Woodside
Ben & Shelly Chigier, 503 1/2 Woodside
Larry Meadows 515 Woodside
Bruce Ward & Cynthia Coe, 521 Woodside
Robert Gebhart, 528 Woodside
Jack Wallack, 532 Woodside
Mike & Katie Mueller, 553, 555 & 557 Woodside
Clayton McNeel, 543 Woodside
Jennifer Tashima, 572 Woodside
Jodi VanDresser & family, 568 Woodside
Tim & Alissa Hoffman, 605 Woodside
Jeff Love, 615 Woodside
Jim Tuton, 621 Woodside
Rachel & Kirk Wilson, 527 Park
Kirsten Ehrich & family, 553 Park
John & Dianne Browning, 561 Park & Woodside lot
Linda & Will Cox, 575 Park
Mark Fischer, 550 Park
Bill & Robin Dark, 594 Park

From: Nicole Buie [redacted]
Sent: Tuesday, June 6, 2023 10:00 PM
To: Virgil Lund
Cc: Brad Dad Buie
Subject: [External] Public Comments from Buie Family-Homeowners for the City Council Hearing

[CAUTION] This is an external email.

Hello Mr. Lund,
We are Brad and Nicole Buie, and are the new homeowners at 576 Woodside Ave. We wholeheartedly stand with our 28+ property owner neighbors and ask that the City Council affirm the Planning Commission's decision and deny the School's appeal once and for all. We believe the Planning Commission made the right decision to deny this Hotel c.u.p. application, as per LMC 15-1-10.

When we learned what the Washington School was trying to do, we were completely shocked that they would propose such egregious changes to our small, historic-rich neighborhood. We love our new home, but have been already concerned about the significant traffic on our very narrow road. Cars and trucks drive fast as it is while pedestrians and their dogs / pets are trying to enjoy our amazing neighborhood, and easy access to the mountain as well as Main Street. Our tiny street and beautiful historic neighborhood is no place for the insane changes that the Washington School is proposing. Surely the rights of one (*commercial*) property owner do not outweigh the rights of all of us (*residential*) property owners who would be directly affected in our Residential HR-1 zone.

Brad and I respectfully request our comments be included in the Staff Report and greatly appreciate the Council's understanding and consideration.

Thank you for your time, and please let us know if you have any questions. I would be there in person but we are traveling.

Thank you,
Nicole and Brad Buie
576 Woodside Ave
[redacted]

Nicole Buie
[redacted]

WSH Appeal Public Comment as of 6.8.23

June 8, 2023 9:32 AM

Mr. Lund:

I would appreciate you adding our statement to the record for the upcoming City Council hearing on this matter.

We remain opposed to the Washington School's ("WS") request to expand its commercial business in our "Historic Residential, HR-1 zone".

We believe the Planning Commission was correct in denying the WS application last June. WS has now filed an appeal, we hope that City Council confirms the Planning Commission's decision to deny last year.

Old Town is a unique neighborhood that contributes to Park City's charm and character. The scale of business expansion being requested more than doubles the quantity of guests visiting the WS daily severely impacting the surrounding neighborhood with traffic and potential parking issues that cannot be mitigated. Indeed, if this CUP were approved, the resulting impact to our quiet enjoyment would likely cause a significant negative impact on the property values of the surrounding neighborhood. Certainly, improving the business model of a single commercial property owner should not offset the collective interests of the many surrounding neighbors who have publicly spoken out against this CUP?

I trust the City Council will make the right decision. Thank you.

Sincerely,

Mary & Clayton McNeel

June 8, 2023 9:47 AM

To the members of the Park City Council, My name is Kirsten Ehrich and as a resident of Park City for 20+ years, I am asking the City Council to uphold the Planning Commission's Denial, by denying this Appeal from the Washington Schoolhouse Inn. Further, I request that this letter be included in the Public Comment record.

My family and I are the happy owners of 553 Park Avenue, next door neighbor to the Washington Schoolhouse Inn. Just over a year ago, old town neighbors organized themselves, hired a lawyer, wrote letters and attended a planning council meeting in an effort to protect the neighborhood from becoming overcrowded and misused from the proposed changes and expansion of the Washington Schoolhouse Inn. A year later, we as neighbors feel the same way, if not more so after a most challenging winter. Old town is a charming, peaceful residential neighborhood nestled on narrow, quaint side streets with extremely restricted ability for growth or change. It was never intended, nor constructed, to handle commercial business of any sort. And, as the town has grown and prospered, this fact is more true now than ever. We ask the planning council to continue their stance of protecting and preserving this historic neighborhood and reject the appeal.

I suppose the heart of the issue to me is the fact that this request does nothing for the social good of the town residents or community enhancement. Hotel status expands the WSH business to the detriment of locals ability to enjoy and function as a small town neighborhood. I can completely understand why an inn owner would want to take advantage of the incredible clientele available to them; however, the building they purchased is nestled in a century-old community neighborhood that was never designed or intended to support businesses such as a hotel. The only reason there is a building of that size in the neighborhood was to educate the town's children. City planners knew then that this was a residential area and not intended or built for commercial use. Today, regardless of whatever creative accommodations or solutions they suggest, there is absolutely no way that their expansion cannot hurt this neighborhood.

Further, in order for the WSH to expand their business, become more profitable and, arguably, supply more tax dollars to Park City, we believe that approval of CUP would significantly devalue the contiguous properties, including ours. Future buyers would absolutely ‘price’ the noise, traffic and light pollution of an adjacent commercial establishment. Personally, our family would be incredibly and negatively affected by any expansion of the WSH footprint or services. Part of the charm of old town is the close proximity of the houses - it is an iconic part of Park City's tourism image. In our case, as immediate neighbors to the WSH, our bedroom windows are located mere feet from the outdoor space WSH would use for expanded functions. We have been grateful to the Schoolhouse for adhering to the guidelines set down years ago, but the enjoyment, use and value of our home would be greatly diminished by larger, louder or later functions of any sort. Owners may be forced to collaborate on future legal strategies to mitigate this degradation. Sadly, that could entangle the town in costly and lengthy litigation. Surely the priority, value and planning should be placed on the citizens of Park City, and the multi-millions of dollars of residential homes surrounding the inn, over a single business expansion.

Lastly, and acknowledging I am not a member of the planning commission, but simply an old town resident and raving fan of Park City, I am aware of and experience some of the aches and pains from growth all over this amazing town. I am concerned that other unique and grandfathered commercial properties scattered across old town would use this appeal to expand the scope of their business, creating fairness issues. Park City is in a fortunate time of growth, popularity and incredible opportunity and I understand that business and lifestyle must coexist in this unique town. However, in the case of the Washington Schoolhouse Inn it is simply the wrong business in the wrong location. When the inn was purchased, it was already surrounded by a century old neighborhood. It was apparent at the time, and even more so now, that while they might be successful as an inn, their growth and size would be limited to their location. Perhaps a solution rests in the inn thinking creatively about a hybrid expansion in a commercial area, such as Main Street. If we as neighbors can compromise with a business in our midst, perhaps they can compromise and expand within a proper commercial area, built and zoned for their success.

In short, nothing has changed about the inn's circumstances - and nothing has changed since the commission voted down their expansion last year. I ask the committee to plan for the future success and longevity of this town and vote down the appeal before them.

Thank you for your time and diligence on this issue,

Kirsten Ehrich

553 Park Avenue

Virgil,

We support John as one of the neighbors located on Woodside in the denial of the application.

Mike Mueller

Dear City Council and Staff,

We are 28 residential property owners on Woodside and Park Avenues who stood opposed to the Washington School's request last year to expand its commercial business in our Historic Residential, HR-1 zone.

We were grateful that the Planning Commission denied their application last June. Now that the School has filed an appeal, we ask that City Council affirm the Planning Commission's decision and deny this appeal.

We believe the Planning Commission made the right decision to deny this Hotel c.u.p. application, as per LMC 15–1-10:

"There are certain Uses that, because of unique characteristics or potential impacts on the municipality, surrounding neighbors, or adjacent land Uses, may not be Compatible in some Areas…"

"If the reasonable anticipated detrimental effects of a proposed Conditional Use cannot be substantially mitigated by the proposal or imposition of reasonable conditions to achieve compliance with applicable standards, the Conditional Use may be denied."

Equally important, the School's proposed Conditional Use was not consistent with surrounding Structures in Use, scale, mass and circulation. Enlarging the currently approved use from 30 overnight B&B guests to over 50 nightly diners is not at all compatible with the surrounding residential uses and properties. These incompatibilities cannot be adequately mitigated.

For these reasons, we ask City Council to Deny the School's Appeal — Surely the rights of one (commercial) property owner do not outweigh the rights of the many (residential) property owners who would be directly affected in this Residential HR-1 zone.

We neighbors have had few problems with the Washington School as it has been quietly run (and Conditioned) since 1983. We look the other way at most parking and noise violations. But if ever there was a commercial c.u.p. in Park City that should be denied, for the greater livability of the residential neighborhoods in our historic core, this is it.

Thank-you for your consideration,

John Plunkett & Barbara Kuhr,

564 Woodside & 557 Park, representing:

Kevin Efrusy, 503 Woodside

Ben & Shelly Chigier, 5031/2 Woodside

Larry Meadows 515 Woodside

Bruce Ward & Cynthia Coe, 521 Woodside

Robert Gebhart, 528 Woodside

Jack Wallack, 532 Woodside

Mike & Katie Mueller, 553, 555 & 557 Woodside

Clayton McNeel, 543 Woodside

Jennifer Tashima, 572 Woodside

Jodi VanDresser & family, 568 Woodside

Tim & Alissa Hoffman, 605 Woodside

Jeff Love, 615 Woodside

Jim Tuton, 621 Woodside

Rachel & Kirk Wilson, 527 Park

Kirsten Ehrich & family, 553 Park

John & Dianne Browning, 561 Park & Woodside lot

Linda & Will Cox, 575 Park

Mark Fischer, 550 Park

Bill & Robin Dark, 594 Park

June 27, 2022

Jason Boal
543 Park Avenue
Park City, UT 84060
jboal@swlaw.com
801-201-1917

CC: Washington School House LLC

NOTICE OF PLANNING COMMISSION ACTION

Description

Address:	543 Park Avenue
Zoning District:	Historic Residential – 1 (HR-1)
Application:	Minor Hotel Conditional Use Permit
Project Number:	PL-20-04477
Action:	Denied
Date of Final Action:	June 27, 2022
Project Summary:	The proposal is to convert the Washington School Inn from a Bed & Breakfast to a Minor Hotel

Action Taken

On June 8, 2022, the Planning Commission conducted a public hearing, and directed staff to draft findings for denial. On June 22, 2022, the Planning Commission denied the proposal to convert the Washington School Inn from a Bed & Breakfast to a Minor Hotel according to the following findings of fact and conclusions of law:

Findings of Fact

1. The property is located at 543 Park Avenue.
2. On February 18, 2020, the Applicant submitted a Conditional Use Permit (CUP) application to the Planning Department to convert the Washington School Inn

from a Bed & Breakfast to a Minor Hotel at 543 Park Avenue. The Applicant proposes expanding the Bed & Breakfast Use to a Minor Hotel Use to include Private Events for non-hotel guest use of the indoor restaurant and gathering areas.

3. The property is in the Historic Residential (HR-1) Zoning District. The property includes two Lots: Lot 1 of the Washington School Inn Replat (13,068 square feet) and Lot 34 of Block 5 of the Park City Survey (1,875 square feet).
4. The property fronts Park Avenue and Woodside Avenue.
5. The primary access to the property is from Park Avenue, a public street.
6. The neighborhood is characterized by a mix of historic and non-historic residential structures. The streetscape is dominated by homes set close to the street. The homes are a mix of one- to two-story residences, with a few three- to four-story homes.
7. The property is subject to two Conditional Use Permits:
    a. On September 21, 1983, the Historic District Commission granted a Bed & Breakfast Conditional Use Permit to operate a 14-room Bed & Breakfast with an additional room for the caretaker.
        i. On June 24, 2015, the Planning Commission approved a modification to the 1983 CUP to shift the laundry facilities from the basement of the Washington School Inn to the detached garage, which was being used for storage.
        ii. The 1983 CUP and its modification establish that passive use of the Washington School Inn garden and grounds by patrons of the Inn are a permitted use in the HR-1 Zoning District and consistent with the 1983 conditional use permit approval. However, organized events for the Washington School Inn patrons and/or the general public including parties, weddings, or other public assemblies, are prohibited in the HR-1 Zoning District and are outside the scope of the 1983 Conditional Use Permit.
    b. On November 10, 2010, the Planning Commission approved a Private Recreation Facility Conditional Use Permit for a lap pool behind the Washington School Inn. The 2010 CUP approval prohibited use of Woodside Avenue for guest parking or for deliveries or service traffic with the sole exception of pool service.
        i. On August 22, 2012, the Planning Commission approved a modification to the 2010 CUP, to expand the site to include landscaping improvements on Lot 34 of the Block 5 of the Park City Survey.
8. LMC § 15-2.2-2(B) establishes a Minor Hotel as a Conditional Use in the HR-1 Zoning District.

9. LMC § 15-15-1 defines a Private Event is defined as, "An event, gathering, party or activity that is closed to the general public or that requires and invitation and/or fee to attend" and defines a Restaurant as "[A] Business in which food is prepared and sold for consumption". The Applicant has proposed the use of the Minor Hotel to include "small gatherings", which includes informal meetings, corporate meetings, or other social gatherings. These small gatherings fall under the definition of Private Events. Private Events are prohibited in the HR – 1 Zoning District. Additionally, "outdoor dining; outdoor food and beverage service stations and cars; outdoor storage; and outdoor events and music" are not allowed uses in the HR-1 Zoning District.
10. The Planning Commission determined that the Applicant's request to allow use of the site for Private Events, to allow use of the dining facilities by non-overnight guests, and to increase the use of the site from approximately 30 guests to 60 guests for dining and Private Events is not compatible with the surrounding Structures in Use, scale, and circulation and reasonable conditions cannot be proposed to mitigate the anticipated detrimental effects of the proposed use because:
    a. The subject property is adjacent to residential land uses on three sides, and the adjacent residential structures have nonconforming 3-foot side setbacks to the Washington School Inn's property;
    b. Restaurants and Private Events are prohibited in the HR-1 Zoning District, "outdoor dining; outdoor food and beverage service stations and cars; outdoor storage; and outdoor events and music" are not allowed uses in the HR-1 Zoning District, and "organized events" are also prohibited by the 1983 CUP Approval; and
    c. The expansion of the arrival and departure, even with drop off by car service, would create incompatible impacts on the residential street.
11. The Applicant sought a parking reduction pursuant to LMC § 15-3-6(B) because a Minor Hotel requires one (1) parking space per room or suite. The Applicant has a private parking easement for eleven (11) parking spaces in a parking structure across the street. The Applicant requested that the parking requirement be reduced from twelve (12) spaces to eleven (11) to protect Significant Vegetation and to retain the vegetative buffer between the Washington School Inn and neighboring residential properties. No additional parking was proposed on-site for the expanded dining sought to be permitted.
12. The Planning Commission found that the request for a parking reduction cannot be adequately mitigated because the mitigation measures would either increase traffic to Park Avenue, which has limited access during winter months, and to Woodside Avenue, which is prohibited under the 2010 CUP Approval. The Applicant's increased parking space on Woodside Avenue would increase traffic

to Woodside Avenue, contrary to the 2010 CUP Approval, and would disturb Significant Vegetation and Steep Slopes.

13. The Planning Commission found that the reliance on public parking facilities as a mitigation strategy was unreasonable.
14. Staff posted notice to the property and mailed notice to property owners within 300 feet on August 25, 2021, February 9, 2022, and May 10, 2022. On May 25, 2022, and on June 8, 2022, the Planning Commission conducted public hearings and continued the item to June 22, 2022 for denial.

Conclusions of Law

1. The Conditional Use Permit is not consistent with the Land Management Code, Section 15-1-10, *Conditional Use Review Process*, and reasonable conditions cannot be proposed to mitigate the anticipated detrimental effects of the proposed Use.
2. The Conditional Use Permit is not compatible with surrounding Structures in Use, scale, mass, and circulation, as required by LMC Section 15-1-10(D), *Standards for Review*.

If you have questions or concerns regarding this Final Action Letter, please call 435-615-5153 or email browne.sebright@parkcity.org.

BY:

John Phillips
Planning Commission, Chair

CC: Browne Sebright, Project Planner

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Park City Municipal Corp.

Wade R. Budge
wbudge@swlaw.com

June 30, 2022

VIA US MAIL AND EMAIL MICHELLE.KELLOGG@PARKCITY.ORG

Michelle Kellogg
City Recorder
Park City
445 Marsac Avenue
Park City, Utah 84060

Re: Notice of Appeal of Planning Commission's Final Action pursuant to Utah Code § 10-9a-703(1) and LMC § 15-1-18C for Application PL-20-04477

Appeal PL-22-05306

Dear Ms. Kellogg:

This firm represents Washington School House, LLC ("**WSH**"), the owner of the real property located at 543 Park, Park City, Utah. WSH previously filed a Conditional Use Permit application on February 18, 2020, to convert its existing Bed and Breakfast into a Minor Hotel (application # PL-20-04477) (the "**Application**").

On June 8, 2022, the Park City Planning Commission held an additional public hearing and directed staff to draft findings of fact and conclusions of law ("**Findings**") for denying the Application. On June 22, 2022, the Planning Commission approved the Findings, and on June 27, 2022, the Planning Commission took final action by executing the Findings and delivering the same to WSH. The Findings concluded that:

1. The Conditional Use Permit is not consistent with the Land Management Code, Section 15-1-10, Conditional Use Review Process, and reasonable conditions cannot be proposed to mitigate the anticipated detrimental effects of the proposed Use.
2. The Conditional Use Permit is not compatible with surrounding Structures in Use, scale, mass, and circulation, as required by LMC Section 15-1-10(D), Standards for Review

Pursuant to Utah Code § 10-9a-703(1) and Park City Land Management Code § 15-1-18C, WSH hereby submits this Notice of Appeal of the Planning Commission's decision.

Snell & Wilmer is a member of LEX MUNDI, The Leading Association of Independent Law Firms.

There are at least six independent bases for this appeal.

1. A land use authority's detrimental effect findings must be supported by substantial evidence in the record. *See Ralph L. Wadsworth Const. v. West Jordan City*, 2000 UT App 49, ¶ 17, 999 P.2d 1240. Findings "based solely on adverse public comment" are insufficient to support a conditional use permit denial. *Id.* This is especially true when such public comments are controverted by evidence in the record. *Id.* ¶ 18. Here, there is no evidence in the record (besides adverse public comment) to justify the Planning Commission's findings that the proposed use would "create incompatible impacts on the residential street" and a parking nuisance. To the contrary, WSH provided the Planning Commission an uncontroverted parking study produced by a licensed engineer that indicated that WSH had more than sufficient parking. The Planning Commission's bare and conclusory findings that the proposed use would increase traffic and parking cannot form the basis for denying the Application.

2. Pursuant to Utah Code § 10-9a-507(2)(a)(i), "a land use authority shall approve a conditional use if reasonable conditions are proposed, or can be imposed, to mitigate the reasonable anticipated detrimental effects of the proposed use . . . ." Importantly, mitigation of reasonably anticipated mitigation does not require elimination of the detrimental effects. *Id.* § 10-9a-507(2)(a)(ii). WSH proposed over 40 conditions and various mitigation plans to mitigate any detrimental effect caused by its proposed use. The Planning Commission's decision was arbitrary and capricious as it provided no evidence and made only conclusory findings as to why these conditions were insufficient to mitigate any detrimental effects.

3. If a land use authority determines that reasonable conditions cannot mitigate the detrimental effects caused by a proposed use, it must support such determination by substantial evidence in the record. *See McElhaney v. City of Moab*, 2017 UT 65, ¶ 27, 423 P.3d 1284. The land use authority can deny a conditional use only if reasonable conditions cannot substantially mitigate the detrimental effects. *See* Utah Code 10-9a-507(2)(c). The Planning Commission made only a conclusory and bare determination as to whether the detrimental effects of WSH's proposed use were unmitigable. In other words, the record is devoid of any evidence—let alone substantial evidence—supporting the conclusion that the detrimental effects of WSH's proposed use were unmitigable. The Planning Commission was required to make an express determination that any detrimental effects of WSH's proposed use were unmitigable and was required to support that conclusion by substantial evidence. The Planning Commission failed to do so.

4. The Planning Commission misconstrued the Application as a standalone request for "Restaurant" and "Private Event Facility" uses which are "prohibited in the HR-1 Zoning District." The Application did not propose "Restaurant" or "Private Event Facility" uses but only requested a conditional use permit for a Hotel Minor use. Pursuant to Section 15-15 of the Park City Land Management Code ("**LMC**"), Minor Hotels/Motels may contain "accessory facilities such as restaurants, bars, spas, [and] meeting rooms." In other words, restaurants and meeting rooms are allowed by the LMC in connection with a Hotel Minor. The fact that

standalone "Restaurant" or "Private Event Facility" uses are prohibited in the HR-1 District are irrelevant to the Application and cannot justify the Application's denial. Moreover, any detrimental effect caused by the Minor Hotel's restaurant and meeting rooms will be remediated through WSH's proposed conditions. The Planning Commission made no findings that such conditions would not remediate any detrimental effects. Moreover, the Planning Commission made several findings relating to outdoor dining and event uses being prohibited in the HR-1 District. These findings are based on public comments directed at outdoor dining and events uses included in an early draft of the Application but were removed based on feedback. Such findings are indicative of the arbitrary and capricious nature of the Planning Commission's decisions as they are directed at uses not included in the Application but that exist solely in the opposing neighbors' minds.

5. The Planning Commission inexplicably and improperly denied the Application because WSH supposedly did not remediate alleged parking issues. This is wrong. WSH proposed multiple options to remediate parking concerns. Specifically, WSH proposed adding an additional parking spot on Woodside Avenue to meet the twelve-spot parking requirement imposed by the LMC[1]. Alternatively, WSH provided a parking study demonstrating that WSH's eleven existing parking spots were more than sufficient for WSH's needs, and WSH requested a parking reduction as permitted by LMC[2]. Finally, WSH agreed to various conditions to mitigate parking issues such as the requirement that all non-guests and employees do not park onsite. Without any evidence and only conclusory, self-serving findings, the Planning Commission determined that WSH's parking remediation plan was insufficient.

6. Both the federal and state constitution guarantee an individual due process before being deprived of life, liberty, or property. *See* U.S. CONST. amend. XIV, § 1; UTAH CONST. Art. 1, § 7. "Procedural due process claims are elevated under a two-part test. The first question is whether the [complaining party] has been deprived of a protected interest in property or liberty." *Salt Lake City Corp. v. Jordan River Restoration Network*, 2012 UT 84, ¶ 48, 299 P.3d 990 (alteration in original) (citations and quotation marks omitted). If the deprivation of property or liberty occurred, then one must determine "whether the procedures at issue comply with due process." *Id.* WSH has a common-law to the unrestricted use of its property and Park City must comply with due process principles in applying its zoning ordinances to deprive WSH of that right. The Planning Commission violated WSH's due process rights when it permitted the opposing neighbors' attorney to submit proposed findings of fact and conclusions of law after the expiration of the public comment period. The Planning Commission wholeheartedly adopted the opposing neighbors' findings thereby depriving WSH of its due process rights and demonstrating the arbitrary and capricious nature of the Planning Commission's decision and its desire to appease the public clamor.

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[1] *See* LMC § 15-3-6(B).
[2] *See* LMC § 15-3-7.

For the foregoing reasons, WSH submits this Notice of Appeal to the City Council of Park City in its capacity as the appeal authority for land use decisions of the Planning Commission.

As always, thank you for your professionalism and attention to this matter.

Sincerely,

SNELL & WILMER

Wade R. Budge, P.C.

WRB:jcb

cc: Thomas Holthus tholthus@mccarthyholthus.com

Advisory Opinion 263

Parties: Washington School House LLC / Park City

Issued: December 14, 2022

TOPIC CATEGORIES:

Conditional Use Applications

Interpretation of Ordinances

Nonconforming Uses & Structures

Substantive Land Use Review

When an application proposes to change from a legal nonconforming use to some other defined land use, the government must review the proposal on its own merits for compliance with applicable zoning standards, without regard to prior conditions or entitlements of the soon-to-be discontinued nonconforming use.

The owner of a legal nonconforming Bed & Breakfast Inn applied for approval as a Minor Hotel, a defined use allowed in the zone with a conditional use permit. Park City wrongfully denied the CUP by treating the proposal as an "expansion" or "increase" of the existing use, instead of reviewing the proposal for approval on its own merits as a minor hotel. The denial was also based on a misinterpretation of city code finding that certain accessory uses expressly included in the code's definition of hotel were instead standalone uses prohibited in the zone. The denial was arbitrary and capricious as the city's reasons were not legally sufficient.

DISCLAIMER

The Office of the Property Rights Ombudsman makes every effort to ensure that the legal analysis of each Advisory Opinion is based on a correct application of statutes and cases in existence when the Opinion was prepared. Over time, however, the analysis of an Advisory Opinion may be altered because of statutory changes or new interpretations issued by appellate courts. Readers should be advised that Advisory Opinions provide general guidance and information on legal protections afforded to private property, but an Opinion should not be considered legal advice. Specific questions should be directed to an attorney to be analyzed according to current laws.

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ADVISORY OPINION

Advisory Opinion Requested By:	Washington School House LLC
Local Government Entity:	Park City
Applicant for Land Use Approval:	Washington School House LLC
Type of Property:	Residential, Historic Site
Date of this Advisory Opinion:	December 14, 2022
Opinion Authored By:	Richard B. Plehn, Attorney Office of the Property Rights Ombudsman

ISSUES

Did Park City wrongfully deny a conditional use permit application seeking to convert an existing legal nonconforming Bed & Breakfast Inn use to a Minor Hotel use?

SUMMARY OF ADVISORY OPINION

A local government may deny a conditional use permit only where it makes supportable findings that reasonable conditions cannot mitigate the use's identified detrimental effects to comply with objective, ordinance-based standards. The government must base these required findings on applicable regulations relevant to the application.

Land use ordinances commonly restrict the expansion of a legal nonconforming use; however, when an applicant proposes to change from a nonconforming use to some other defined land use, the government must review the proposal on its own merits for compliance with applicable zoning standards, without regard to prior conditions or entitlements of the soon-to-be discontinued nonconforming use.

The applicant operates a Bed & Breakfast Inn as a legal nonconforming use, but has applied for approval as a Minor Hotel, which is another defined land use allowed with a conditional use permit. Park City wrongfully denied the conditional use permit application by treating the proposal as an "expansion" or "increase" of the prior bed & breakfast use,

instead of reviewing the proposed minor hotel for approval on its own merits. The city made several findings of detrimental effects based on the proposal's noncompliance with prior permits for the bed & breakfast use that do not pertain to a change in use. The city also misinterpreted its code to find that use of dining and meeting facilities within the hotel constituted additional standalone uses that were prohibited in the zone. From this errant basis, the city concluded that the application did not conform with the land use code and that reasonable conditions could not mitigate the detrimental effects it had identified. The denial was arbitrary and capricious as the city's reasons were not legally sufficient.

The application proposes a minor hotel, which is a defined use that includes accessory uses of dining and meeting facilities commonly associated with a hotel, and is allowed in the zone with a conditional use permit irrespective of how the property has been used in the past. Accordingly, the city must review the application as a proposal for a minor hotel use, only, and make appropriate findings regarding compliance with objective, ordinance-based standards. If reasonable conditions mitigate anticipated detrimental effects of the minor hotel use in the zone, the application is entitled to be approved as conditioned.

EVIDENCE

The Ombudsman's Office reviewed the following relevant documents and information prior to completing this Advisory Opinion:

1. Request for Advisory Opinion submitted by attorney Wade R. Budge, on behalf of Washington School House, LLC, on June 30, 2022.
2. Letter from Nicole M. Deforge, on behalf of a group of Park City Citizens and Neighbors, on July 22,2022.
3. Letter from Mark D. Harrington, on behalf of Park City, on July 26, 2022.
4. Letter from Wade R. Budge, on behalf of Washington School House, LLC, on August 30, 2022, in response to Ms. Deforge's letter, dated July 22, 2022.
5. Letter from Wade R. Budge, on behalf of Washington School House, LLC, on August 30, 2022, in response to Mr. Harrington's letter, dated July 26, 2022.
6. Letter from Nicole M. Deforge, on behalf of a group of Park City Citizens and Neighbors, on September 9, 2022.

BACKGROUND

Washington School House, LLC ("WSH") owns the historic Washington School House in Park City ("City"), a landmark structure built in in 1889 and considered a historic structure in city code. The property is located in the "Old Town" area, situated between Park Avenue at the front of the property, and Woodside Avenue at the rear. The property is surrounded on three sides by residential housing in the "Historic Residential (HR-1)" zoning district.

Existing Use as a Bed & Breakfast Inn

The property has been operating as a Bed & Breakfast Inn under a conditional use permit ("CUP") initially issued in 1983. At the time, hotels and other lodging facilities were not allowed in the HR-1 zone, but city ordinances gave the Historic District Commission the

authority to approve uses that were not consistent with the zoning regulations when such an approval was necessary to preserve a historic structure.[1] As a result, in order to "save the building from demolition or accidental loss,"[2] the Historic District Commission approved a CUP allowing renovation of the schoolhouse to operate as a Bed & Breakfast together with approved nonconforming parking—a private agreement for 11 parking spots in an off-site parking structure across the street.[3]

Over the years, WSH has received several other approvals in furtherance of the CUP for the Bed & Breakfast use. Of note, in 2001, the City approved a renovation of a detached accessory garage into a flat-roof terrace, concluding it was allowed by the HR-1 zoning and consistent with the 1983 CUP, though cautioning that "programming the flat-roof/terrace for outdoor commercial activities which are inconsistent with the character and scope of bed and breakfast inn operations is not permitted under the 1983 conditional use permit or the HR-1 district regulations."[4]

In 2010, the City approved a "Private Recreation Facility" CUP to construct a lap pool on WSH grounds behind the schoolhouse. Again, the City found that "passive use of the grounds by patrons of the Inn are a permitted use in the HR1 zone and consistent with the 1983 conditional use permit . . . [but] [o]rganized events for the Washington School Inn patrons and/or the general public including parties, weddings, and other public assemblies, are not permitted in the HR1 zone and are outside the scope of the 1983 conditional use permit."[5] Finally, in 2011, the City approved the internal remodel of WSH to reduce the number of rooms from 15 to 12, which is its current operation. The current guest occupancy is approximately 30 as a Bed & Breakfast use.

Application for a Change in use to a Minor Hotel

From the time in 1983 when the schoolhouse was initially approved as a nonconforming bed & breakfast use in the HR-1 district, not only has Bed & Breakfast Inn been added as an allowed use in the district, but several other types of allowed lodging uses have been added, including "Nightly Rental," "Boarding House, hostel," and, "Hotel, Minor."[6]

In 2020, WSH applied for a new conditional use permit to convert the existing 12-room Bed & Breakfast use to a 12-room Minor Hotel use. According to the City's initial staff report reviewing the proposal, "A Bed & Breakfast . . . is limited to guest rooms and facilities for guest meals, whereas a Minor Hotel allows for accessory facilities like

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[1] June 8, 2022 Planning Commission Packet, Item 5.B, Exhibit E: 1983 Conditional Use Permit Approval Letter.
[2] *Id.*, Item 5.B, Exhibit D: 1983 CUP Application for Bed & Breakfast.
[3] *Id.*, Item 5.B, Exhibit F. The Staff Report noted that the proposal did not conform to existing parking requirements because "the parking structure would be located off the property, it does not meet side yard setback requirements of the zone, and it exceeds the maximum amount of hard surfaced area allowed for parking." Additionally, "Two parking stalls are 9' x 20' when 10' x 20' is the minimum for outside spaces."
[4] Planning Commission Staff Report, The Washington School Inn, dated April 28, 2021.
[5] *Id.*
[6] *See,* PARK CITY LAND MANAGEMENT CODE ("LMC") § 15-2.2-2 (2022); *see also*, LMC § 15-15-1 (definitions).

restaurants, bars, spas, meeting rooms, group dining facilities, and other activities customarily associated with Hotels."[7]

In WSH's conditional use permit application, WSH asserted that "[f]unctionally, the proposed [Minor Hotel] use will continue much the same as the existing, Bed and Breakfast use," but that the "one exception to the current operation that the applicant seeks to permit[] is the ability of Overnight Guests to invite/host Non-Resident Guests for dining or small gatherings." These small gatherings might include "an informal meeting, corporate meeting, or other social gathering."[8]

When first submitted, WSH's proposal initially sought for both indoor and outdoor facilities to be utilized for special events, and that dining facilities could be available to patrons without overnight accommodations. This proposal received a significant amount of public opposition over the course of four public meetings on the application.[9]

A group of self-organized citizens that reside in the area surrounding the property ("Citizens"), represented by legal counsel, appeared and spoke against the application at scheduled public hearings, and submitted arguments to the Planning Commission as well as to this Office in response to WSH's request for an advisory opinion. Citizens argued, generally, that organized events—including weddings, parties, reunions, and corporate retreats—had already occurred onsite and violated the CUPs for the Bed and Breakfast use. Public comments also focused the gradual but consistent expansion of the use of the property over the years. Citizens' attorney submitted a letter to the Planning Commission lamenting that WSH was "seeking permission to double the use of its property to allow the very things it was expressly prohibited from doing in prior CUPs."

Planning staff also expressed concern that WSH's proposal for its dining facilities effectively opened the use to the general public and likely exceeded the limits of an accessory use of a Minor Hotel, and instead would constitute an additional primary use as a "Restaurant" that could operate irrespective of whether the hotel had any overnight guests (a Restaurant, as a primary use, is not allowed in the HR-1 zone). Planning Staff sought input from the Planning Commission whether the dining facility proposal would constitute an accessory use of a Minor Hotel or a standalone use as a Restaurant.

However, WSH revised the scope of its application in several aspects over the course of the review process with planning staff and public hearing input. As ultimately reviewed by the Planning Commission, the proposed dining and gathering activities would only take place inside the hotel. Non-resident guests were also defined to only include the invitees of overnight guests using the dining facility and indoor gathering areas. WSH proposed a maximum occupancy of 60 guests (plus 8 employees), up to 30 of which would be overnight patrons of the hotel rooms, while the remaining 30 people would be the non-

[7] Planning Commission Staff Report, The Washington School Inn, dated April 28, 2021.
[8] *Id.*
[9] Consisting of two work meetings in 2021 and later two public hearings, the first of which was held in November of 2021 and noted as "brief," and was continued to the second and last public hearing held on June 8, 2022.

resident guests invited by the hotel's overnight patrons. Invited non-resident guests would be limited to certain operating hours, and no walk-ins would be permitted.

Parking Reduction

City code provides an initial parking requirement for a Minor Hotel as 1 parking space per room, but also allows the Planning Commission to approve exceptions. The application sought a parking reduction under city code to satisfy parking requirements for a 12-room Minor Hotel with the existing 11 parking spaces used currently for the Bed and Breakfast Inn. WSH submitted a traffic study concluding that the existing spots were more than sufficient for the demand of the new hotel use.

As for invited non-resident guests, WSH did not anticipate providing any parking for these invitees, who would instead arrive by "private shuttle, ride share, taxi, public transit, or on foot." Finally, delivery and service vehicles serving the hotel would park on Park Avenue with the exception of smaller sized vehicles that could park in the driveway as long as they did not block the sidewalk. Pool service and delivery vehicles would continue to use Woodside Avenue as they had for the Bed & Breakfast Inn use under the 2010 CUP.

As an alternative, should the Planning Commission insist on the full requirement for 12 parking spots under the code, WSH optionally proposed adding one additional parking spot in the rear of the property off of Woodside Avenue to satisfy the required 12th spot. This option, according to Staff Report, would require removal of existing landscaping and vegetation, and a steep slope conditional use permit.

Denial of Conditional Use Permit

WSH notes that it worked with the City's planning department on its current proposal for over two years, and its conditional use application included 42 draft conditions aimed at mitigating any anticipated detrimental effects caused by the Minor Hotel use. Staff recommend approval of the application as ultimately revised by the applicant, and as conditioned by the 42 proposed conditions. At the final Planning Commission meeting, during public comment, Citizens continued to speak against the application.

The Planning Commission ultimately moved to deny the conditional use permit application, the minutes reflecting the reasons being "there was not sufficient parking mitigation for the additional use, there would be a detrimental effect on the surrounding neighborhood, and there were concerns about the number of non-resident guests." The Planning Commission thereafter prepared a written Notice of Planning Commission Action detailing a list of 14 findings of fact, as well as conclusions of law.

The written findings added that the Planning Commission found that (1) the property is subject to two CUPs and that the proposed Minor Hotel use was an "expansion" of the existing Bed & Breakfast use; and (2) the proposed use of dining and other facilities by non-resident guests constituted standalone primary uses of "Restaurant", "Private Event", and "Outdoor Uses", which the Commission found were all prohibited in the HR-1 zone and violated certain restrictions of existing CUPs. Based on these findings, the Planning

Commission additionally found that a parking reduction could not be approved because it would increase traffic and violate existing CUPs, and, alternatively, an added parking space also would increase traffic and violate existing CUPs, and disturb significant vegetation and steep slopes. From these findings, the Planning Commission concluded that the applicant's "request to allow use of the site for Private Events," and to "increase the use of the site" was not compatible with the surrounding structures in use, scale, and circulation and reasonable conditions could not be proposed to mitigate the anticipated detrimental effects of the proposed use.

WSH requested an advisory opinion to determine whether the City erred in denying the application for a conditional use permit.

ANALYSIS

A conditional use is a land use allowed in a particular zoning district, *see* UTAH CODE § 10-9a-507(1), but because of unique characteristics or potential impact of the land use on the municipality, surrounding neighbors, or adjacent land uses, may not be compatible in some areas of the district or may be compatible only if certain conditions are required that mitigate or eliminate detrimental impacts. *Id.* § 10-9a-103(8).

A land use authority's decision to approve or deny conditional use is an administrative land use decision, *id.* § 10-9a-507(3), which must be supported by substantial evidence in the record. *Id.* § 10-9a-801(3)(c)(i). If the land use authority imposes conditions, it must "ensure that the conditions are stated on the record and reasonably relate to mitigating the anticipated detrimental effects of the proposed use." *Id.* § 10-9a-507(2)(b). Similarly, in denying an application, the land use authority "must make findings of fact and conclusions of law that are adequately detailed so as to permit meaningful appellate review." *McElhaney v. City of Moab*, 2017 UT 65, ¶ 35. Findings are "sufficiently detailed [when they] disclose the steps by which [the authority] reaches its ultimate factual conclusions." *Id.* ¶ 36.

A municipality acts arbitrarily and capriciously in denying a conditional use permit where its reasons either have no factual basis or are not legally sufficient. *See, Davis County. v. Clearfield City*, 756 P.2d 704, 713 (Utah Ct. App. 1988).

Here, the Planning Commission made a number of incorrect findings that resulted from mischaracterizing the proposal as well as misinterpreting city code. The City's conclusions were therefore not supported by substantial evidence, and its decision to deny the application was not legally sufficient.

Park City's enacted conditional use ordinance provides three conditional use standards:

1. The Application must comply with all requirements of the land use code;
2. The proposed use must be compatible with surrounding structures in use, scale, mass and circulation; and

3. The effects of any differences in use or scale have been mitigated through careful planning.

See, PARK CITY LAND MANAGEMENT CODE ("LMC") § 15-1-10.D.

The Planning Commission made conclusions for each of these standards in the negative, namely, that: "The Conditional Use Permit is not consistent with the Land Management Code . . . is not compatible with surrounding Structures in Use, scale, mass, and circulation . . . and reasonable conditions cannot be proposed to mitigate the anticipated detrimental effects of the proposed Use." We conclude, however, that the Planning Commission provided either insufficient factual support, or legally insufficient bases for each of the above standards.

First, the Planning Commission made several findings regarding compliance with requirements that were not relevant to the information shown in the application. As a result, the conclusion that the proposal was not compatible with surrounding structures was not supported by substantial evidence as it was based on these irrelevant findings. As to the final standard, the Planning Commission provided no factual support for its conclusion that no reasonable conditions could be proposed to mitigate the anticipated detrimental effects of the proposed use. The applicant had proposed 42 conditions for review, and the Planning Commission's findings are almost silent as to the efficacy of these conditions, instead making conclusory findings that the effects could not be mitigated by condition.

I. The Planning Commission's Findings Were Insufficient Where the Proposal was Reviewed as if it was an Expansion of a Nonconforming Use and Under Regulations Irrelevant to the Use Proposed

Utah's Land Use Development and Management Act ("LUDMA"), as applied to municipalities, provides that a land use application should be substantively reviewed under the land use regulations applicable to the application or to the information shown on the application. UTAH CODE § 10-9a-509(1)(a)(i)(B). That also means that the inverse should be true—if an application does not propose a particular land use, it would be wrong to review the application and make findings under land use regulations not applicable to the application.

A. The application sought a change in use, and prior approvals/conditions for the former Bed & Breakfast Inn have no relevance in determining whether the proposed Minor Hotel complies with applicable conditional use standards.

Here, the applicant proposed a Minor Hotel, a use allowed in the zoning district with a conditional use permit. While the property currently operates as a legal nonconforming Bed & Breakfast Inn, and the applicant's purpose in changing uses sought mostly to "maintain" the current operation with certain exceptions, the Minor Hotel use is legally distinct from a Bed & Breakfast Inn under city code, and as such, should only be reviewed under the land use regulations applicable to a Minor Hotel as a conditional use, without

regard to the existing nonconforming use. By changing land uses, the nonconforming use is being discontinued, and the minor hotel application is therefore not an application that seeks to "expand" or "increase" the nonconforming bed & breakfast use.

This distinction is important because nonconforming use regulations often presume that a nonconforming use should not be expanded or increased, but should rather be reduced—and Park City is no exception.[10] However, conditional use applications are reviewed under an entirely different presumption. Namely, LUDMA considers a conditional use to be a use allowed in the zone, and directs that a land use authority "shall approve a conditional use 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," and may only deny the conditional use "[i]f 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." UTAH CODE § 10-9a-507(2).

Here, the City improperly treated the application as if it were an expansion or increase of a nonconformity. A good portion of the staff report analyzed the proposal according to the differences between the conditions currently imposed on the Bed & Breakfast Inn by prior CUPs and the current Minor Hotel proposal. Public comment on the application, too, largely focused on the proposal as an "increase" or "expansion" of the existing bed & breakfast use. But most importantly, the Planning Commission's findings centered around the proposal as "expanding the Bed & Breakfast Use to a Minor Hotel Use . . . ," Park City, *Notice of Planning Commission Action* ("Notice"), at Findings of Fact #2 (June 27, 2022), and as a request to "increase the use of the site . . . ." *Notice*, Finding #10.

The Planning Commission also explicitly found that the property continued to be subject to prior CUPs, erroneously finding that the proposal violated these CUP conditions in several ways. As a result, the City's conclusion that the application did not conform to enacted conditional use standards wrongfully relied in almost its entirely on the legal fiction that the nonconforming bed & breakfast use still existed for purposes of the application and that this proposal was an "increase [of] the use of the site."

A change in use starts with a clean slate, and is to be reviewed entirely on its own merits for compliance with all existing land use ordinances. The City's conclusions regarding its conditional use standards were legally insufficient because they wrongfully relied on purported noncompliance or other detrimental effects relating to existing CUP conditions, which have nothing to do with a new application for a Minor Hotel use.

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[10] Park City has enacted an ordinance on nonconforming uses and structures "intended to limit enlargement, alteration, restoration, or replacement which would increase the discrepancy between existing conditions and the Development standards prescribed by this Code." LMC § 15-9-1 (2000). City Code gives direction that land use applications involving nonconformities "are reviewed to ensure that they are reducing the degree of non-conformity and improving the physical appearance of the Structure and site through such measures as landscaping, Building design, or the improved function of the Use in relation to other Uses." *Id.*

B. *The application's proposed use of dining and indoor facilities are accessory uses of a Minor Hotel, not standalone primary uses prohibited by the HR-1 zone*

The Planning Commission also wrongfully concluded that WSH proposed operating standalone uses of "Restaurant", certain "Private Events", and/or "Outdoor Uses", all of which are prohibited in the HR-1 district.

First, we note that the finding that Outdoor Uses is prohibited is incorrect on its face as it applies to WSH's application. This is because the ordinance referenced in the Planning Commission's findings, LMC Section 15-4-21 (which does prohibit all outdoor uses unless the zone allows by permit) was not enacted until September of 2020,[11] after WSH submitted its conditional use application on February 18, 2020. Because WSH is "entitled to substantive review . . . under the land use regulations[] in effect on [that] date," UTAH CODE § 10-9a-509, this section prohibiting outdoor uses does not apply to WSH's application.

As for regulations regarding Private Events and Restaurants, when interpreting land use ordinances, the standard rules of statutory construction apply, in which Utah courts will look first to the plain language of the ordinance, *Brendle v. City of Draper*, 937 P.2d 1044, 1047, reading the ordinance "as a whole, [interpreting] its provisions in harmony with other [ordinances] in the same chapter and related chapters." *Foutz v. South Jordan*, 2004 UT 75, ¶ 11. In doing so, the primary goal is "to give effect to the legislative intent, as evidenced by the plain language, in light of the purpose the [ordinance] was meant to achieve." *Id.*

City code provides that a minor hotel is a hotel with fewer than 16 rooms, *See* LMC § 15-15-1 (2019), while defining "Hotel" as:

> A Building containing sleeping rooms for the occupancy of guests for compensation on a nightly basis that ***includes accessory facilities such as restaurants, bars, spas, meeting rooms, on-site check-in lobbies, recreation facilities, group dining facilities, and/or other facilities and activities customarily associated with Hotels***, such as concierge services, shuttle services, room service, and daily maid service.

Id. (emphasis added). Additionally, the HR-1 zone provides that "Accessory Building and Use[s]" are permitted uses. LMC § 15-2.2-2.A. City code defines Accessory use as "[a] land Use that is customarily incidental and subordinate to the to the primary Use located on the same Lot." LMC § 15-15-1 (2019).

Part of the dispute here is how the use of dining and other facilities was initially submitted, amended, and ultimately reviewed by the Planning Commission. As originally submitted,

[11] *See*, PARK CITY, Ordinance 2020-42. This section on prohibited outdoor uses was previously only part of the Historic Recreation Commercial (HRC) district, but the City amended the Code to move that section to its current location as Section 15-4-22 under the Chapter for "Supplemental Regulations," which "qualify or supplement, as the case may be, the regulations appearing elsewhere in [the] Code." LMC § 15-4-1.

WSH had initially desired that its definition of "non-resident guest" not only mean "guests of overnight guests," but also, "guests using the dining facility and indoor areas that have not reserved overnight accommodations but have made reservations for dining or indoor gathering."

The City's staff report concluded that inasmuch as use of hotel facilities and dining area are tied to guests of the hotel and their invited guests, they should be considered accessory uses of the hotel. However, the as applicant's initial broader definition of non-resident guest would open the inn to anyone, it might no longer be considered an Accessory Use, but rather an additional primary use that would be able to operate irrespective of whether the hotel has any overnight guests. Staff suggested limiting the definition to only "the guests of overnight guests using the dining facility and indoor gathering areas." This amended definition was what was ultimately proposed by WSH when the application came before the Planning Commission at the June 8, 2022 meeting.

We agree that the application's proposed use of dining and indoor meeting facilities by invitees of hotel guests is expressly anticipated in the Code's very definition of minor hotel as "include[d] accessory facilities," as mentioned above. Therefore, as Accessory Uses are a permitted use in the HR-1 zone, and the proposed use pertains to accessory uses of a Hotel, the only relevant land use proposed by WSH's application is a Minor Hotel, and the Planning Commission erred by interpreting its code in a way that considered WSH's application as a proposal for standalone "Restaurant" and "Private Events" uses when plainly permitted as accessory uses of a Minor Hotel. See Utah Code § 10-9a-306(2) ("If a land use regulation does not plainly restrict a land use application, the land use authority shall interpret and apply the land use regulation to favor the land use application").

II. The Planning Commission's Conclusion that the Proposal Was Incompatible with Surrounding Structures was Legally Insufficient as Based on Irrelevant Findings

The City's conditional use standards require that a proposed use be compatible with surrounding structures in use, scale, mass and circulation, or, at least, that the effects of any differences in use or scale have been mitigated. LMC § 15-1-10.D. In other words, a finding that a proposal is ***not*** compatible with surrounding structures is essentially a finding of a detrimental effect under state law. The City's conditional use standards provide a list of 16 items that the Planning Commission "must review" when considering impacts and mitigation, essentially constituting the available "reasons" why a use could be found to be incompatible. *See, id.* § 15-1-10.E.

The Planning Commission's errant findings regarding compliance with the existing CUP conditions or standalone primary uses not applicable to WSH's application are inescapably entangled with its conclusion that the application did not comply with its conditional use standards. Specifically, what the Planning Commission determined was not compatible with surrounding structures in use, scale, and circulation was "the Applicant's request to ***allow use of the site for Private Events***, to allow use of the dining

facilities by non-overnight guests, and to ***increase the use*** of the site from approximately 30 guests to 60 guests for dining ***and Private Events***." (emphases added).

We do not believe that the proper analysis on review would be to attempt to strike out only the illegitimate considerations of the findings and try to make assumptions about to what extent this finding of incompatibility was otherwise partly based on any legitimate factors under the City's conditional use standards. The findings explicitly state as its basis considerations that are irrelevant. This inclusion of irrelevant considerations inherently results in findings of fact and conclusions of law that are inadequate "to permit meaningful appellate review," *See, McElhaney v. City of Moab*, 2017 UT 65, ¶ 35, and are therefore legally insufficient.

As a result, "where [a municipality's] reasons . . . are not legally sufficient," denial of a conditional use permit is arbitrary and capricious. *Davis County*, 756 P.2d 704, at 713.

III. The Planning Commission's Determination that Detrimental Effects Could Not be Mitigated was Conclusory and Not Supported.

A conditional use permit may only be denied if the land use authority finds that 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." Utah Code § 10-9a-507(2).

The applicant worked with planning staff to propose a list of 42 conditions that could be imposed on the proposed use to mitigate anticipated detrimental effects. Other than its findings regarding the applicant's proposed parking reduction, and a conclusory finding that the applicant's "reliance on public parking facilities as a mitigation strategy was unreasonable," the Planning Commission's findings are almost silent as to any possible conditions, either those proposed or those that could be imposed.

Conclusory statements that detrimental effects cannot be mitigated by condition, without any discussion of the efficacy of conditions proposed or able to be imposed, fail to disclose the steps by which the authority reaches its ultimate factual conclusions, and are inadequate for review. *McElhaney,* 2017 UT 65, at ¶ 36.

Here, it would appear that the Planning Commission's findings did not address conditions in detail perhaps because it had concluded, erroneously, that the proposal categorically did not comply with city code as it proposed standalone Restaurant, Private Event, and Outdoor Uses, and otherwise violated prior CUP conditions on the property for the Bed & Breakfast use. Again, these irrelevant findings result in a legally insufficient conclusion regarding whether the identified detrimental effects could be mitigated by reasonable condition. As a result, the decision to deny the conditional use permit was arbitrary, capricious, and illegal.

Ultimately, WSH's application proposed only a minor hotel with relevant accessory uses. The City must therefore review the application as such and make appropriate findings on

that basis. If the application complies with the stated requirements in city ordinances pertaining to a minor hotel use, and the application's 42 proposed conditions—or other reasonable conditions—will mitigate anticipated detrimental effects of that use in the HR-1 zone in accordance with relevant CUP standards outlined in city ordinances, the application is entitled to approval as conditioned.

CONCLUSION

The City's decision to deny WSH's conditional use application for a Minor Hotel in the HR-1 zone was both arbitrary and capricious, and illegal. The decision was illegal as it was based on an incorrect interpretation of applicable ordinances as well as ordinances that were not applicable to WSH's application. The decision was arbitrary and capricious because the Planning Commission's findings were not ordinance-based, not sufficiently detailed, or otherwise not factually supported. The City must review the proposal for compliance with objective code requirements for a Minor Hotel use only, which anticipates the accessory use of its dining and meeting facilities as proposed, and if reasonable conditions will mitigate the anticipated detrimental effects of this Minor Hotel use in this area of the HR-1 zone, the application is entitled to approval.

Jordan S. Cullimore

Jordan S. Cullimore, Lead Attorney
Office of the Property Rights Ombudsman

NOTE:

This is an advisory opinion as defined in Section 13-43-205 of the Utah Code. It does not constitute legal advice, and is not to be construed as reflecting the opinions or policy of the State of Utah or the Department of Commerce. The opinions expressed are arrived at based on a summary review of the factual situation involved in this specific matter, and may or may not reflect the opinion that might be expressed in another matter where the facts and circumstances are different or where the relevant law may have changed.

While the author is an attorney and has prepared this opinion in light of his understanding of the relevant law, he does not represent anyone involved in this matter. Anyone with an interest in these issues who must protect that interest should seek the advice of his or her own legal counsel and not rely on this document as a definitive statement of how to protect or advance his interest.

An advisory opinion issued by the Office of the Property Rights Ombudsman is not binding on any party to a dispute involving land use law. If the same issue that is the subject of an advisory opinion is listed as a cause of action in litigation, and that cause of action is litigated on the same facts and circumstances and is resolved consistent with the advisory opinion, the substantially prevailing party on that cause of action may collect reasonable attorney fees and court costs pertaining to the development of that cause of action from the date of the delivery of the advisory opinion to the date of the court's resolution. Additionally, a civil penalty may also be available if the court finds that the opposing party—if either a land use applicant or a government entity—knowingly and intentionally violated the law governing that cause of action.

Evidence of a review by the Office of the Property Rights Ombudsman and the opinions, writings, findings, and determinations of the Office of the Property Rights Ombudsman are not admissible as evidence in a judicial action, except in small claims court, a judicial review of arbitration, or in determining costs and legal fees as explained above.

The Advisory Opinion process is an alternative dispute resolution process. Advisory Opinions are intended to assist parties to resolve disputes and avoid litigation. All of the statutory procedures in place for Advisory Opinions, as well as the internal policies of the Office of the Property Rights Ombudsman, are designed to maximize the opportunity to resolve disputes in a friendly and mutually beneficial manner. The Advisory Opinion attorney fees and civil penalty provisions, found in Section 13-43-206 of the Utah Code, are also designed to encourage dispute resolution. By statute they are awarded in very narrow circumstances, and even if those circumstances are met, the judge maintains discretion regarding whether to award them.

MAILING CERTIFICATE

Section 13-43-206(10)(b) of the Utah Code requires delivery of the attached advisory opinion to the government entity involved in this matter in a manner that complies with UTAH CODE § 63-30d-401 (Notices Filed Under the Governmental Immunity Act).

These provisions of state code require that the advisory opinion be delivered to the agent designated by the governmental entity to receive notices on behalf of the governmental entity in the Governmental Immunity Act database maintained by the Utah State Department of Commerce, Division of Corporations and Commercial Code, and to the address shown is as designated in that database.

The person and address designated in the Governmental Immunity Act database is as follows:

Matt Dias, City Manager
Park City
445 Marsac Avenue
Park City, Utah 84060

On this ___ Day of _____, 2022, I caused the attached Advisory Opinion to be delivered to the governmental office by delivering the same to the United States Postal Service, postage prepaid, certified mail, return receipt requested, and addressed to the person shown above.

_____
Office of the Property Rights Ombudsman

MEMORANDUM

LICENSED PROFESSIONAL ENGINEER
NO. 295699
RYAN R. HALES
03/15/2021
STATE OF UTAH

Date: March 15, 2021

To: Washington School House, LLC

From: Hales Engineering

Subject: Washington School House Inn Parking Study

UT21-1830

This memorandum discusses the parking study completed for the Washington School House Inn in Park City, Utah. The study identifies the parking supply included in the site plan, the parking supply rates required by the City and parking demand rates identified by the Institute of Transportation Engineers (ITE). A discussion of the anticipated parking demand for special events on the property is also included.

Project Description

The Washington School House is located at 543 Park Avenue. A vicinity map of the project site is shown in Figure 1, and a full site plan is found in Appendix A. The Washington School House operates as a boutique bed and breakfast. It serves a limited number of guests that seek a small, private, and exclusive destination. The Washington School House has been recognized in the media, including Travel + Leisure, as a destination draw for Park City.

The owners of the property applied for a conditional use permit to change the Washington School House's current operations as a Bed and Breakfast Inn to a Hotel Minor land use under Park City code. The hotel will have 12 rooms. The property site plan identifies a total of 12 stalls (11 stalls located in a lot across Park Avenue and authorized by easement and 1 parking stall planned for the west end of the property on Woodside Avenue). A driveway on the property offers 2 additional stalls that do not meet the City's off-street parking dimensions.

Figure 1: Site vicinity map of the project in Park City, Utah

Park City Parking Code

The Park City code specifies parking rates for various land use types. According to section 15-3-6B of the code, the City requires "1 space per room or suite, and one space per 200 sf of separately leasable commercial space." This property doesn't include any separately leasable commercial space. Based on these requirements, the Washington School House is required to provide a total of 12 off-street parking spaces. This requirement will be met with the 11 current off-street parking spaces and the 1 proposed parking space.

ITE Parking Demand Rates

While the planned usage of the Washington School House is unique and smaller than a typical hotel, it is comparable to the Institute of Transportation Engineers (ITE), *Parking Generation*, 5th Edition, 2019, business hotel land use. The average parking demand rate for a business hotel (ITE land use 312 is 0.72 parking stalls per hotel room, with an 85th percentile demand rate of 0.83 stalls per room and a maximum observed rate of 0.85 parking stalls per room. This is based on 11 study sites across the United States since the year 1980, with an average parking supply of 1.1 spaces per room. The number of stalls needed based on each of these rates for the proposed project is shown in Table 1.

Table 1: ITE Parking Generation

Park City - Washington School House Inn ITE Parking Generation (LU 312)		
Rate Type	Rate (stalls/dwelling unit)	Stalls
Average	0.72	9
85th Percentile	0.83	10
Maximum	0.85	11

ITE Parking Generation, 5th Edition, 2019

Source: Hales Engineering, February 2021

It is typically recommended that the parking demand be increased by 10% to provide an adequate parking supply for the property. If the 85th percentile parking demand of 10 stalls is used, then a parking supply of 11 stalls is advisable. A summary of the parking rates from the existing site plan, the Park City code, and ITE data can be found in Table 2.

Table 2: Parking Rate Comparison

Park City - Washington School House Inn Parking Rate Comparison		
Source	Rate (stalls / room)	# of Stalls
Park City Parking Code	1.00	12
ITE 85th Percentile Parking Demand	0.83	10
Existing Site Parking (off-street)	1.00	12

ITE Parking Generation, 5th Edition, 2019

1. Two driveway parking spaces exist and have not been included in these numbers

Source: Hales Engineering, February 2021

The proposed site plan, which includes 12 off-street parking spaces, exceeds the recommended ITE parking supply. Moreover, the property owner reports, based on experience with the bed and breakfast, that only about 25% of guests require parking during their stay. This results in use of about 3 of the available parking spaces. The remaining guests arrive via transit, ridesharing services, or private transportation services and use these same services during their stay. Guests using transportation services are picked up and dropped off in a pull out located in front of the Washington School House.

Special Events

The Hotel (Minor) land use would allow the Washington School House to host small, private events. These special events are anticipated to include small corporate retreats, and small, private celebrations for weddings or other milestone events.

The property owners have indicated that no more than 60 guests would be permitted on the property for special events. This is due to the private, exclusive nature of the property and the small nature of the gathering spaces. This number includes up to 34 overnight guests (which is the Washington School House's full occupancy, based on sleeping areas available in the 12 guest rooms). The balance of special event guests would arrive from offsite.

As described above, the property owner stated that most overnight guests utilize ridesharing services for transportation to and from the Washington School House. Approximately 25% of overnight guests bring their own vehicles and require parking. If 25% of the overnight guests use parking spaces, then only 3 of the 12 spaces on the property are being used by these guests. That leaves more than adequate parking capacity for non-overnight, special event guests (estimated at 26 for special events when the Washington School House is completely rented out), the majority of which will also likely use ridesharing or other transportation services. Guests arriving by rideshare, or other transportation service, will be picked up and dropped off in the pull out in front of the Washington School House. The Washington School House will manage parking during special events through use of a valet service.

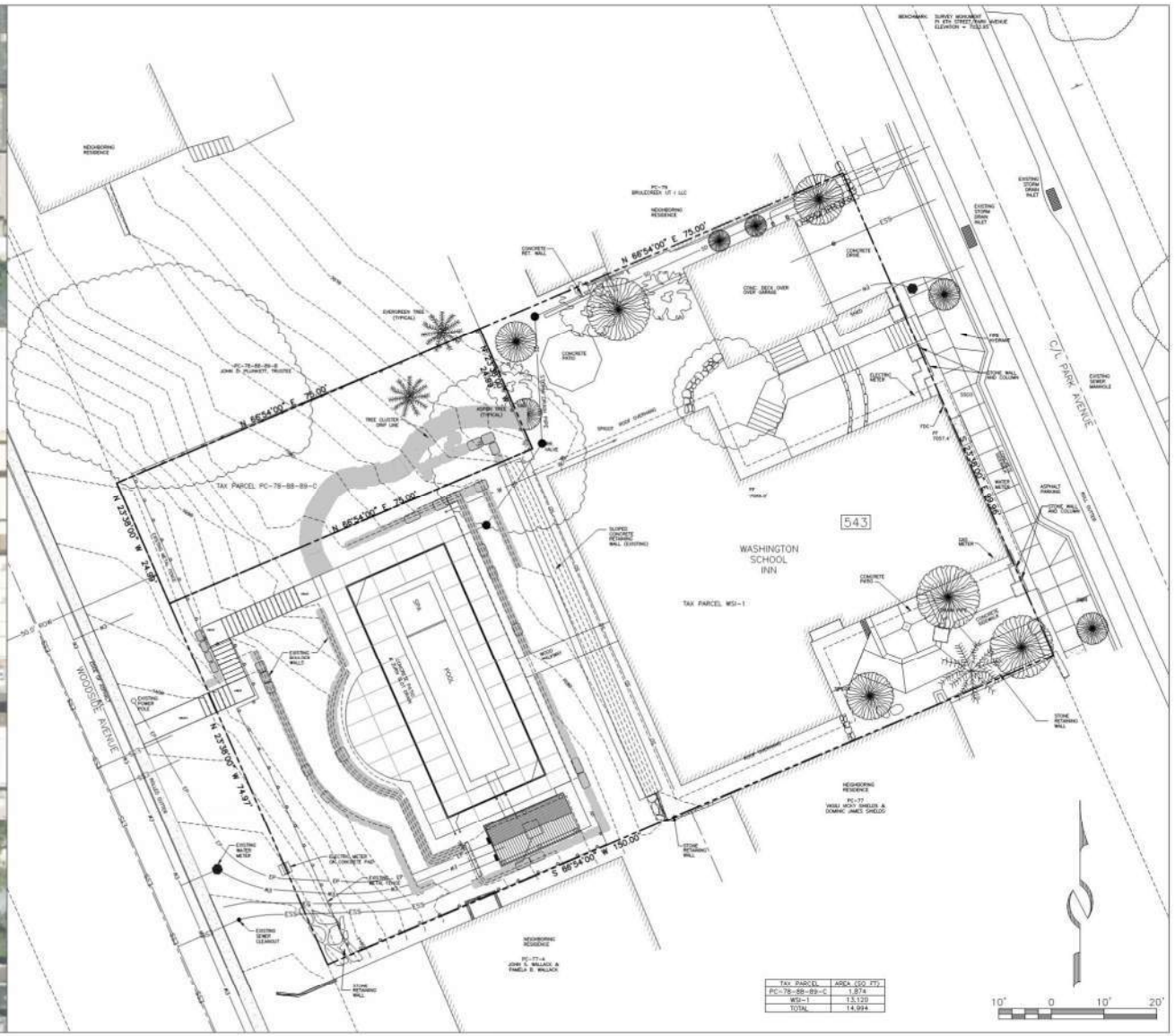
Conclusions and Recommendations

Hales Engineering makes the following conclusions for parking at the proposed Washington School House Hotel in Park City, Utah:

- The proposed site plan for the Washington School House Hotel identifies a total of 12 off-street parking spaces, with 2 additional spaces available in the driveway at the property. This equals a parking supply of 1 parking space per room.
- Section 15-3-6B of the Park City code would require 12 parking spaces for the Washington School House property under the "Hotel (minor)" land use. This translates to a parking supply rate of 1.0 parking space per room.
- The ITE 85th percentile parking demand rate for a business hotel is 0.83 parking stalls per room, translating to 10 parking stalls. With a 10% increase to parking demand, a parking supply of 11 parking stalls is recommended.
    - <u>The current site plan meets the number of parking spaces required in the Park City code and exceeds the number recommended by the ITE data.</u>
    - <u>Based on past parking usage at the property, overnight guests will only use approximately 3 of the 12 available spots.</u>
- The Washington School House is a small, private, exclusive destination that is meant to provide a high level of service to a limited number of guests. It may host small, private, special events under the new "Hotel (minor)" land use.
    - The events will largely cater to overnight guests, with a limited number of additional special event guests who are not staying at the Hotel.
    - Based on past experience, most guests at the Hotel will use ridesharing services and do not require on-site parking. <u>It is not anticipated that parking demand will exceed the 12 supplied parking spaces during special events.</u>

APPENDIX A

Site Plan



TAX PARCEL	AREA (SQ. FT.)
PC-78-88-89-C	1,874
WSI-1	13,120
TOTAL	14,994

(435) 649-9467

CONSULTING ENGINEERS · LAND PLANNERS · SURVEYORS

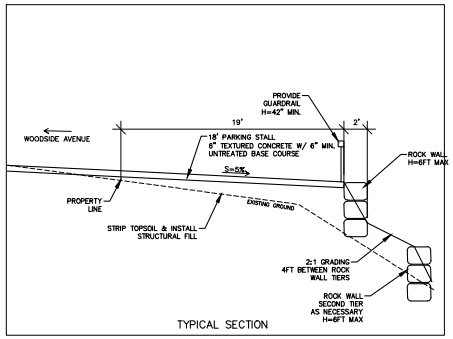
STAFF: MICHAEL DEMKOWICZ, RYAN BETZ

DATE: 2/12/20

2020 EXISTING CONDITIONS & VICINITY
543 PARK AVENUE
WASHINGTON SCHOOL INN

FOR: TRIP BENNETT
JOB NO.: 20-7-17
FILE: X:\ParkCitySurvey\dwg\7-4-10\2017 improvements\wsi2017.dwg

SHEET 1 OF 2



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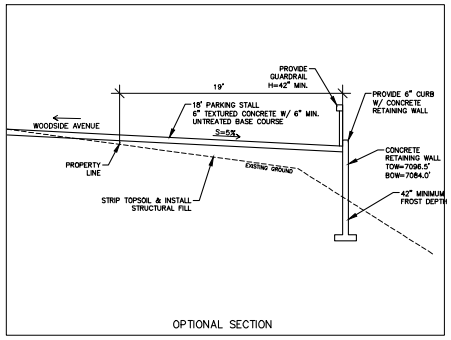

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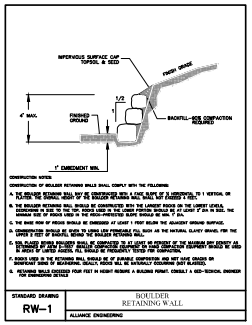
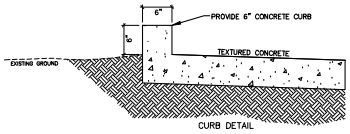
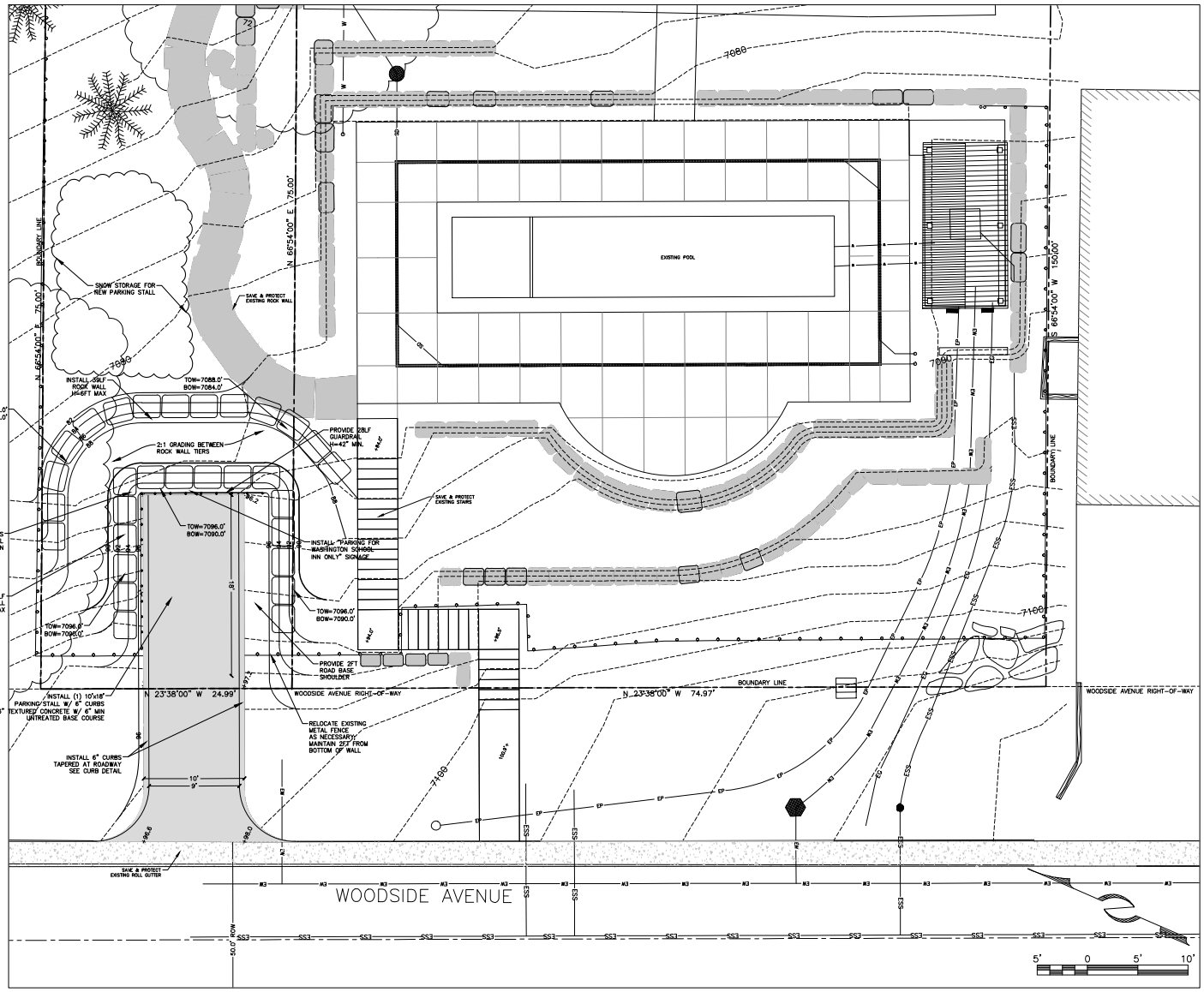




CURB DETAIL

DETAILS



(435) 649-9467

Alliance Engineering Inc

CONSULTING ENGINEERS LAND PLANNERS SURVEYORS

323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

STAFF:
MICHAEL DEMKOWICZ
RYAN BETZ

DATE: 2/12/20

2020 IMPROVEMENTS
543 PARK AVENUE
WASHINGTON SCHOOL INN

FOR: TRIP BENNETT
JOB NO.: 20-7-17
FILE: X:\ParkCitySurvey\dwg\7-4-10\2017 improvements\WSI-civil.dwg

SHEET 2 OF 2

April 13, 2023

To whom it may concern,

Parking Services would like to provide a brief report on the parking management between Park City Municipal and the Washington School House.

The week of December 15th, I held a meeting with Washington School House management regarding their Conditional Use Permit issued by Planning and how their current parking permit allocations and parking impacts violated that agreement. Current residential permit codes found in 9-5-3:

RESIDENT PERMIT. One (1) resident permit shall be issued for each vehicle owned by a person residing within a Residential Permit Zone (RPZ). If more than two (2) permits are requested for one (1) residence, the owner(s) of the vehicles of the residence must make a formal application to the City for additional permits. In no case shall the number of resident permits issued to one (1) residence exceed five (5). Permits will only be issued to the extent that the number of vehicles registered at the dwelling exceeds the off-street parking available at that dwelling to encourage the use of all available off-street parking. No more than two (2) permits shall be issued to any residence within an RPZ that requires parking on a public street subject to time limited parking, as set forth in 9-3-3 of the Municipal Code. An applicant for a permit shall present a current Utah Motor Vehicle registration, a current operator's license, and proof of residence with the application, and shall certify the application with his or her signature.

No permit shall be issued in the event that either the registration or license shows an address not within the RPZ unless the applicant demonstrates to the satisfaction of the City Manager or designee that the applicant is, in fact, a resident of the RPZ and that the vehicle is used primarily by the applicant.

The resident permits shall be valid until the expiration date shown on the permit, or until the resident, business, or qualified non-profit organization relocates outside of the RPZ, or until the permitted vehicle is sold, whichever occurs first.

Resident permits shall be valid only in the same residential permit parking zone in which the residence, business, or qualified institution is located.

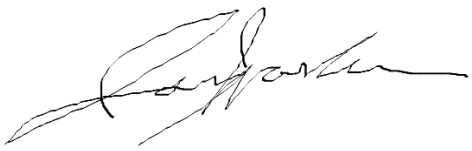
1. **BUSINESS PERMIT.** If the City Manager or designee deems necessary, business permits may be made available upon payment of the prescribed fee, if any, to Main Street area businesses for parking in designated public parking facilities.
2. **SERVICE VEHICLE PERMIT**. Service vehicle permits shall be made available to allow building maintenance and cleaning functions for buildings in the resident permit zones. Applicants shall possess a valid Park City business license. Service vehicles shall be required to use short-term zones, or park in metered spaces and pay the hourly fee while conducting service calls in the metered Main Street core parking areas.

Washington School House has been provided temporary residential permits for many years (about 40-50 every 6 months) by Parking Services which have allowed for their concierge vehicles and sometimes employees to park in residential permitted zones. In an effort to gain parking compliance among businesses operating in residential zones, Parking Services referenced CUP documents provided by Park City Planning and informed them of the violation with proposed compliant solutions. Washington Schoolhouse management were receptive and understood the need to make the changes and agreed on applying for several Old Town Business permits (valid in China Bridge parking garage) to facilitate any overflow parking that exceeded their 11 designated stalls across from their business. They also agreed to apply for 2 Residential Business Permits to accommodate their concierge vehicles to pickup and drop off guests in front of their business. Their business model of limiting parking and traffic impacts is agreeable with current City goals and efforts to reduce congestion in Old Town, so I agreed to also furnish them with 4 temporary residential permits until they could get their applications processed and employees informed of the change during the remainder of the busy winter season.

Moving forward, Washington School House management would not be provided the temporary permits and the expectation would be the business permits and employees parking in their designated 11 stalls and purchase permits for China Bridge instead of residential zones.

Johnny Wasden

Park City Municipal Parking Manager



Washington School House
Project Number PL-20-04477

PROJECT DESCRIPTION

This application is a request for a new conditional use permit ("CUP") to allow the Washington School House to modify its current operations as a Bed and Breakfast Inn to a Minor Hotel. Although Minor Hotels are typically permitted to include accessory facilities such as restaurants, bars, spas, meeting rooms, on-site check-in lobbies, recreation facilities, group dining facilities, and/or other facilities and activities customarily associated with Hotels, such as concierge services, shuttle services, room service, and daily maid service[1], the applicant seeks to generally maintain the current operation as a Bed and Breakfast. The one exception to the current operation that the applicant seeks to permit, is the ability of overnight guests to invite/host non-resident guests for dining or small gatherings. These small gathering might include an informal meeting, corporate meeting, or other social gathering. These dining and gathering activities will only take place inside the Hotel during the hours of 8:00 am – 10pm. No outside areas of the Hotel are proposed/permitted for non-resident guest use. By limiting the dining/gathering to the inside of the hotel, the square footage limitation of the interior dining area, the limitation of two (2) evening seatings in the dining room and total building capacity of sixty (60) guests, will ensure that the proposed change in operation is scaled appropriately for the historic building and neighborhood. This occupancy limit is supported by the building and fire codes. There are no proposed physical changes to the site or the structure associated with this application, other than the potential twelfth (12th) parking spot on Woodside Ave.

The applicant is seeking to reduce the number of parking stalls required, so that the twelfth (12th) stall is not required. Per Park City Land Management Code 15-3-6.B the required parking for a Minor Hotel is "1 space per room or suite, and 1 space per 200 sf of separately leasable commercial space". There has never been any "leasable commercial space" in the Hotel and the proposed use will not change that. The areas that will be used for non-resident dining are the areas currently used for resident dining and are vital to the current operation of the Hotel. The Park City Land Management Code 15-3-7 does permit the Planning Commission to reduce the required number of parking stalls in order to prevent excessive parking and paving. The applicant believes it is in the best interest of the neighborhood and city to preserve the wooded area and Woodside, as opposed to paving it for parking for the twelfth (12th) stall. An analysis from a traffic engineer has been provided to support the reduction in parking as well.

The Washington School House was originally constructed in 1889 from limestone quarried in Peoa, Utah. It is a landmark structure that is listed on the Park City Historic Sites Inventory and the National Register for Historic Places. A prior owner granted the Utah State Historical Society a preservation easement on the building's façade.

On September 21, 1983, the Historic District Commission granted a conditional use permit that authorized a 15-unit bed and breakfast on the property. The Historic District Commission granted the approval to encourage the restoration and adaptive reuse of the Washington School House. A recorded easement (Entry No. 225977) provides 11 parking spaces for the Washington School House.

[1] Park City Land Management Code 15-15 Definitions: Hotel/Motel

The property has been the subject of several subsequent approvals. In 2001, the City approved a plat that combined 7 old town lots into the one lot of record for the historic building. The lot is currently identified as Parcel No. WSI-1. At the same time, the City approved renovations to the non-historic, detached garage on the property because it qualifies as an allowed accessory building.

On November 10, 2010, the Planning Commission approved a CUP for a private recreation facility, which allowed a lap pool behind the Washington School House. In 2012, the Planning Commission approved a modification to the CUP it approved in 2010. The modification expanded the site plan to include landscaping improvements on Lot 34 (identified by Parcel No. PC-78-88- 89-C), which is located on the northwest side of Parcel No. WSI-1. The modification also included changes to the screening of mechanical equipment.

The Applicant completed a total interior renovation of the Washington School House in 2011. As part of the renovation, the Applicant decreased the number of rooms from 15 to 12. This application requests a new CUP to operate a 12 room Minor Hotel. The CUP will apply to both Parcel No. WSI-1 and Parcel No. PC-78-88-89-C.

Management Plan
Washington School House
Project Number PL-20-04477

The Washington School House is located at 543 Park Avenue. The property includes Summit County Parcel Nos. WSI-1 and PC-78-88-89-C.

The Owner, Washington School House LLC, prepared this Management Plan to facilitate implementation of Conditions of Approval for the Washington School House's Minor Hotel Conditional Use Permit. The Owner shall comply with the terms and requirements of the Conditional Use Permit and this Management Plan.

This Management Plan includes the following components:

Section 1: Parking Management Plan
Section 2: Noise Management Plan
Section 3: Site Plan
Section 4: Sample Hotel Contact Information and Complaint Form
Section 5: Supplemental Information

DEFINITIONS:

Non-resident Guests - Includes guests of overnight guests, or guests using the dining facility and indoor areas that have not reserved overnight accommodations but have made reservations for dining or indoor gathering.

Overnight Guests - Hotel guest that have reserved a room for overnight accommodations.

Section 1

Parking Management Plan
Washington School House
Project Number PL-20-04477

The Owner holds a private easement (Entry No. 225977) that authorizes it to use 11 parking stalls located in a two-level parking lot on the east side of Park Avenue, near the Washington School House ("**Park Avenue Lot**"). In addition, the Owner has the ability to create one (1) off-street parking space located on the Washington School House Property and accessed from Woodside Avenue, that if needed, could be utilized. In total, the Owner will provide eleven (11) off-street parking stalls, unless the data collected over a year after the approval of the Planning Commission show that a twelfth (12th) spot is needed.[2] A site plan for this Parking Management Plan is included. To facilitate implementation of this Parking Management Plan, the Owner will limit occupancy to sixty (60) guests, inclusive of overnight and non-resident guests and maintain the seating capacity of the dining facility at twenty-six (26), at one time. This occupancy limit is supported by the building and fire codes.

The change that is being proposed with the Conditional Use Permit application, permitting non-resident guests to dine and gather at the Hotel, does not necessitate any additional parking stalls per the Park City Land Management Code (PCLMC) parking standards. PCLMC 15-3-6.B required parking for a Minor Hotel to be based on "1 space per room or suite, and 1 space per 200 sf of separately leasable commercial space". There has never been any "leasable commercial space" in the Hotel and the proposed use will not change that. The areas that will be used for non-resident dining, are the areas currently used for resident dining and are vital to the current operation of the Hotel. Additionally, Park City Code 4-2-9 provides persuasive support that dining facilities in a hotel are not a separate use. It states that "Traditional hotel/Restaurant offerings including private dinner bookings in Restaurants, existing entertainment such as in Restaurant outlets or lounges etc., or groups utilizing interior signage" are exempt from obtaining a separate business license, because the use is considered part of the hotel operation. Furthermore, Park City Land Management Code 15-3-7 does permit the Planning Commission to reduce the required number of parking stalls in order to prevent excessive parking and paving. The applicant believes it is in the best interest of the neighborhood and city to preserve the wooded area and Woodside, as opposed to paving it for parking for the twelfth (12th) stall. An analysis from a traffic engineer has been provided to support the reduction in parking as well.

Additional bicycle parking for the proposed Conditional Use Permit should not be required. PCLMC 15-3-9 .1 requires bicycle parking for new structures or additions to structures. There is no change to the structure being proposed. There is also an exception for required bicycle parking "when such facilities would negatively impact access, circulation, or snow removal", see PCLMC 15-3-9 .3. With this being a historic site, with limited area, this exception is applicable. Bicycle parking will continue to be provided, as it currently is provided within the onsite garage.

- **Guest Parking and Circulation.**
    - Arriving and departing overnight guests may self-park or use a valet parking at the Washington School House's entrance on Park Avenue, to park in the Park

[2] The conditions of approval for CUP# PL-20-04477 allow for one year of observation before the determination of whether the additional spot is need.

Avenue Lot.

- All guests arriving on site shall do so on a reservation-only basis. When the reservation is made, the Owner shall advertise that parking is only available to overnight guests.

- If vehicles in excess of the Washington School House's eleven (11) available spots arrive, staff will direct the vehicles to park at the lots shown on the **Public Parking Lots Map**, or other City-approved lots.

- Non-resident guests must arrive by private shuttle, ride share, taxi, public transit, or on foot.

- The valet(s) will direct the private shuttle, ride shares, or taxis to temporarily park in the Washington School House's driveway, or in the pull out on Park Avenue, when guests are loading or unloading.

- When valet parking is provided, one or two valets will be stationed outside the Washington School House during overnight guest's arrival and departure. As vehicles arrive, the valet(s) will direct them to temporarily park in the Washington School House's driveway, or in the pull out on Park Avenue, as shown on the **Parking Management Site Plan**. The valet(s) will then park the vehicles at the Washington School House's off-street parking stalls. When overnight guests depart, the valet(s) will return vehicles to them at the driveway, or in the pull out on Park Avenue. To avoid blocking the sidewalk, the valet(s) will only direct appropriately sized vehicles to use the driveway for pick-up and drop-off. In addition, the valet will instruct vehicles not to block the sidewalk.

- Upon arrival, all guests will enter the Washington School House through the Hotel Entrance, as shown on the **Parking Management Site Plan**. Due to the limited number of guests, no queuing is anticipated during guest arrival. If a queue does form at the entrance, guests will be directed to wait at the Northeast Patios, shown on **Parking Management Site Plan**, until they are able to enter the building. This will help avoid sidewalk congestion. When guests depart, they will exit through the Hotel Entrance, or the sidewalk level door, as shown on the **Parking Management Site Plan**. The sidewalk level door locks automatically and will not be used as an entrance. If multiple guests are waiting for vehicles, they will be directed to wait inside, or at the Northeast Patios, to avoid sidewalk congestion.

- In the winter Park Avenue is utilized as a one-way street with traffic movement going from south to north. When reservations are made, guests will receive instruction on how to arrive at the Property.

- **Employee Parking and Circulation.**

  - Employees will be required to arrive at the Washington School House using one of the following methods: on foot; using public transit; parking at a public parking

lot and then use public transit; on bike; or using one of the trip options available through Ride On Park City ("Ride On"). The Owner will notify employees of their commute options, including the Ride On program and public transit. The Owner will encourage employees to use the Ride On program and public transit for their commute.

- Bicycle parking for employees is currently provided in the structure of the Hotel (garage area) and this will continue to be provided.

- **Delivery and Service Vehicles**. All vendors making deliveries to the Washington School House shall adhere to the following guidelines:

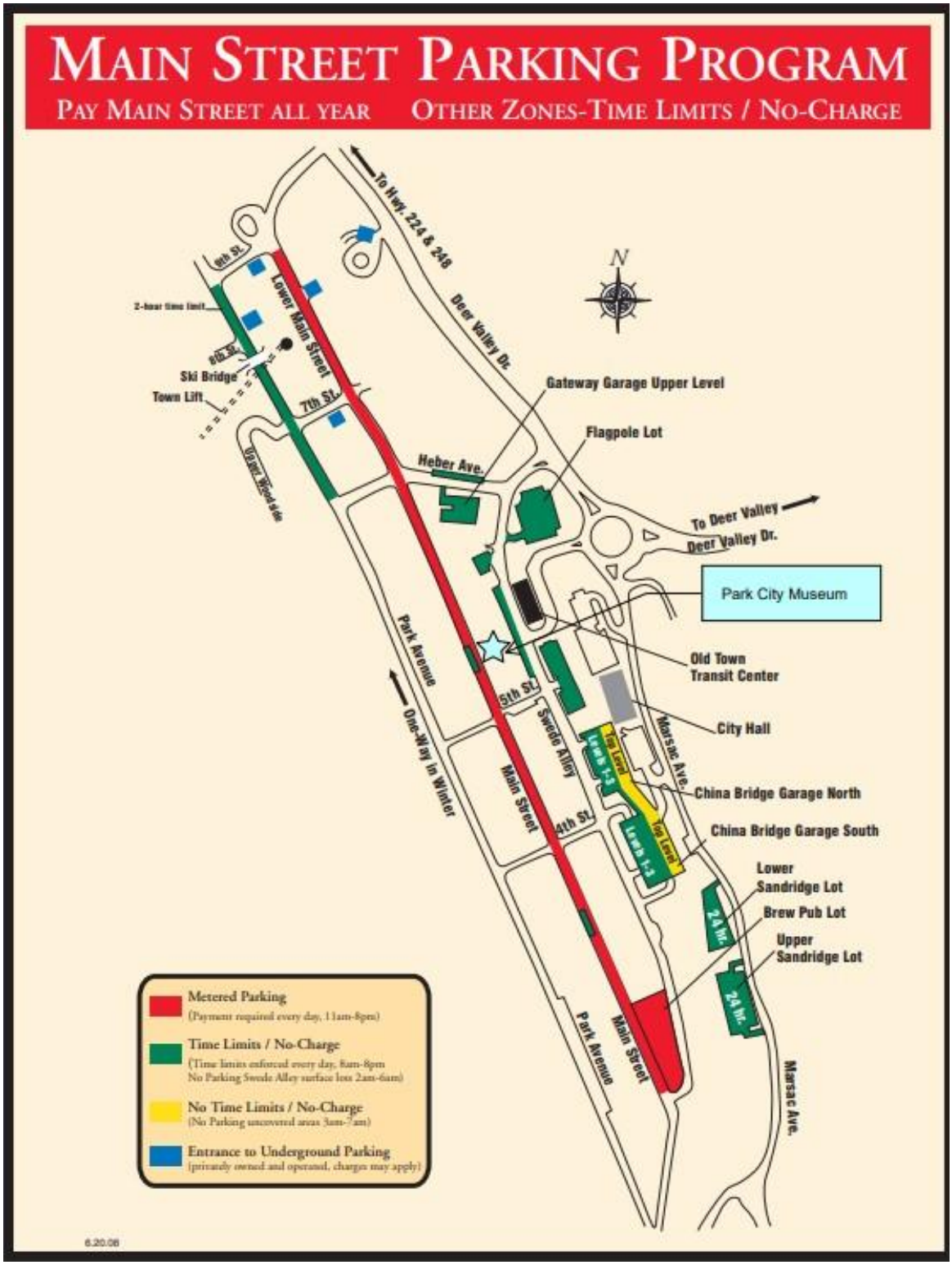
  - Subject to the exception noted below, delivery and service vehicles shall park on Park Avenue. In addition, appropriately sized delivery and service vehicles may park in the driveway at the Washington School House, provided that the vehicles do not block the sidewalk.

  - Consistent with the 2010 CUP Approval (Project No. PL-10-01066), pool service and delivery vehicles may use Woodside Avenue.

  - Subject to the exception for limited pool deliveries, delivery and service vehicles for Washington School House shall not park on Woodside Avenue.

  - The Owner shall use reasonable efforts to schedule delivery and pickup on days and at times to minimize all impacts.

Public Parking Lots Map

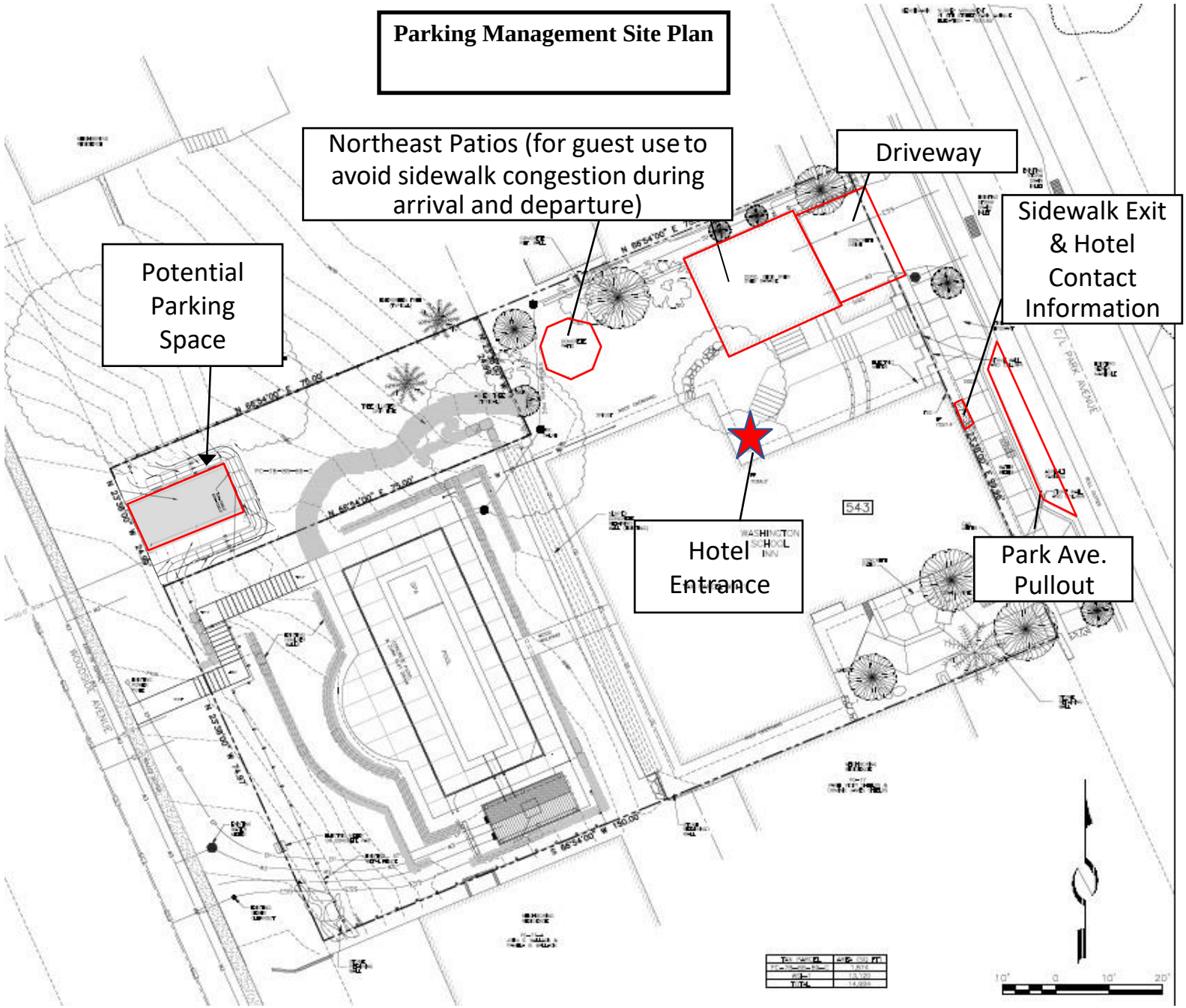


4822-8503-7290

Employee Parking Lot Map

4822-8503-7290

Parking Management Site Plan



Section 2
Noise Management Plan
Washington School House
Project Number PL-20-04477

SUMMARY

The purpose of this Noise Management Plan is to detail the procedures in place to ensure compliance with the CUP and the Park City Noise Ordinance, City Code 6-3-9 ("**Noise Ordinance**"). This Noise Management Plan will be applicable to all hotel operations, pursuant to the approval of the CUP. The outdoor areas of the hotel will only be used by overnight guests during normal operations. Non-Resident guests will only be permitted in the indoor areas of the Hotel. The primary location for outdoor passive uses will be on the west side of the building, around the pool, as shown on **the Hotel Site Plan.** No outdoor activities may use other patio and lawn areas on the property.

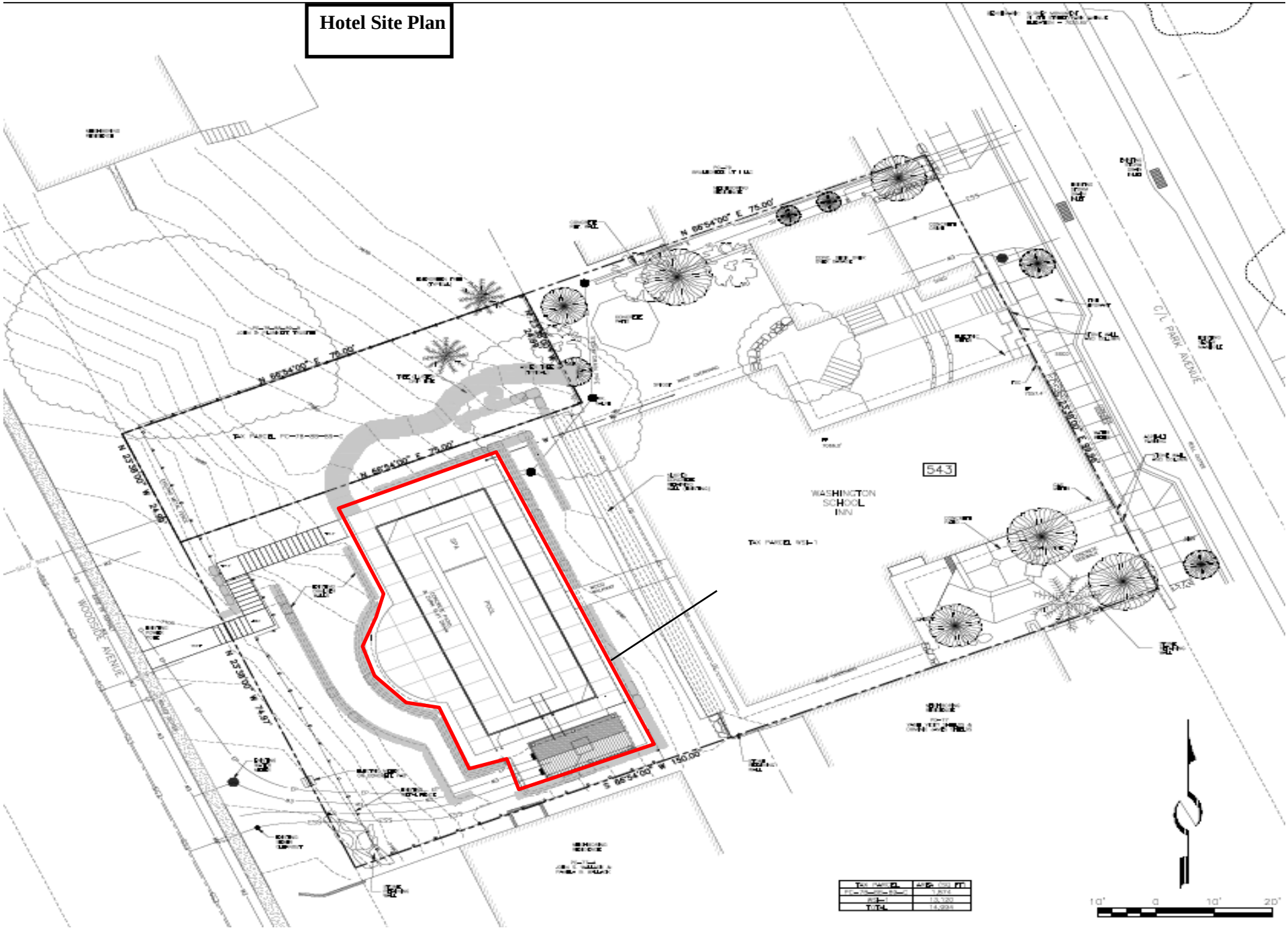
Key Requirements

- The hours of operation for outdoor areas and non-resident guests is 8:00 AM – 10:00 PM. The closing time will be strictly enforced.
- The outdoor areas of the hotel will only be used by overnight guests during normal operations.
- The Owner will designate a Neighborhood Coordinator. The Neighborhood Coordinator's information will be provided to the city and the neighbors.
- Outdoor passive uses for overnight guests and hotel operations shall be programmed and oriented to minimize sound impacts to the surrounding neighbors.
- The Owner shall regularly monitor noise levels to ensure compliance with the Noise Ordinance.

Site Planning

- Outdoor passive uses should be designed in a way to mitigate sound impacts to the adjacent neighbors.
- Complaints related to noise originating from outdoor passive uses should be reported directly to the Neighborhood Coordinator. Any complaints received by the Planning Department will be forwarded to the Neighborhood Coordinator upon receipt.

Hotel Site Plan



Section 5
Supplemental Information
Washington School House
Project Number PL-20-04477

As part of the Washington School House's Management Plan, the following information is provided to add clarification to the operation of the hotel.

1. **Waste Management.**

- The owner will work with the county to obtain the largest possible trash containers.
- Trash pickups will be scheduled for pick up at least three (3) times a week in order to prevent trash build up.
- Trash containers will not be put out for pickup on days when pickup is not scheduled.
- Trash containers will be stored in the garage area.

2. **Square footage for indoor and outdoor space of the facility**

The indoor and outdoor square footage of the hotel that will be used by overnight guests during normal operations and indoor square footage that could be used by non-resident guests is summarized in the table below. The maximum occupancy shall be sixty (60) guests. The primary location for outdoor passive uses will be on the west side of the building, around the pool.

Location	Square Feet
Indoor total	2,273 SF
Kitchen	Approx. 216 SF
Main floor dining	Approx. 492 SF
Basement dining	Approx. 398 SF
Outdoor	2,701 SF
Total	**4,974 SF**

3. **The estimate the number of employees that will be required.**

During maximum occupancy, the Owner plans to have 8 employees on-site. Thus, the total occupancy during will be 68 people (including 60 guests and 8 staff).

4. **The source of the ITE parking demand rate.**

The Institute of Transportation Engineer's ("**ITE**") parking demand rates are based on 11 study sites located across the United States. ITE's parking demand rates are discussed further in Item 7.

5. **The Owner's justification for reducing off-street parking from 12 spaces to 11 pursuant to section 15-3-7 of the City Code.**

Section 15-3-6(B) of the City Code requires the Owner to provide 12 off-street parking spaces for its proposed Minor Hotel. The Owner has an easement to use 11 existing spaces in a parking lot located on Park Avenue, across from the Washington School House. To meet the City Code's requirements for a Minor Hotel, the Owner proposed a twelfth space on Woodside Avenue. The 12 off-street parking spaces are dedicated, private spaces for the Minor Hotel; they will not overlap with other parking uses. Section 15-3-7 of the City Code authorizes the Planning Commission to reduce the parking requirement to prevent excessive parking and paving. The Owner requests that the Planning Commission reduce its off-street parking requirement from 12 spaces to 11.

Hales Engineering completed a March 15, 2021 Parking Study for the Washington School House. To estimate parking requirements for the Minor Hotel, the Parking Study relied on the ITE Parking Generation Manual (5th Ed. 2019). The ITE Manual estimates a parking demand rate for uses similar to the proposed Minor Hotel based on 11 study sites across the United States. The parking rate, and recommended number of spaces for the Minor Hotel, are summarized in Table 1 (excerpted from the Parking Study).

Table 1: ITE Parking Generation

Park City - Washington School House Inn ITE Parking Generation (LU 312)		
Rate Type	Rate (stalls/dwelling unit)	Stalls
Average	0.72	9
85th Percentile	0.83	10
Maximum	0.85	11
ITE Parking Generation, 5th Edition, 2019 Source: Hales Engineering, February 2021		

Hales Engineering drew two important conclusions from Table 1. First, Hales Engineering typically recommends that the ITE's 85th Percentile parking demand estimate be increased by 10%. For the Minor Hotel, this results in a parking demand of 11 spaces. Second, the ITE data showed a maximum observed parking demand rate of 0.85 spaces. For the Washington School House, this results in a parking demand of 11 spaces. In addition, the Owner collected parking data during 2019 based on the number of off-street parking passes issued to guests. The Owner determined that guests for the existing bed and breakfast use at the Washington School House use only 3 of the 11 available parking spaces. In summary, the ITE data, and existing use patterns, support the conclusion that the Minor Hotel needs only 11 off-street parking spaces.

The proposed CUP for the Minor Hotel don't necessitate a twelfth parking space. The Owner proposes a maximum occupancy of 60 guests. Up to 30 of these will be overnight guests. The remaining 20-30 people will be non-resident guests that arrive from offsite. The Owner's Parking Management Plan details how parking will be managed. Notably, the Owner will discuss parking management with the booking guest and require non-resident guests to private shuttle,

ride share, taxi, public transit, or on foot. Staff will valet park the allowed vehicles, when applicable. The remaining guests will arrive from off-site via shuttle, ride share, taxi, public transit, or on foot. If excess vehicles arrive, staff will direct the guests to park at their off-site lodging, or at lots identified in the Parking Management Plan, and to then travel by shuttle, ride share, taxi, public transit, or on foot. Because the Owner will cap the number of vehicles allowed and require other guests to be picked up/dropped off, or travel by foot, a twelfth parking space is not necessary.

For the reasons set forth above, a twelfth spot is not needed for the proposed Minor Hotel. As a result, the Owner requests that the Planning Commission reduce its off-street parking requirement from 12 spaces to 11. If the off-street parking requirement is reduced, the Owner will remove the proposed Woodside Avenue parking space from its Application.

PARK CITY 1884

Community Development/Engineering
Building and Planning Departments

September 26, 1983

The Mac Quoid Company
P.O. Box 1825
Park City, Utah 84060
Attn: Mr. Malcolm S. Mac Quoid

RE: WASHINGTON SCHOOL
545 Park Avenue

Dear Mac:

The Park City Historic District Commission approved your conditional use application for a Bed and Breakfast Inn to be located at 545 Park Avenue at their regularly scheduled September 21, 1983 meeting. The Commission stressed that they approved the use because by doing so, a significant, Nationally Registered Historic Building would be restored. The approval was granted on the following two conditions:

1. That an agreement acceptable to the City Attorney that commits the developer to provide 11 parking stalls for the Washington School be recorded.

2. That if the land to the north of the Sun Classics building is under City ownership, that the developer reach an acceptable agreement with the City for use of the land for stairways and parking access. The agreement should protect the possibility of closing the driveway to Main Street if necessary.

Please keep in mind that the Commission approved only the use of the building, the Staff will review the final drawings for the project. Besides the standard submittal requirements, the Staff is particularly interested in reviewing the landscape plans, the elevations of the parking structure, stairway locations and details, alteration of rock walls, fencing details, details for the decorative iron railings and signage. Modifications to the Sun Classics building will be considered as a separate application.

The Staff is satisfied with the drawings for the school. However, while we would approve the building with the additional dormers, we caution you that the Federal Government may question the approval of the building for the tax

credits with such modifications.

We look forward to continue working with you toward the completion of a successful project. If you have any questions, please don't hesitate to contact either Alison Child or me at 649-6714.

Sincerely,

Bill Ligety

William C. Ligety
Planning Director

WCL:ew

When recorded return to:

Old Towne Associates
P.O. Box 1825
Park City, Utah 84060

Entry No. 225977
REQUEST OF The McQuoid Company
FEE ALAN SPRIGGS, SUMMIT CO. RECORDER
$ 12.00 By Susan Lebrecht
RECORDED 10-9-84 at 3:45 M

EASEMENT AGREEMENT

This Agreement is made and entered into by and between Old Towne Associates, a Utah general partnership ("Old Towne"), and Sierra Pacific Financial, a California general partnership ("Sierra Pacific").

Recitals:

A. Old Towne is the owner of certain real property located in Park City, Utah and more particularly described in Exhibit "A" attached to this Agreement and incorporated by this reference.

B. Sierra Pacific is the owner of certain real property located at 543 Park Avenue, Park City, Utah known as the Washington School and more particularly described in Exhibit "B" attached to this Agreement and incorporated by this reference.

C. By this Agreement the parties intend to provide an easement for parking purposes whereby the property described in Exhibit "A" will be subject to an easement in favor of the property described in Exhibit "B" for motor vehicle parking purposes, as provided in this Agreement.

Now, therefore, the parties hereto agree as follows:

1. Old Towne hereby grants to Sierra Pacific a private easement for parking purposes, sufficient to allow Sierra Pacific to park 11 automobiles or comparably sized motor vehicles on the property described in Exhibit "A". Such easement shall be a benefit appurtenant to the property described in Exhibit "B" and shall run with title to such property.

2. Old Towne shall improve and maintain the property described in Exhibit "A" sufficient to allow compliance with the easement for parking purposes described herein.

3. This Agreement and the rights and duties provided herein shall be binding on, and shall inure to the benefit of, the successors and assigns of Old Towne and Sierra Pacific, respectively.

In witness whereof, the parties have entered into this Agreement as of the date first written above.

Old Towne Associates,
a Utah general partnership

By The MacQuoid Company,
a Utah corporation

By: _____
Malcolm S. MacQuoid,
President

Sierra Pacific Financial,
a California general partnership

By Spring Mountain Enterprises,
a California corporation

By: _____
Frank O'Bryan,
President

BOOK 316 PAGE 697

State of Utah)
) ss.
County of Summit)

On the 4th day of October, 1984, personally appeared before me Malcolm S. MacQuoid, who being by me duly sworn did say that he is the president of The MacQuoid Company, a Utah corporation, a general partner of Old Towne Associates, a Utah general partnership, and that said instrument was signed in behalf of said corporation and said partnership by authority, and said Malcolm S. MacQuoid acknowledged to me that said corporation and said partnership executed the same.

Notary Public

My Commission Expires: February 10, 1986

Residing at: Salt Lake City, Utah

State of California)
) ss.
County of Orange)

On the 3rd day of October, 1984, personally appeared before me Frank O'Bryan, who being by me duly sworn did say that he is the president of Spring Mountain Enterprises, a California corporation, a general partner of Sierra Pacific Financial, a California general partnership, and that said instrument was signed in behalf of said corporation by authority, and said Frank O'Bryan acknowledged to me that said corporation and said partnership executed the same.

Lorraine Bellovich
Notary Public

My Commission Expires: 11-11-87

Residing at: Huntington Beach, Ca.

OFFICIAL SEAL
LORRAINE BELLOVICH
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
ORANGE COUNTY
My Commission Exp. Nov. 11, 1987

BOOK 316 PAGE 698

All of Lots 37, 38 and 39 in Block 9, Park City Survey, except the following:

Beginning at a point on the Easterly line of Park Avenue, said point being South 23°38' East along said Park Avenue 12.90 feet from the Northwest Corner of Lot No. 37, Block 9, Park City Survey and running thence North 66°22' East 20.00 feet; thence South 23°38' East 30.00 feet; thence South 66°22' West 20.00 feet to the Easterly line of said Park Avenue, thence North 23°38' West along said Easterly line 30.00 feet to the point of beginning.

Subject to the general property taxes for the year 1983, and thereafter, and any special assessments now due or to become payable.

Subject to easements and restrictions of record or enforceable in law and equity.

Exhibit "A"

All of Lots 10, 11 and 12, Block 5, Amended Plat of Park City Survey, according to the plat of record and on file in the office of the County Recorder, Summit County, Utah.

Subject to easements and restrictions of record or enforceable in law and equity.

Excepting all oil, gas and/or other minerals which were previously reserved.

Exhibit "B"

Entry No. 218601
REQUEST OF The MacQuoid Company
FEE ALAN SPRIGGS, SUMMIT CO. RECORDER
$ 19.00 By Susan Robinson
RECORDED 3-22-84 at 4:00 M

NON-EXCLUSIVE EASEMENT AGREEMENT

This Agreement is entered into by and among Park City Municipal Corporation ("City"), Old Towne Associates, a Utah general partnership ("Old Towne"), and Sierra Pacific Financial, a California general partnership ("Sierra Pacific"), as of March 22, 1984.

Recitals:

A. Old Towne is the owner of certain real property located at 537 Main Street, Park City, Utah presently known as the Old Towne Shoppes and more particularly described in Exhibit "A" attached to this Agreement and incorporated by this reference.

B. Sierra Pacific is the owner of certain real property located at 543 Park Avenue, Park City, Utah known as the Washington School and more particularly described in Exhibit "B" attached to this Agreement and incorporated by this reference.

C. Old Towne and Sierra Pacific have entered into a parking agreement which necessitates the improvement of an existing right-of-way connecting Park Avenue and Main Street and more particularly described as the North 21.5 feet of Lot 11, and all of Lot 36, Block 9, of the amended plat of Park City Survey ("the Right-of-Way").

D. It is in the best interests of the public health, safety and welfare to improve the Right-of-Way described above and to grant non-exclusive easements to Old Towne and Sierra Pacific appurtenant to each of the properties described in Exhibits "A" and "B", as provided in this Agreement.

Now, therefore, the parties hereto agree as follows:

1. City hereby grants to Old Towne a private non-exclusive pedestrian and vehicular right-of-way easement over the Right-of-Way as described above. Such easement shall be appurtenant to the property described in Exhibit "A" and shall run with such property.

2. City hereby grants to Sierra Pacific a private non-exclusive pedestrian and vehicular right-of-way easement over the Right-of-Way as described above. Such easement shall be appurtenant to the property described in Exhibit "B" and shall run with such property.

BOOK 295 PAGE 135

3. Old Towne and Sierra Pacific shall improve the Right-of-Way by, among other things, rebuilding the existing stairs and installing lights to light the stairs. Such lights shall be hooked into the City's lighting system. All improvements to the Right-of-Way shall be subject to City's prior approval.

4. City shall maintain the Right-of-Way as required for safe pedestrian access, but Old Towne and Sierra Pacific may supplement the City's maintenance as they deem necessary or appropriate.

5. The easement granted hereby shall create no implication or duty by City to provide or allow vehicular access to the Right-of-Way from Main Street. At such time, if any, that motor vehicles are prohibited or restricted from access to the Right-of-Way from Main Street, City shall permit the Right-of-Way to be used in a manner that will permit vehicular access from Park Avenue to the lower level of parking at the rear of the property described in Exhibit "A".

6. This Agreement shall be binding on, and shall inure to the benefit of, the successors and assigns of Old Towne and Sierra Pacific, respectively.

In witness whereof, the parties have entered into this Agreement as of the date first written above.

Old Towne Associates,
a Utah general partnership

By The MacQuoid Company,
a Utah corporation

By: _____
Malcolm S. MacQuoid,
President

Sierra Pacific Financial,
a California general partnership

By Spring Mountain Enterprises,
a California corporation

By: _____
Frank O'Bryan,
President

Park City Municipal Corporation

By: _____
Mayor Pro Tempore

BOOK 295 PAGE 137

State of Utah)
) ss
County of Summit)

On the 16th day of March, 1984, personally appeared before me Malcolm S. MacQuoid, who being by me duly sworn did say that he is the president of The MacQuoid Company, a Utah corporation, a general partner of Old Towne Associates, a Utah general partnership, and that said instrument was signed in behalf of said corporation and said partnership by authority, and said Malcolm S. MacQuoid acknowledged to me that said corporation and said partnership executed the same.

Notary Public

My Commission Expires:
February 16, 1986

Residing at:
Park City Utah

State of California)
) ss.
County of Orange)

On the 20th day of March, 1984, personally appeared before me Frank O'Bryan, who being by me duly sworn did say that he is the president of Spring Mountain Enterprises, a California corporation, a general partner of Sierra Pacific Financial, a California general partnership, and that said instrument was signed in behalf of said corporation by authority, and said Frank O'Bryan acknowledged to me that said corporation and said partnership executed the same.

Notary Public

My Commission Expires:
August 31, 1987

Residing at:
Newport Beach, California

OFFICIAL SEAL
IDA RUTH PHINNEY
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
My comm. expires AUG 31, 1987

State of Utah)
) ss.
County of Summit)

On the 22nd day of March, 1984, personally appeared before me William H. Coleman, who being by me duly sworn did say that he is the Mayor Pro-Tempore of Park City Municipal Corporation, a municipal corporation organized and existing under the laws of the State of Utah, and that said instrument was signed in behalf of said Park City Municipal Corporation by authority of a resolution of its City Council, and said William H. Coleman acknowledged to me that said Park City Municipal Corporation executed the same.

William R. Gatherum
Notary Public

My Commission Expires:
May 13, 1987

Residing at:
Salt Lake City, Utah

WILLIAM R. GATHERUM
NOTARY
PUBLIC
STATE OF UTAH

BOOK 295 PAGE 139

The North 3.50 feet of Lot No. 8, all of Lot Nos. 9 and 10, the South 3.50 feet of Lot No. 11, and all of Lot Nos. 37, 38 and 39, in Block 9, Park City Survey; Except the following:

Beginning at a point on the Easterly line of Park Avenue, said point being South 23°38' East along said Park Avenue 12.90 feet from the Northwest Corner of Lot No. 37, Block 9, Park City Survey and running thence North 66°22' East 20.00 feet; thence South 23°38' East 30.00 feet; thence South 66°22' West 20.00 feet to the Easterly line of said Park Avenue, thence North 23°38' West along said Easterly line 30.00 feet to the point of beginning.

Subject to the general property taxes for the year 1983, and thereafter, and any special assessments now due or to become payable.

Subject to easements and restrictions of record or enforceable in law and equity.

BOOK 295 PAGE 140

Exhibit "A"

Lots 10, 11, 12, 32, 33, 34, 35, 36, and 37, Block 5, Amended Plat of PARK CITY SURVEY, according to the plat of record and on file in the office of the County Recorder, Summit County, Utah.

Subject to the general property taxes for the year 1983 and thereafter, and any special assessments now due or to become due.

Subject to easements and restrictions of record or enforceable in law and equity.

Excepting all oil, gas and/or other minerals which were previously reserved.

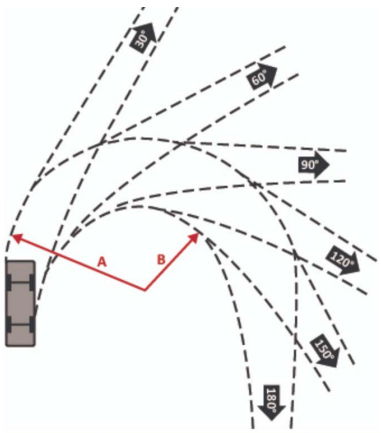
Exhibit "B"

From: Browne Sebright
To: Lillian Zollinger; Virgil Lund
Subject: FW: Washington School House Parking
Date: Wednesday, April 19, 2023 3:26:29 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png

From: Nestor Gallo <nestor.gallo@parkcity.org>
Sent: Monday, September 27, 2021 4:37 PM
To: Boal, Jason <jboal@swlaw.com>
Cc: John Robertson <john.robertson@parkcity.org>; Browne Sebright <browne.sebright@parkcity.org>; Austin Taylor <austin.taylor@parkcity.org>
Subject: RE: Washington School House Parking

Good morning Jason,

The minimum passenger vehicles dimensions specified by AASHTO are shown in Figure 1.



Symbol	Design Vehicle Type	Width (ft)	Length (ft)
P	Passenger Car	7.0	19

Figure 1: Passenger vehicle minimum dimensions

The minimum parking stall dimensions of 9 feet wide by 19 feet long were adopted, assuming a driver needs a minimum of one foot on each side to safely open the vehicle's door.
These dimensions apply to road design and parking lots.

However, passenger vehicles vary in dimension from a small sedan to a full-size pickup truck, as illustrated in Figure 2.

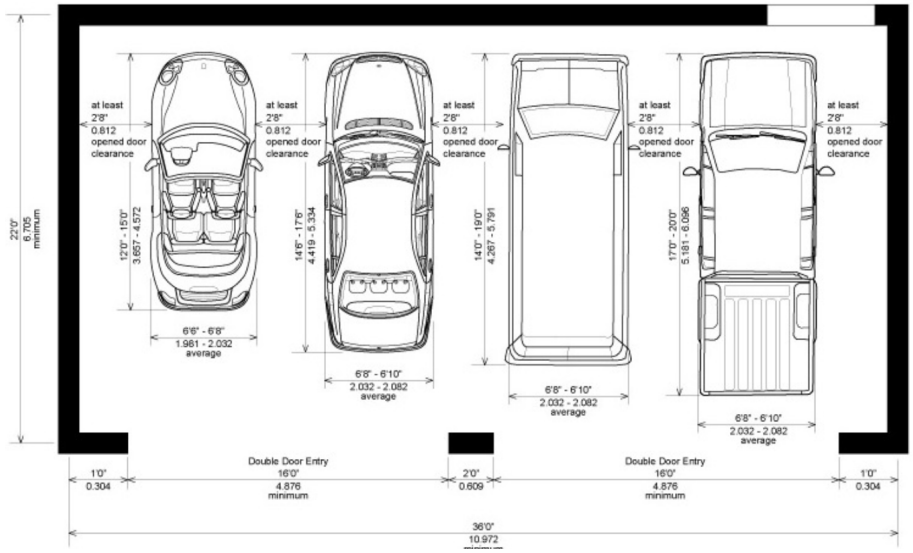


Figure 2: Average vehicle sizes.

The average size of a mid-size sedan is 6'10" wide to 14'6" in length.

The striping of the existing parking structure is shown in Figure 3:

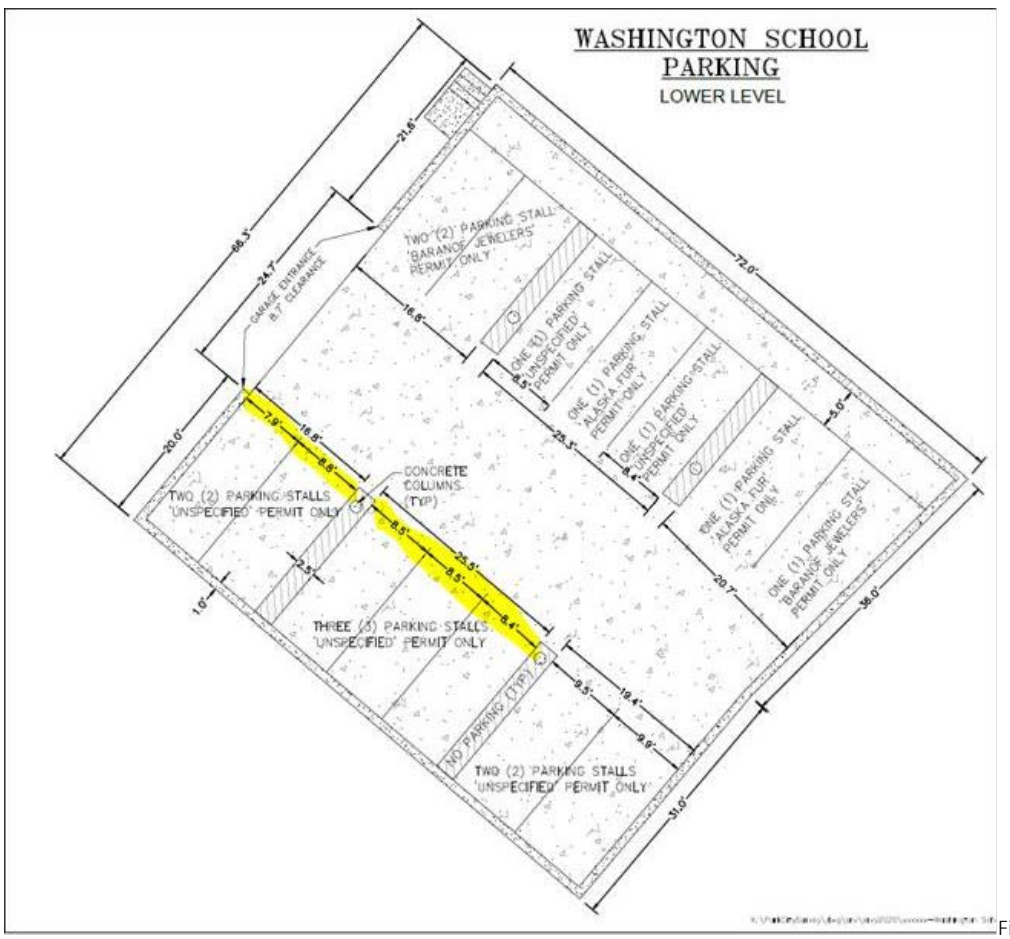


Figure 3: Existing Lower Parking Area

Based on the following facts:

1. The existing parking lot is considered a valid non-compliant structure, and remodeling is not feasible.

2. The striping of the parking stalls is limited by the location of the reinforced concrete columns (see Figure 3).
3. The hardship of the existing parking stalls being smaller than required by the city code is not self-imposed.
4. The existing striping still works for small and mid-size sedan vehicles.
5. The applicant could coordinate the parking of large size vehicles before a scheduled event.

The Engineering Department supports a minor variance to the minimum parking stall dimensions.
If you have any questions, please, let me know.
Sincerely,

Nestor Gallo, P.E.
Public Improvements Engineer
Engineering Department
Park City Corporation
(435) 615 5057

From: Boal, Jason jboal@swlaw.com
Sent: Thursday, September 23, 2021 4:13 PM
To: Nestor Gallo <nestor.gallo@parkcity.org>
Subject: [External] Washington School House Parking

[CAUTION] This is an external email.

Nestor,

Per Park City Municipal Code 15-3-3.F, we would like the City Engineer to take a look and hopefully offer an approved variation to the parking stall size. This would allow us to continue to utilize an existing parking lot with existing space.

1. Background Information

The Owner has an easement that authorizes it to use 11 parking spaces in a two-story parking structure located on the east side of Park Avenue, across the street from the Washington School House (the "Park Avenue Lot"). These 11 spaces have been in use since 1984.

Currently, the Land Management Code requires that parking spaces have dimensions of 9' wide by 18' long. The Park Avenue Lot has 26 spaces. 12 of those parking spaces are assigned to others. The remaining 14 parking spaces are not assigned. The Owner may use 11 of the 14 unassigned parking spaces. In other words, the Owner doesn't use all of the unassigned parking spaces.

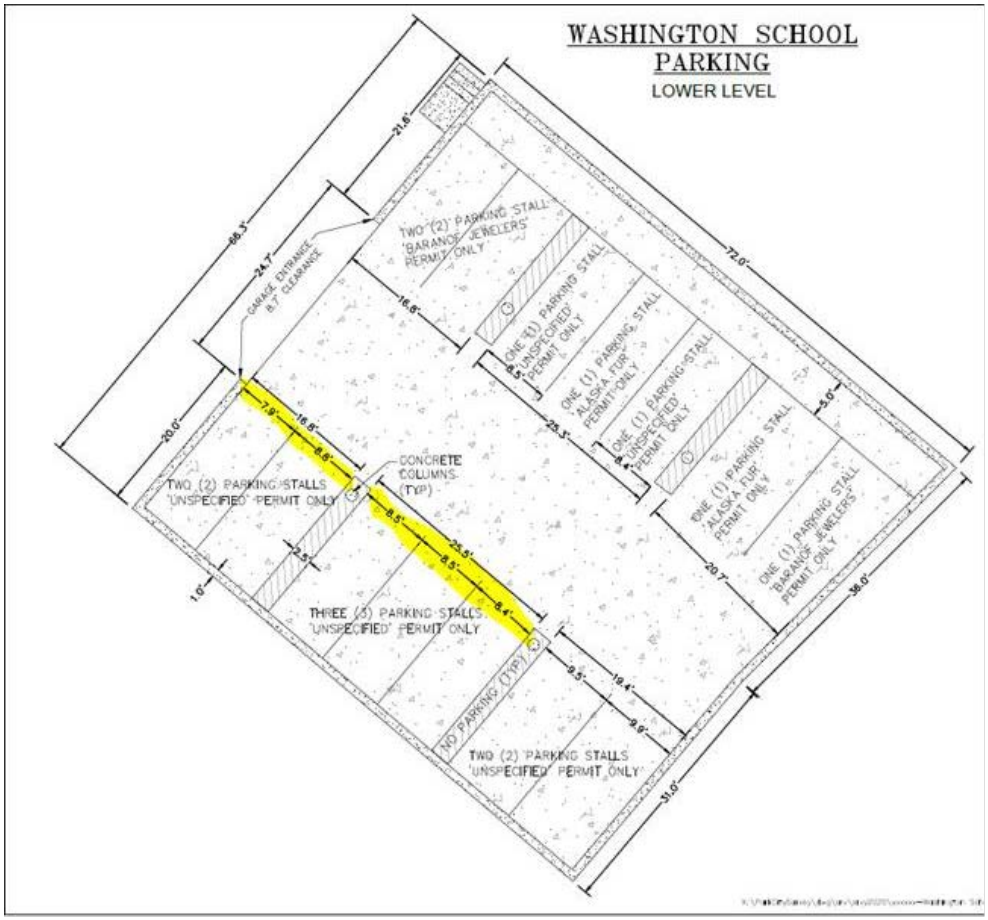
7 of the 14 unassigned parking spaces are narrower than the City's current 9' width requirement for parking spaces. 6 of them are too narrow by a matter of inches (between 2" and 7"). One spot is too narrow by 13 inches.

2. Summary of Parking Spaces

- The lot has 26 spaces
    - 14 lower spaces (5 dedicated, 9 free)
    - 12 upper spaces (7 dedicated, 5 free)
- The shortcomings are minor, there are 14 available spaces:
    - 7 comply with current dimensions (5 upper level and 2 lower level, west side)
    - 1 is 2" too narrow (lower level)
    - 5 are 6-7" too narrow (lower level)

- 1 is 13” too narrow (lower level)
- Note that they wouldn’t necessarily need to use the smallest spot because they only need 11 of the 14 available spots.

3. See attached drawings for parking space assignments and dimensions.
4. Pictures of cars parked at 5 spots, including the smallest spot.



GMC
V61 OYS

I am happy to provide any additional information you might need or answer any questions you might have.

I really appreciate your help on this!

Jason Boal
Urban Planner

office: 801.257.1917
email: jboal@swlaw.com

Snell & Wilmer
Gateway Tower West | 15 West South Temple | Suite 1200 | Salt Lake City, UT 84101-1547

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Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Planning
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Approve Ordinance No. 2023-36, an Ordinance Amending Land Management Code Sections 15-1-8 *Review Procedure Under the Code* and 15-1-18 *Appeals*
(A) Public Hearing (B) Action

Suggested Action:

Attachments:
Land Management Code Amendments Regarding Council Appeal Authority Staff Report
Exhibit A: Draft Ordinance No. 2023-36
Exhibit B: Western Planner 2020 Article

City Council
Staff Report

Subject:	**City Council Land Use Appeal Authority**
Application:	**PL-23-05689**
Authors:	**Charles Pearlman, City Attorney's Office** **Rebecca Ward, Interim Planning Director**
Date:	**July 13, 2023**
Type of Item:	**Legislative – Land Management Code Amendments**

Recommendation

(I) Review and consider proposed Land Management Code amendments to remove the City's legislative body, the City Council, as Appeal Authority for Master Planned Developments (MPDs) and Conditional Use Permits (CUPs); (II) conduct a public hearing; and (III) consider approving Ordinance No. 2023-36 creating a permanent three-member Appeal Panel with members serving terms of three years to hear appeals of MPDs and CUPs (Exhibit A).

Description

Applicant:	Planning Department
Land Management Code Sections Amended:	15-1-8 *Review Procedure Under the Code* 15-1-18 *Appeals*
Reason for Review:	The Planning Commission holds a public hearing and forwards a recommendation to the City Council for amendments to the Land Management Code. The City Council holds a public hearing and takes Final Action.[1]

Terms that are capitalized as proper nouns throughout this staff report are defined in LMC § 15-15-1.

Background

On June 14, 2023, the Planning Commission unanimously recommended the LMC be amended to establish a permanent three-member Appeal Panel with members serving terms of three years to hear the appeals of Final Action by the Planning Commission on MPDs and CUPs (Staff Report; Audio).

Very few jurisdictions ever utilized their legislative bodies as land use appeal authorities on administrative appeals. Boards of Adjustment were the standard choice for land use appeals. An exception was those employing older forms of government, such as three-member County Commissions in which individual commissioners exercised executive, administrative, and legislative authority.

[1] LMC § 15-1-7

The Land Management Code (LMC) provides for appeals to City Council for MPDs and CUPs.[2] These appeals go to City Council unless City Council determines that to "ensure fair due process for all affected parties or to otherwise preserve the appearance of fairness in any appeal" the appeal should go to an Appeal Panel that the Council appoints for the specific appeal.[3]

The City Council is an appeal authority on Planning Commission Final Action for MPDs and CUPs likely due to the overlap with those types of approvals with the City's early annexations and MPDs. The City Council often approved annexations and high-level master plans with little detail but wanted to retain overall site plan approval as smaller phases of the projects developed.

Due to changes in state law, this process presents challenges, outlined below.

Analysis

(I) Appeals of Planning Commission Final Action for Master Planned Developments and Conditional Use Permits Increases Risk of Challenges to Due Process and Ex Parte Communications.

Over the past 20 years, the Utah Legislature made numerous changes to the Municipal Land Use, Development, and Management Act to facilitate municipalities moving away from legislative bodies as their Appeal Authority (Utah Code §§ 10-9a-701 — 10-9a-708).[4] These amendments also clarified which decisions are administrative, legislative, and quasi-judicial. While for most matters the Utah Code does not directly prohibit legislative bodies from also acting as a municipality's appeal authority, the Utah Code was amended in part to decrease the risk of due process and ex parte communications as a basis to challenge appeal decisions by legislative bodies.

When the City Council was first established as the appeal authority for CUPs, CUPs were considered discretionary, and in that context, it made sense for the Council to remain the appeal authority. However, such use of CUPs is inconsistent with today's code, which mirrors Utah case law that consistently has held CUPs to be administrative.

These changes have shifted the status of CUPs to "permitted uses" so long as impacts can be mitigated pursuant to objective standards. Reconciling current state code with older development agreements is complex and legally challenging. If the community's goal is to hold property owners to the strict legal terms of existing agreements, limiting

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[2] LMC § 15-1-18(C)
[3] LMC § 15-1-18(C)(1)
[4] *See, e.g.* Local Land Use Development and Management Amendments, 2005 Utah Laws 254; Municipal and County Land Use and Development Revisions, 2021 Utah Laws 385; Land Use and Development Amendments, 2019 Utah Laws 385; Historic Preservation Amendments, 2017 Utah Laws 017; Land Use Amendments, 2017 Utah Laws 084; Land Use and Development Amendments, 2019 Utah Laws 384; Local Land Use and Development Revisions, 2023 Utah Laws 501; County and Municipal Land Use Regulation of Potential Geologic Hazard Areas, 2008 Utah Laws 326.

the owner's appeal to an Appeal Panel better ensures a decision consistent with the underlying legal documents and codes.

Conversely, communities often expect their Council to get involved early in the process to explore whether a better result can be achieved. The Council's status as the appeal authority mandates that the Council remain on the sidelines pending any potential appeal. Avoiding ex parte contacts and remaining a fair and impartial body to hear any subsequent challenge to the planning process limits the Council's ability to hear and talk to the community. This role is often in conflict with community expectations.

As a result of changes to state code and the challenges of having the legislative body act as the Appeal Authority for the municipality, most municipalities in Utah have followed suit by amending their appeals process to remove the legislative body as their Appeal Authority, and we recommend careful consideration of doing the same.

(II) Staff Recommends Planning Commission Final Action on Master Planned Developments and Conditional Use Permits be Appealed to an Appeal Panel.

LMC § 15-1-18(C) was implemented to allow the City Council to consider an alternative to the Treasure Hill project pending the Planning Commission's ongoing review of the CUP application. This section establishes City Council discretion to appoint a three-person Appeal Panel on a case-by-case basis if the Council determines it is needed to ensure fair process or fairness of the appeal process.[5]

Appointed Appeal Panel members must meet the following qualifications:

- Be a Park City or area resident
- Have at least five years of experience in an adjudicative position and/or a legal or planning degree
- Be capable of conducting quasi-judicial administrative hearings in an orderly, impartial, and highly professional manner
- Be able to follow complex oral and written arguments and identify key issues of local concern
- Master non-legal concepts required to analyze specific situations
- Render findings and determinations on cases heard based on neutral consideration of the issues, sound legal reasoning, and good judgment

The proposed amendments to establish a permanent Appeal Panel incorporate these same criteria and qualifications and require City Council appointment, but for a three-year term on the Appeal Panel for all MPD and CUP appeals.

An alternative to an Appeal Panel is to appoint an Appeal Hearing Officer, one individual. When considering the appeal process for Treasure Hill, an Appeal Panel was recommended rather than an Appeal Hearing Officer due to concerns that one

[5] LMC § 15-1-18(C)(1)

individual would be responsible for such large project appeals as the last decision-maker prior to a district court appeal (Ordinance No. 10-15; Council Meeting Minutes, April 1, 2010, p. 2).[6] The City thought the community would be better represented by an Appeal Panel with formal expertise like a hearing officer, but with decision-making strengthened through multiple panel members hearing and determining the cases. The Planning Commission finds the advantages of an Appeal Panel continue to outweigh an Appeal Hearing Officer.

(III) Staff Recommends No Changes to Appeals Heard by the Board of Adjustment.

A third option includes shifting appeals of Planning Commission Final Action on MPDs and CUPs to the Board of Adjustment. However, this is not recommended. Land use decisions have become dominated by more complex legal parameters and state code. In his 2020 article *Resolving Disputes in the West – Land Use Appeals*, Craig Call outlines the following cons for appeals to the Board of Adjustment:

> *Using a board is cumbersome. There are delays in waiting for fixed meeting dates or getting all the members together for special hearings. A big issue is that it can be difficult to find qualified individuals and train them. They are often not as informed on the applicable law as a trained individual might be. Boards are viewed as sometimes being more easily swayed by public clamor and emotion and to be less able to enforce a correct application of the law. Their decisions may be less likely to survive a challenge in the court room. It takes a lot of staff time to prepare recommendations and provide findings of fact and conclusions of law for a bullet-proof decision by a lay panel* (Exhibit B).

LMC § 15-1-18(B) limits appeals to the Board of Adjustment to those involving staff or Historic Preservation Board Final Action on a Historic District Design Review Application or Historic Preservation Board Final Action on a Determination of Significance involving designation of a site to Park City's Historic Sites Inventory. In addition to the Board of Adjustment's review of Variance and Non-Conforming Use applications, the Board is experienced and competent in these Historic District reviews that require an understanding of the City's Historic District land use regulations. As a result, no changes are recommended. However, if the City Council is interested in having appeals of Planning Commission Final Action on MPDs and CUPs go to the Board of Adjustment for consideration, we recommend a joint meeting with the Planning Commission and Board of Adjustment to discuss the pros and cons and to receive Board of Adjustment input.

Department Review

The Planning Department and City Attorney's Office reviewed this report.

[6] Most jurisdictions employ an Appeal Hearing Officer over an Appeal Panel for efficiency and cost.

Notice

Staff published notice on the City's website and the Utah Public Notice website on May 26, 2023. The *Park Record* published notice on May 31, 2023.[7]

Public Input

Staff did not receive any public input at the time this report was published.

Alternatives

- The City Council may adopt Ordinance No. 2023-36,
- The City Council may deny Ordinance No. 2023-36,
- The City Council may request additional information and continue the discussion to a date certain.

Exhibits

Exhibit A: Draft Ordinance No. 2023-36
Exhibit B: Resolving Disputes in the West – Land Use Appeals

[7] LMC § 15-1-21

DRAFT ORDINANCE NO. 2023-36

AN ORDINANCE AMENDING LAND MANAGEMENT CODE SECTIONS 15-1-8 *REVIEW PROCEDURE UNDER THE CODE* AND 15-1-18 *APPEALS*

WHEREAS, the Land Management Code implements the goals and policies of the General Plan in part to promote the health, safety, and welfare of the present and future inhabitants, to protect and enhance the vitality of the City's resort-based economy, and to protect or promote moderate income housing;

WHEREAS, the Utah Code Section 10-9a-701 requires that each local government that regulates land use appoint an appeal authority to hear appeals from decisions applying those land use regulations to a particular application or property;

WHEREAS, Park City is one of the last remaining cities in Utah to still use its legislative body as an appeal authority for Master Planned Developments and Conditional Use Permits;

WHEREAS, due to the increased complexity of matters upon appeal, increased risk of due process and conflict challenges to legislative bodies acting as quasi-judicial appeal authorities, changes in state law, and the City Council's desire to remain proactive and fully empowered to engage affirmatively its representation of constituents and residents regarding land use matters;

WHEREAS, on June 14, 2023, the Planning Commission conducted a duly noticed public hearing;

WHEREAS, on June 14, 2023, the Planning Commission unanimously forwarded a positive recommendation for City Council's consideration;

WHEREAS, on July 13, 2023, the City Council conducted a duly noticed public hearing;

NOW, THEREFORE BE IT ORDAINED by the City Council of Park City, Utah, as follows:

SECTION 1. AMEND MUNICIPAL CODE OF PARK CITY LAND MANAGEMENT CODE TITLE 15. Municipal Code of Park City Title 15 Land Management Code Sections 15-1-8 *Review Procedure Under the Code* and 15-1-18 *Appeals* are hereby amended as outlined in Attachment 1.

SECTION 2. EFFECTIVE DATE. This Ordinance shall be effective upon publication.

PASSED AND ADOPTED THIS 13th day of July 2023.

PARK CITY MUNICIPAL CORPORATION

_____

Nann Worel, Mayor

Attest:

_____

City Recorder

Approved as to form:

_____

City Attorney's Office

Attachment 1

15-1-8 Review Procedure Under The Code

A. No Building Permit shall be valid for any Building project unless the plans for the proposed Structure have been submitted to and have been approved by the Planning, Engineering and Building Departments.

B. No new Use shall be valid on any Property within the City unless the Use is allowed.

C. No Subdivision shall be valid without preliminary approval of the Planning Commission and final approval by the City Council with all conditions of approval completed.

D. Proposals submitted to the Planning Department must be reviewed according to the type of Application filed. Unless otherwise provided for in this LMC, only one (1) Application per type, per Property, will be accepted and processed at a time.

E. The Planning, Engineering and Building Departments review all Allowed Uses, Administrative Lot Line Adjustments, Administrative Permits, and Administrative Conditional Use permits.

F. Projects in the Historic Districts and Historic Sites outside the Historic Districts are subject to design review under the Design Guidelines for Historic Districts and Historic Sites.

G. Conditional Uses and Master Planned Developments are initially reviewed by staff and submitted to the Planning Commission for review, final permitting and Final Action.

H. Subdivisions and Plat Amendments are initially reviewed by staff and submitted to the Planning Commission who makes a recommendation to the City Council for Final Action.

I. Variances, Special Exceptions, Non-Conforming Uses and Non-Complying Structures are reviewed by the Board of Adjustment.

J. No review may occur until all applicable fees have been paid. Final approval is not effective until all other fees including engineering fees have been paid, and following applicable staff review.

RECOMMENDATION (y), [~~and~~] FINAL ACTION (X), and APPEAL (z)						
	Planning	HPB	Board of Adjustment	Planning Commission	City Council	Appeal Panel
Allowed Use	X					
[~~Allowed~~] Historic District Design Review [~~(HDDR)~~]	X		z [~~(when HPB takes part in the HDDR review)~~]			
Administrative Permits	X			z		
Conditional Use			[~~z (at request of the City Council for City Development applications)~~]	X	[~~z~~]	z
Conditional Use Admin.	X			z		

Determination of Significance		X	z			
MPD			[~~z (at request of the City Council for City Development applications)~~]	X	[~~z~~]	z
Determination of Non-Conforming Use and Non-Complying Structures	X		z			
Change of Non-Conforming Use			X			
Historic Preservation Board Review for Material Deconstruction [~~HPBR)~~]		X	z			
Plat Amendment				y Recommendation to CC	X	
Variance			X			
Subdivision and Condominium Plats				y Recommendation to CC	X	
Annexation and Zoning				y [~~Reconmendation~~]	X	

				Recommendation to CC		
Zoning Appeal			X			
LMC Amendments				y Recommendation to CC	X	

*All Applications shall be filed with the Planning Department. Planning Department staff makes a recommendation to the appropriate decision making body (X).

HISTORY

Adopted by Ord. 00-25 on 3/30/2000

Amended by Ord. 06-22 on 4/27/2006

Amended by Ord. 09-10 on 3/5/2009

Amended by Ord. 09-23 on 7/9/2009

Amended by Ord. 11-05 on 1/27/2011

Amended by Ord. 12-37 on 12/20/2012

Amended by Ord. 15-35 on 10/12/2015

Amended by Ord. 15-53 on 12/17/2015

Amended by Ord. 2016-44 on 9/15/2016

15-1-18 Appeals And Reconsideration Process

A. **STAFF.** Final Action by either the Planning Director or Planning Staff may be appealed to the Planning Commission. Final Action regarding the Design Guidelines for Historic Districts and Historic Sites shall be reviewed by the Board of Adjustment.

B. **HISTORIC PRESERVATION BOARD (HPB)**. The City or any Person with standing adversely affected by any decision of the Historic Preservation Board may be appealed to the Board of Adjustment.

C. **PLANNING COMMISSION**. The City or any Person with standing adversely affected by a Final Action by the Planning Commission on appeals of Staff action may petition the District Court in Summit County for a review of the decision. ~~Final Action by the Planning Commission on Conditional Use permits and Master Planned Developments (MPDs) involving City Development may be appealed to the Board of Adjustment at the City Council's request. All other~~ Final Action by the Planning Commission concerning Conditional Use permits (excluding those Conditional Use permits decided by Staff and appealed to the Planning Commission; final action on such an appeal shall be appealed to the District Court) and MPDs may be appealed to the Appeal Panel. ~~City Council. When the City Council determines it is necessary to ensure fair due process for all affected parties or to otherwise preserve the appearance of fairness in any appeal, the City Council may appoint an appeal panel as appeal authority to hear any appeal or call up that the Council would otherwise have jurisdiction to hear. The appeal panel will have the same scope of authority and standard of review as the City Council.~~ Only those decisions in which the Planning Commission has applied a land use ordinance to a particular Application, Person, or Parcel may be appealed to an appeal authority.

1. **APPEAL PANEL MEMBERSHIP AND QUALIFICATIONS.** The [~~appeal panel~~] Appeal Panel shall have three (3) members. The decision to

appoint and the appointment of [~~an appeal panel~~] the Appeal Panel shall be made by the City Council at a duly noticed public meeting after publicly noticed request for qualifications. Qualifications shall include a weighted priority for the following: Park City or Area residency, five years or more of prior experience in an adjudicative position, and/or a legal or planning degree. Each member of the [~~appeal panel~~] Appeal Panel shall have the ability to:

a. Conduct quasi-judicial administrative hearings in an orderly, impartial and highly professional manner.

b. Follow complex oral and written arguments and identify key issues of local concern.

c. Master non-legal concepts required to analyze specific situations.[~~, render findings and determinations~~].

d. Absent any conflict of interest, render findings and determinations on cases heard, based on neutral consideration of the issues, sound legal reasoning, and good judgment.

2. **PROCESS**. Any hearing before [~~an appeal panel~~] the Appeal Panel shall be publicly noticed, include a public hearing, and meet all requirements of the Utah Open and Public Meetings Act. [~~The appeal panel shall have the same authority and follow the same procedures as designated for the "City Council" in this Section. The City Council may decide to appoint an appeal panel for a particular matter at any time an application is pending but the~~

~~appointment of the individual members of the panel shall not occur until an actual appeal or call up is pending.]~~

3. The City Council shall appoint the Appeal Panel. The appointment of the individual members of the panel shall be for terms of three (3) years.

D. **STANDING TO APPEAL**. The following has standing to appeal a Final Action:

1. Any Person who submitted written comment or testified on a proposal before the Planning Department, Historic Preservation Board or Planning Commission;
2. The Owner of any Property within three hundred feet (300') of the boundary of the subject site;
3. Any City official, Board or Commission having jurisdiction over the matter; and
4. The Owner of the subject Property.

E. **TIMING**. All appeals must be made within ten (10) calendar days of the Final Action except for an appeal from a decision by the historic preservation authority which is a decision by Staff regarding the Design Guidelines for Historic Districts and Historic Sites or a decision by the Historic Preservation Board regarding a land use application, the applicant may appeal the decision within thirty (30) days after the day on which the historic preservation authority issues a written decision. The reviewing body, with the consultation of the appellant, shall set a date for the appeal. All appeals shall be heard by the reviewing body within forty-five (45) days of the date that the appellant files an appeal unless all parties, including the City, stipulate otherwise.

F. **FORM OF APPEALS**. Appeals to the Planning Commission, Board of Adjustment, or Historic Preservation Board must be filed with the Planning Department. ~~Appeals to the City Council must be filed with the City Recorder.~~ Appeals to the Appeal Panel must be filed with the City Recorder. Appeals must be by letter or petition, and must contain the name, address, and telephone number of the petitioner; the petitioner's relationship to the project or subject Property; and a comprehensive statement of all the reasons for the appeal, including specific provisions of the law, if known, that are alleged to be violated by the action taken. The Appellant shall pay the applicable fee established by resolution when filing the appeal. The Appellant shall present to the appeal authority every theory of relief that it can raise in district court. The Appellant shall provide courtesy mailing to all parties who received mailed notice for the action being appealed within fourteen (14) days of filing the appeal.

G. **BURDEN OF PROOF AND STANDARD OF REVIEW**. The appeal authority shall act in a quasi-judicial manner [~~even if the appeal authority is the City Council~~]. The appellant has the burden of proving that the land use authority erred. The appeal authority shall review factual matters de novo, without deference to the land use authority's determination of factual matters. The appeal authority shall determine the correctness of the land use authority's interpretation and application of the plain meaning of the land use regulations, and interpret and apply a land use regulation to favor a land use application unless the land use regulation plainly restricts the land use application. All appeals must be made in writing. Review of petitions of appeal shall include a public hearing and

shall be limited to consideration of only those matters raised by the petition(s), unless the appeal authority grants either party approval to enlarge the scope of the appeal to accept information on other matters. New evidence may be received so long as it relates to the scope of the appeal.

H. **NON-ADVERSARIAL PROCESS.** For all appeals before [~~City Council~~] the Appeal Panel, and any Board or Commission, the following shall apply:

1. The procedural hearings and reviews established by the City's regulatory procedures does not adopt or utilize in any way the adversary criminal or civil justice system used in the courts.
2. The role of City staff, including legal staff, is to provide technical and legal advice and professional judgment to each decision making body, [~~including City Council,~~] as they are not advocates of any party or position in a dispute, notwithstanding the fact that their technical and legal advice and professional judgment may lead them to make recommendations concerning the matter.
3. In the absence of clear evidence in the record that a staff member has lost impartiality as a technical adviser, the City's need for consistent, coherent and experienced advisers outweighs any claims of bias by the applicant.

I. **WRITTEN FINDINGS REQUIRED**. The appeal authority shall direct staff to prepare detailed written Findings of Fact, Conclusions of Law and the Order.

J. **[~~CITY COUNCIL~~] APPEAL PANEL ACTION ON APPEALS**.

1. The Appeal Panel, with the consultation of the appellant, shall set a date for the appeal.

2. The City Recorder shall notify the Property Owner and/or the Applicant of the appeal date. The City Recorder shall obtain the findings, conclusions and all other pertinent information from the Planning Department and shall transmit them to the Appeal Panel.
3. The Appeal Panel may affirm, reverse, or affirm in part and reverse in part any properly appealed decision of the Planning Commission. The Appeal Panel may remand the matter to the appropriate body with directions for specific Areas of review or clarification. Appeal Panel review of petitions of appeal shall include a public hearing and be limited to consideration of only those matters raised by the petition(s), unless the Panel by motion, enlarges the scope of the appeal to accept information on other matters.
4. Staff must prepare written findings within fifteen (15) working days of the Appeal Panel vote on the matter.

K. **CITY COUNCIL CALL-UP**. Within fifteen (15) calendar days of Final Action on any project, the City Council, on its own motion, may call up any Final Action taken by the Planning Commission or Planning Director for review by the [~~Council~~] the Appeal Panel. [~~Call-ups involving City Development may be heard by the Board of Adjustment at the City Council's request.~~] The call-up shall require the majority vote of the Council. Notice of the call-up shall be given to the Chairman of the Commission and/or Planning Director by the Recorder, together with the date set by the Council for consideration of the merits of the matter. The Recorder shall also provide notice as required by Sections 15-1 -12 and 15-1-18 (K) herein. In calling a matter up, the Council may limit the scope of the call-up

hearing to certain issues. The City Council, with the consultation of the Applicant, shall set a date for the call-up. The City Recorder shall notify the Applicant of the call-up date. The City Recorder shall obtain the findings, and all other pertinent information and transmit them to the Council.

L. **NOTICE**. There shall be no additional notice for appeals of Staff determination other than listing the matter on the agenda, unless notice of the Staff review was provided, in which case the same notice must be given for the appeal. Notice of appeals of Final Action by the Planning Commission and Historic Preservation Board; notice of all appeals to [~~City Council~~] the Appeal Panel, reconsiderations, or call-ups shall be given by:

1. Publishing the matter once at least fourteen (14) days prior to the first hearing in a newspaper having general circulation in Park City;
2. Mailing courtesy notice at least fourteen (14) days prior to the first hearing to all parties who received mailed courtesy notice for the original action.
3. Posting the Property at least fourteen (14) days prior to the first hearing; and
4. Publishing notice on the Utah Public Notice Website at least fourteen (14) days prior to the first hearing.

M. **STAY OF APPROVAL PENDING REVIEW OF APPEAL**. Upon the filing of an appeal, any approval granted under this Title will be suspended until the appeal body, pursuant to this Section 15-1-18 has acted on the appeal.

N. **APPEAL FROM THE [~~CITY COUNCIL~~] APPEAL PANEL**. The Applicant or any Person aggrieved by City action on the project may appeal the Final Action by

the [~~City Council~~] Appeal Panel to a court of competent jurisdiction. The decision of the [~~Council~~] Appeal Panel stands, and those affected by the decision may act in reliance on it unless and until the court enters an interlocutory or final order modifying the decision.

O. **RECONSIDERATION**. The City Council, and any Board or Commission, may reconsider at any time any legislative decision upon an affirmative vote of a majority of that body. The City Council, and any Board, Panel or Commission, may reconsider any quasi-judicial decision upon an affirmative vote of a majority of that body at any time prior to Final Action. Any action taken by the deciding body shall not be reconsidered or rescinded at a special meeting unless the number of members of the deciding body present at the special meeting is equal to or greater than the number of members present at the meeting when the action was approved.

~~P.~~ [~~No participating member of the Appeal Panel may entertain an appeal in which the participating member acted as the land use authority.~~] The Appeal Authority shall conduct the hearing in accordance with Utah Code Sections 10-9a-701(3) and (5), as amended.

HISTORY

Adopted by Ord. 00-25 on 3/30/2000

Amended by Ord. 06-22 on 4/27/2006

Amended by Ord. 09-10 on 3/5/2009

Amended by Ord. 09-23 on 7/9/2009

Amended by Ord. 10-15 on 4/15/2010

Amended by Ord. 12-37 on 12/20/2012

Amended by Ord. 14-37 on 7/17/2014

Amended by Ord. 15-35 on 10/12/2015

Amended by Ord. 15-53 on 12/17/2015

Amended by Ord. 16-15 on 3/24/2016

Amended by Ord. 2016-44 on 9/15/2016

Amended by Ord. 2017-04 on 2/16/2017

Amended by Ord. 2017-42 on 8/3/2017

Amended by Ord. 2018-46 on 8/2/2018

Amended by Ord. 2020-34 on 7/9/2020

Amended by Ord. 2022-16 on 5/26/2022

Resolving Disputes in the West - Land Use Appeals

By Craig Call

[Excerpt from Western Planner 2020 Article]

LOCAL APPEALS OPTIONS

Of course only one state has an ombudsman-based land use review process, but we all have either a Board of Adjustment or a Hearing Officer. In Utah we call that an "Appeal Authority". The ombudsman does not take the place of that essential local step in the formal appeal process. Every litigant still needs to "exhaust local remedies" before they go to court.

A local appeal on the merits can be an essential "pressure relief valve" which helps to avoid making serious mistakes on all sides of a land use question. If it is staffed with well-trained and independent individuals, an appeal should help resolve difficulties and solve more problems than it causes.

A land use appeal is meant to protect all involved – to give the municipality a second look when objections are raised – and to afford the applicant/property owner/neighbor/competitor a chance for a hearing on the merits. It's a whole lot less hassle than going to court and often can provide both a solution (and some much-needed therapy) for those involved.

We have about 15 years of experience in Utah in allowing cities, counties and towns to not choose to appoint a hearing officer to be the local "appeal authority" instead of a board of adjustment. We also allow other groups including the local legislative body to hear appeals. (That is not an option I recommend by the way. It can be pretty difficult for elected officials to take

off their “chat at the grocery store politician” legislative hat and put on their “unbiased third party neutral decision-maker” quasi-judicial hat to hear a case as the appeal authority.)

There are, of course, pros and cons between the option of hiring a hearing officer option versus appointing a board of adjustment.

BOARD OF ADJUSTMENT:

Pros: This option involves local people that have the local lay of the land. There are usually no direct costs other than staff time (which I admit is not a small factor). It’s the way we have always done it so we don’t have to make major changes. A board is viewed by many as not likely to be as strict on the letter of the local ordinances. Many consider that a good thing. It is usually easier to get a variance from a board than it would be from a hearing officer. A board can involve a mix of members including a lawyer, a planner, a real estate professional and others with diversified backgrounds. In many states there is no other option.

Cons: Using a board is cumbersome. There are delays in waiting for fixed meeting dates or getting all the members together for special hearings. A big issue is that it can be difficult to find qualified individuals and train them. They are often not as informed on the applicable law as a trained individual might be. Boards are viewed as sometimes being more easily swayed by public clamor and emotion and to be less able to enforce a correct application of the law. Their decisions may be less likely to survive a challenge in the court room. It takes a lot of staff time to prepare recommendations and provide findings of fact and conclusions of law for a bullet-proof decision by a lay panel.

HEARING OFFICER:

Pros: It’s simpler. An individual can respond to appeals or variance requests with flexible hours, dates and formats. Parties can sit around the table at city hall and still preserve all the essential elements of due process without a lot of formality. The format is very flexible. I have heard cases entirely via email communications, preserving a record for further appeal

and protecting all involved from inappropriate contacts outside the record. Zoom or its video alternatives also work very well, enhance flexibility, and can keep travel costs to a minimum.

Most hearing officers are very knowledgeable about the law and ordinances. A hearing officer is more likely to follow the law and keep the city or town out of court, or to improve the chances of a win if the matter is litigated. They do not have to be lawyers. A hearing officer could be a seasoned planner or lay person.

An experienced hearing officer can handle all details of the appeal and remove all administrative burdens from the city staff. The right hearing officer can also avoid the trouble caused when a decision is based on clamor or bias. Land use regulations and processes have long been accused of promoting inequity and even discrimination against certain classes of citizens. A hearing officer can help avoid both the appearance and substance of such potential abuses.

An individual can be appointed for a term of years or case by case, depending on the ordinance. Some individuals are available to provide this function for several municipalities. They generally do not live in the communities they serve, but can get up to speed on the issues quickly now that local ordinances are universally available on line.

Cons: Local governments sometimes do not want the law applied strictly and appreciate the more casual approach that a citizen body takes. Many communities want the local touch that a citizen board provides. A hearing officer can cost a few hundred dollars to a thousand dollars or more to review a case, hear from the parties, and write up a decision, depending on the complexity of the issue.

A FAIR PROCEDURE

All in all, whatever the process, it is essential that we provide a fair and understandable procedure to resolve land use disputes. “. . . due process is not a technical concept with a fixed content unrelated to time, place and circumstances which can be imprisoned within the treacherous limits of any formula. Rather the demands of due process rest on the concept of basic

fairness of procedure and demand a procedure appropriate to the case and just to the parties involved." Utah Supreme Court, *Rupp v. Grantsville City*, 610 P.2d 340 (Utah 1980).

As land use professionals we can build great cities and lovely small places. We can also look back on building great relationships and preserving the individual dignity that citizens are entitled to keep as they get involved in the land use arena.

Every Beverly Watson is obligated to cover the costs she imposes on the city. But Beverly Watson was not a resource to be mined. We as planners can facilitate fairness. A healthy and accessible means of resolving land use disputes is essential to accomplishing equity for all involved.

About the Author

Craig M. Call is a land use hearing officer for Salt Lake City and eight other Utah cities and counties. He is the executive director of the Utah Land Use Institute and served as the first Utah Property Rights Ombudsman. Craig is a retired attorney who once served on the Provo Utah City Council and in the Utah Legislature. His ideal day would be touring the spectacular landscape of the West in a vintage convertible.

City Council
Staff Report

Subject: **Huntsman Estates First Amended Plat**
Application: **PL-23-05540**
Author: **Alexandra Ananth, Sr. Planner**
Date: **July 13, 2023**
Type of Item: **Administrative – Plat Amendment**

Recommendation

(1) Review the requested Plat Amendment to clarify Plat Note 3 of the Huntsman Estates Subdivision; (2) hold a public hearing; and (3) consider approving Ordinance 2023-35 based on the Findings of Fact, Conclusions of Law, and Conditions of Approval in the Draft Ordinance (Exhibit A).

Description

Applicant:	Benjamin Wu, represented by Alliance Engineering
Location:	Legacy Court and Legacy Way, accessed off Royal Street
Zoning District:	Residential Development, Deer Valley MPD (RD-MPD)
Adjacent Land Uses:	Residential, Resort, Open Space
Reason for Review:	Plat Amendments require Planning Commission recommendation and City Council action[1]

BE	Building Envelope
LOD	Limits of Disturbance
MPD	Master Planned Development
RD	Residential Development
DV	Deer Valley

Terms that are capitalized as proper nouns throughout this staff report are defined in LMC § 15-15-1.

Summary

On July 9, 2020, the City Council approved Ordinance 2020-31, creating the 15-Lot Huntsman Estates Subdivision. The subdivision contains just over 40-acres and is zoned RD with an MPD Overlay (the property is subject to the Deer Valley Master Planned Development where it is allocated 15 units of Density). Lots vary in size from 0.54 acres to 3.04 acres, except for Lot 12, which is 23.77 acres and contains the original Huntsman House built in 1989. The Plat includes a 10-foot-wide public trail easement.

Lots in the Huntsman Estates Subdivision include a "Building Envelope/Limits Of Disturbance" (BE/LOD) Area shown on the Plat, that is roughly proportionate to the Lot size. Because the BE and LOD are combined on the plat, the responsibility of building

[1] LMC § 15-7.1-2(B)

within the LOD falls on the Applicant.

It is more typical that either the Building Footprint or the Limits Of Disturbance are shown on the plat and the two are not combined, as they are not the same. LODs are typically larger and extend out from the Building Pad and allow for temporary construction disturbance beyond the Building Envelope that is revegetated after construction.

The combined BE/LOD is causing confusion with Lot buyers and architects who are interpreting the LOD as the BE. It has also been noted that there is no allowance to connect the BE/LOD to the Right-Of-Way.

Plat Note 3 currently reads as follows:

> *All Lots are limited to single family dwellings and accessory units. All buildings must be within the Building Envelopes (BE)/Limits of Disturbance (LOD) areas as shown on this Plat. Minor adjustments to the BE/LOD area shall be allowed by the Planning Director so long as the size of the BE/LOD area on the Lot remains the same.*

The Applicant is proposing to strike all references to Building Envelope (BE) on the Plat to clarify that the LOD is shown on the Plat, and to clarify that driveway connections and utility corridors between the LOD and Right-Of-Way shall not count against the LOD.

The Planning Commission and Applicant agreed on the following modification to Plat Note 3 at a public hearing on June 14, 2023, and unanimously voted to recommend the Plat Amendment for City Council's consideration on July 13, 2023 (Staff Report, Audio).

> All Lots are limited to Single-Family Dwellings and Accessory Buildings/Uses. All building footprints must be within the Limits of Disturbance (LOD) areas as shown on this Plat. Minor adjustments to the LOD area shall be allowed by the Planning Director so long as the size of the LOD area on the Lot remains the same. Driveway connections, utility corridors, paths, and drainage features between the LOD and Right-Of-Way shall not count against the LOD. Driveways outside the LOD shall not exceed 20 feet in width.

A Snyderville Basin Water Reclamation District (SBWRD) easement recorded on February 16, 2021, as Entry Number 1155650 in the Summit County Recorder's Office is being added to the Plat with this Amendment.

Background

The Huntsman Estates Subdivision is a 15-Lot Subdivision Approved by the City Council in 2020 by Ordinance 2020-31.

- The Planning Commission held a Work Session on the project on February 12, 2020 (Staff Report, Minutes beginning on p. 2).

- The Planning Commission held a Public Hearing on the project on May 27, 2020 (Staff Report, Minutes beginning on p. 45). The Commission voted unanimously to forward a positive recommendation to the City Council for consideration.
- The Council held a Public Hearing on June 25, 2020 (Staff Report, Minutes beginning on p. 13) and continued the item to July 9, 2020 (Staff Report, Minutes beginning on p. 14) for more information on house size in the surrounding area. On July 9, 2020, the Council approved the subdivision by a vote of 4 to 1 and chose not to limit house size since few other subdivisions within the Deer Valley MPD have maximum size limits, and the Applicant had proposed LODs.

Plat Notes include:

- The overall subdivision shall contain a minimum of 88% Open Space; and
- A certified arborists assessment is required for each Lot prior to the issuance of Building Permits.

Analysis

(I) The proposal to modify Plat Note 3 complies with LMC Chapter 15-2.13, Residential Development (RD) District, and the intent of the original subdivision approval.

LMC § 15-15-1 defines Building Envelope, Building Pad, and Limits of Disturbance as follows.

> **BUILDING ENVELOPE**. The Building Pad, Building Footprint, and Height restrictions that defines the maximum Building Envelope in which all Development must occur.
>
> **BUILDING PAD**. The exclusive Area, as defined by the Setbacks, in which the entire Building Footprint may be located. See the following example; also see Limits of Disturbance.
>
> **LIMITS OF DISTURBANCE**. The designated Area in which all Construction Activity must be contained.

The Staff Report for the May 27, 2020, Planning Commission meeting refers to what the Applicant labeled as Building Pad/Building Envelope Area as Limits of Disturbance.

Exhibit M to the May 27, 2020, Staff Report (Exhibit C to this Staff Report), includes the same table but with a column labeled “LOD.”

Based on the above, it is Staff’s understanding that the Applicant intended these Exhibits to illustrate proposed Building Envelopes. However, Alliance Engineering and Planning Department Staff interpreted these as Limits of Disturbance, within which all construction activity must be limited. The May 27, 2020 Staff Report and Minutes consistently refer to LODs.

In Ordinance 2020-31, the Ordinance approving the Huntsman Estates Subdivision Plat, LODs are referenced in Finding of Fact #18, and Conditions of Approval #7 & #9. There is no mention of the terms Building Envelope or Building Pad in the Ordinance approving the Huntsman Estates Subdivision.

The Applicant is now proposing to amend the Plat to 1) clarify the BE/LOD is the LOD and strike all references to Building Envelope (BE) from the Plat; and 2) exclude driveways connections and utility corridors between the LOD and Right-Of-Way from counting against the LOD.

The Zone Height in the RD District is 28 feet. Setback Requirements are as follows and all lots must comply with these requirements as well as the LOD:

RD Zone Setback Requirements

Front Setback	Rear Setback	Side Setback
20 ft., 25 ft. to front facing garages	15 ft., 10 ft. for Accessory Buildings and detached garages	12 ft.

(II) Good Cause.

Plat Amendments are reviewed according to LMC § 15-7.1-6, *Final Subdivision Plat*, and approval shall require a finding of Good Cause and a finding that no Public Street Right-of-Way, or easement is vacated or amended.

LMC § 15-15-1 defines Good Cause as "[p]roviding positive benefits and mitigating negative impacts, determined on a case-by-case basis to include such things as: providing public amenities and benefits, resolving existing issues and non-conformities, utilizing best planning and design practices, preserving the character of the neighborhood and of Park City and furthering the health, safety, and welfare of the Park City Community."

The Planning Commission found good cause for the proposed plat amendment as it will provide clarity to Plat Note 3, allows for the connection of the LOD to the Right-of-Way, and allows for the addition of a sewer easement to the Plat. As a result of the clarified LOD, driveways to the ROW will not result in a reduction of the house size. No Public Street Right-of-Way, or easement is vacated or amended by the proposed Plat Amendment.

Department Review

The Planning Department and City Attorney's Office reviewed this report.

Development Review Committee

This application went to DRC on April 18, 2023. No significant issues were raised.

Notice

Staff published notice on the City's website and the Utah Public Notice website and posted notice to the property on April 12, 2023. Staff mailed courtesy notices to property owners within 300 feet on April 12, 2023 and June 27, 2023. The *Park Record* published notice on April 12, 2023.[2]

Public Input

No public input was received prior to the publication of this Staff Report.

Alternatives

- The City Council may approve Ordinance 2023-35;
- The Council may deny Ordinance 2023-35 and direct staff to make Findings for this decision; or
- The Council may request additional information and continue the discussion to a date certain.

Exhibits

Exhibit A: Draft Ordinance and Plat
Exhibit B: Recorded Subdivision Plat
Exhibit C: Ordinance 2020-31

[2] LMC § 15-1-21

Ordinance No. 2023-35

AN ORDINANCE APPROVING THE HUNTSMAN ESTATES FIRST AMENDED PLAT, PARK CITY, UTAH

WHEREAS, the owner of the Huntsman Estates Subdivision, located at 5000 Royal Street, petitioned the City Council for approval to amend Conditions of Approval and Plat Note 3, of the fifteen lot (15-lot) Huntsman Estates Subdivision; and

WHEREAS, on April 12, 2023, the property was posted, and notice was mailed according to the requirements of the Land Management Code; and

WHEREAS, legal notice was published in the Park Record on April 12, 2023, according to requirements of the Land Management Code; and

WHEREAS, the Planning Commission opened a Public Hearing on April 26, 2023, and continued the Hearing to June 14, 2023; and

WHEREAS, the Planning Commission continued the Hearing on June 14, 2023, and moved to forward a positive recommendation to City Council; and

WHEREAS, on July 13, 2023, the City Council held a public hearing to receive input on the Plat Amendment; and

WHEREAS there is good cause and it is in the best interest of Park City Utah, to approve the Plat Amendment.

NOW, THEREFORE BE IT ORDAINED by the City Council of Park City, Utah as follows:

SECTION 1. APPROVAL. The Plat Amendment as shown in Attachment 1 is approved subject to the following Findings of Facts, Conclusions of Law, and Conditions of Approval.

Findings of Fact:

1. The Huntsman Estates Subdivision contains 40.69 acres, is zoned Residential Development, and is located within the Deer Valley MPD Overlay (RD-MPD).
2. The Parcel was originally known as the Westview Parcel located in the North Silver Lake Community of Deer Valley and is assigned 15 Units of Density in Exhibit 1 of the Twelfth Amendment and Restated Deer Valley MPD, with one Unit already developed.
3. The Subdivision is classified as a Major Subdivision according to LMC Section 15-7.1-3(A)(2) as it contains four (4) or more lots. The subdivision contains 16 lots including one common parcel.
4. On July 9, 2020, City Council approved Ordinance 2020-31, and vacated the previous Westview MPD.

5. Building Height is limited to 28 feet with an exception for the existing residence on Lot 12, which was granted in 1987 as part of the Conceptual MPD approval for the Westview MPD.
6. The proposed Plat Amendment was reviewed for compliance with all Sections of LMC Chapter 15-7, Subdivision General Provisions.
7. Single Family Dwellings are an allowed Use within the RD District.
8. Lockout Units require a CUP.
9. Accessory Apartments require an Administrative Permit.
10. Nightly Rentals are allowed subject to an active business license and compliance with Municipal Code Section 4-5-3 unless Homeowner Association rules prohibit them.
11. All future buildings shall be reviewed for compliance with the Architectural Design Guidelines of LMC Chapter 15-5.
12. The Applicant submitted a Forrest Assessment from a certified arborist with their original Subdivision Application that evaluated the health and viability of the site and makes recommendations on thinning and removing dead standing trees to balance the need for tree removal for forest health, build out, and wildfire prevention with the visibility of the site.
13. Reasonable care shall be taken in the siting of houses, accessory buildings/uses, and driveways to attempt to limit long driveways and the removal of Significant Vegetation.
14. The Applicant submitted BE/LOD Areas for each of the individual lots in a file titled Lot Exhibit dated 4/15/20. The Applicant is now proposing that the BE/LODs be considered Limits of Disturbance (LOD), as noted in new Plat Note 3.
15. The property is located outside the Park City Landscaping and Maintenance of Soil Cover Ordinance.
16. This Plat Amendment seeks to clarify Plat Note 3, and to add a Snyderville Basin Water Reclamation District easement to the Plat.
17. As a result of the clarified LOD, driveways to the ROW will not result in a reduction of the house size.
18. There are no Maximum House Size limitations in the Subdivision.

Conclusions of Law:

1. There is Good Cause for the Plat Amendment. The proposed Amendment complies with the Land Management Code requirements and the Deer Valley MPD and is within the Density approved for the parcel in 1987.
2. The Amendment is consistent with the 2014 Park City General Plan and the Park City Land Management Code including Sections 15-7.1-3(C) and 15-12-15(B)(4) and (9) and applicable State Law regarding Subdivisions.
3. Neither the public nor any person will be materially injured by the proposed Amendment.
4. Approval of this Amendment does not adversely affect the health, safety, and welfare of the citizens of Park City.

Conditions of Approval:

1. The City Planner, City Attorney, and City Engineer will review and approve the final form and content of the Plat Amendment for compliance with State Law, the Land Management Code, and the Conditions of Approval, prior to recordation of the Plat.
2. The Applicant will record the Plat at the County within one (1) year from the date of City Council approval. If recordation has not occurred within one (1) years' time, this approval will be void, unless a request for an extension is made in writing prior to the expiration date and an extension is granted by the City Council.
3. All Plat Notes on the Huntsman Estates Subdivision Plat shall be carried forward except for Plat Note 3, which shall be modified as noted below.

   All Lots are limited to Single-Family Dwellings and Accessory Buildings/Uses. All building footprints must be within the Limits of Disturbance (LOD) areas as shown on this Plat. Minor adjustments to the LOD area shall be allowed by the Planning Director so long as the total size of the LOD area on the Lot does not increase. Driveway connections and utility corridors between the LOD and Right-Of-Way shall not count against the total LOD allowed on the Lot. Driveways outside the LOD shall not exceed 20 feet in width.
4. Any reference to Building Envelope (BE) shall be removed from the Plat.
5. Prior to the issuance of a building permit for individual Lots, the Applicant or owner of the Lot shall submit a certified arborists assessment of the Lot that analyzes the health and viability of all Significant Vegetation on the property within 100 feet of the principal dwelling and any accessory buildings/uses, including a tree preservation plan that indicates trees proposed for removal, how trees will be protected during construction, and a tree replacement plan. The plan shall indicate that trees shall be limited within a 15-foot radius of any structure, and that diseased or dead trees within 100 feet of any structure will be removed, consistent with the Forest Assessment dated March 28, 2020. This includes vegetation that is no longer standing. A 30-foot vegetation protection area will be required around dwellings with limited existing or new tree landscaping as approved by Park City Municipal Corporation and the Park City Fire District.
6. Should the Applicant move forward with Phase 2 of this project (Additional Land A and B), a Condition of Approval shall be placed on the Plat Amendment that the Applicant shall deed a parcel of property to the City as natural Recreational Open Space, which parcel of property shall be agreed upon by the Applicant and Park City Municipal Corporation.
7. A Construction Management Plan that explicitly prohibits parking on Royal Street during construction will be required prior to the issuance of any building permits.
8. The Huntsman Estates Subdivision development exceeds one (1) acre and shall meet the requirements of the municipal separate storm sewer system (MS4) storm water program. A plat note shall indicate that each lot within this common development shall be required to obtain a MS4 storm water permit prior to any construction activity.

9. A Plat Note shall indicate that the Subdivision shall be served by an on-call van shuttle service that will transport owners/guests to the Silver Lake or Snow Park area as well as the Main Street core and the surrounding resorts during peak vacation/holiday weeks to minimize the traffic impact from this subdivision. At a minimum this shall include holiday weeks and three-day weekends in perpetuity. The shuttle van shall utilize Royal Street and shall not utilize Hillside Avenue.
10. A Plat Note shall indicate that the Plat is subject to Ordinance 2023-35.

SECTION 2. EFFECTIVE DATE. This Ordinance shall take effect upon publication.

PASSED AND ADOPTED this 13th day of July, 2023.

PARK CITY MUNICIPAL CORPORATION

_____
Mayor

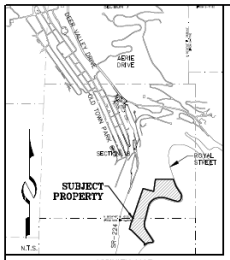
ATTEST:

_____
City Recorder

APPROVED AS TO FORM:

_____
City Attorney's Office

Attachment A: Plat Amendment



VICINITY MAP

SURVEYOR'S CERTIFICATE

I, Michael Demkowicz, do hereby certify that I am a Professional Land Surveyor, and that I hold License No. 4857264, as prescribed under the laws of the State of Utah. I further certify that by authority of the owner, I have made a survey of the tract of land shown on this plat and described hereon, and have combined said tract of land into lots, together with streets, hereafter to be known as HUNTSMAN ESTATES FIRST AMENDED and that the same has been correctly surveyed and monumented on the ground as shown on this plat.

PROFESSIONAL LAND SURVEYOR No. 4857264 MICHAEL DEMKOWICZ STATE OF UTAH

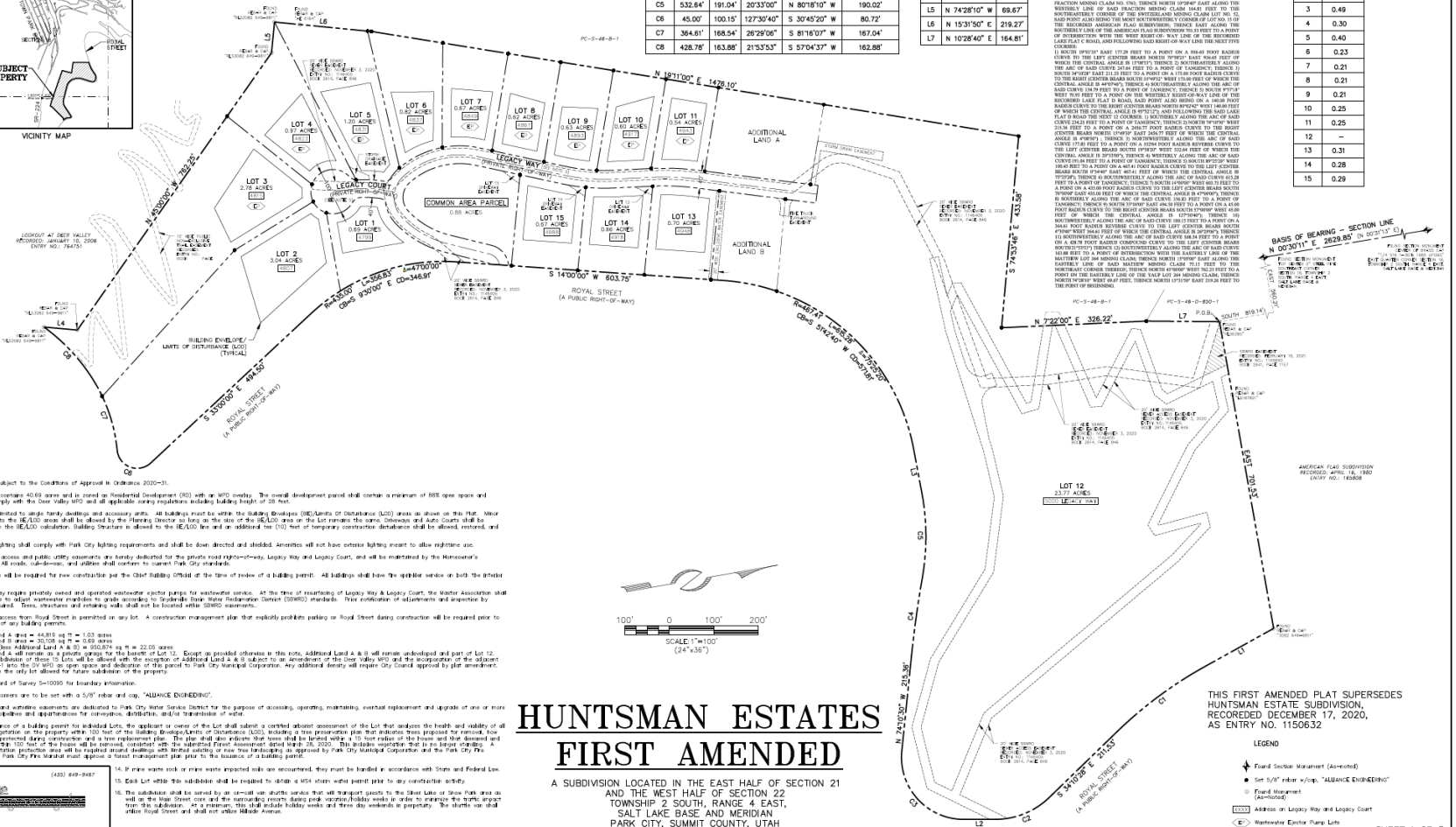
CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	936.65'	247.63'	15°08'53"	S 26°36'02" E	246.91'
C2	175.00'	134.79'	44°07'46"	S 12°06'35" E	131.48'
C3	140.00'	234.25'	95°52'12"	S 57°53'24" W	207.87'
C4	2456.77'	177.83'	4°08'50"	N 72°06'05" W	177.79'
C5	532.64'	191.04'	20°33'00"	N 80°18'10" W	190.02'
C6	45.00'	100.15'	127°30'40"	S 30°45'20" W	80.72'
C7	364.61'	168.54'	26°29'06"	S 81°16'07" W	167.04'
C8	428.78'	163.88'	21°53'53"	S 57°04'37" W	162.88'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S 19°01'35" E	177.29'
L2	S 9°57'18" W	70.95'
L3	S 89°25'20" W	100.45'
L4	N 15°05'00" E	75.15'
L5	N 74°28'10" W	69.67'
L6	N 15°31'50" E	219.27'
L7	N 10°28'40" E	164.81'

LEGAL DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 3964.03 FEET AND WEST 356.68 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, AND NORTH 87°04'34" WEST 380.16 FEET FROM THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THE PORT ARTHUR MINING CLAIM NO. 5762, AND RUNNING THENCE NORTH 19°19'00" EAST ALONG THE EAST LINE OF SAID MINING CLAIM 1478.10 FEET TO THE NORTHEAST CORNER THEREOF, SAID POINT ALSO BEING ON THE SOUTHERLY LINE OF THE ENGINEER MINING CLAIM NO. 5765; THENCE SOUTH 78°52'00" EAST ALONG THE SOUTHERLY LINE OF SAID CLAIM 1478.10 FEET TO THE SOUTHEAST CORNER THEREOF, SAID POINT ALSO BEING THE NORTHEASTERLY CORNER OF THE TRUMP MINING CLAIM NO. 265 AND THE SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5765; THENCE NORTH 7°22'00" EAST 326.22 FEET TO THE SAID SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5765; THENCE NORTH 10°28'40" EAST ALONG THE WESTERLY LINE OF SAID FRACTION MINING CLAIM 164.81 FEET TO THE SOUTHEASTERLY CORNER OF THE SWITZERLAND MINING CLAIM LOT NO. 52, SAID POINT ALSO BEING THE MOST SOUTHWESTERLY CORNER OF LOT NO. 15 OF THE RECORDED AMERICAN FLAG SUBDIVISION; THENCE EAST ALONG THE SOUTHERLY LINE OF SAID SUBDIVISION 100.15 FEET TO THE SOUTHEAST CORNER OF INTERSECTION WITH THE WEST RIGHT-OF- WAY LINE OF THE RECORDED LAKE FLAT C ROAD, AND FOLLOWING SAID RIGHT-OF-WAY LINE THE NEXT FIVE COURSES:
1) SOUTH 19°01'35" EAST 177.29 FEET TO A POINT ON A 936.65 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS NORTH 70°58'25" EAST 936.65 FEET OF WHICH THE CENTRAL ANGLE IS 15°08'53"); THENCE 2) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 247.63 FEET TO A POINT OF TANGENCY; THENCE 3) SOUTH 9°57'18" WEST 70.95 FEET TO A POINT ON A 175.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 57°49'52" WEST 175.00 FEET OF WHICH THE CENTRAL ANGLE IS 44°07'46"); THENCE 4) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 134.79 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 87°51'14" WEST 70.95 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF THE RECORDED LAKE FLAT D ROAD, SAID POINT ALSO BEING ON A 140.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 89°26'42" WEST 140.00 FEET OF WHICH THE CENTRAL ANGLE IS 95°52'12"); AND FOLLOWING THE SAID LAKE FLAT D ROAD THE NEXT FIVE COURSES: 1) NORTHWESTERLY ALONG THE ARC OF SAID CURVE 234.25 FEET TO A POINT OF TANGENCY; THENCE 2) NORTH 56°05'54" WEST 215.36 FEET TO A POINT ON A 2456.77 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 11°49'10" EAST 2456.77 FEET OF WHICH THE CENTRAL ANGLE IS 4°08'50"); THENCE 3) NORTHWESTERLY ALONG THE ARC OF SAID CURVE 177.83 FEET TO A POINT ON A 532.64 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 15°58'50" WEST 532.64 FEET OF WHICH THE CENTRAL ANGLE IS 20°33'00"); THENCE 4) WESTERLY ALONG THE ARC OF SAID CURVE 191.04 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 89°25'20" WEST 100.45 FEET TO A POINT ON A 467.41 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 0°34.40" EAST 467.41 FEET OF WHICH THE CENTRAL ANGLE IS 20°33'00"); THENCE 6) WESTERLY ALONG THE ARC OF SAID CURVE 167.04 FEET TO A POINT OF TANGENCY; THENCE 7) SOUTH 14°08'40" WEST 402.15 FEET TO A POINT ON A 45.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 76°09'00" EAST 45.00 FEET OF WHICH THE CENTRAL ANGLE IS 47°00'00"); THENCE 8) SOUTHERLY ALONG THE ARC OF SAID CURVE 36.63 FEET TO A POINT OF TANGENCY; THENCE 9) SOUTH 57°09'00" EAST 496.20 FEET TO A POINT ON A 45.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 57°09'00" WEST 45.00 FEET OF WHICH THE CENTRAL ANGLE IS 17°59'00"); THENCE 10) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 14.13 FEET TO A POINT ON A 1200.00 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 47°09'00" WEST 1200.00 FEET OF WHICH THE CENTRAL ANGLE IS 24°20'00"); THENCE 11) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 168.34 FEET TO A POINT ON A 428.78 FOOT RADIUS COMPOUND CURVE TO THE LEFT (CENTER BEARS SOUTH 21°53'53") THENCE 12) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 163.88 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF THE MATTHEW LOT 364 MINING CLAIM; THENCE NORTH 17°09'00" EAST ALONG THE EASTERLY LINE OF SAID MATTHEW MINING CLAIM 1717.12 FEET TO THE NORTHEAST CORNER THEREOF; THENCE NORTH 73°51'00" WEST 1122.00 FEET TO A POINT ON THE EASTERLY LINE OF THE YALP LOT 264 MINING CLAIM; THENCE NORTH 17°09'00" WEST 89.87 FEET; THENCE NORTH 17°51'00" EAST 219.26 FEET TO THE POINT OF BEGINNING.

BUILDING ENVELOPE /LOD AREA TABLE	
LOT	ACRE
1	0.21
2	0.58
3	0.49
4	0.30
5	0.40
6	0.23
7	0.21
8	0.21
9	0.21
10	0.25
11	0.25
12	–
13	0.31
14	0.28
15	0.29



NOTES

1. This plat is subject to the Conditions of Approval in Ordinance 2020–31.
2. The property contains 40.69 acres and is zoned as Residential Development (RD) with an MPD overlay. The overall development parcel shall contain a minimum of 88% open space and otherwise comply with the Deer Valley MPD and all applicable zoning regulations including building height of 28 feet.
3. All Lots are limited to single family dwellings and accessory units. All buildings must be within the Building Envelopes (BE)/Limits Of Disturbance (LOD) areas as shown on this Plat. Minor adjustments to the BE/LOD areas shall be allowed by the Planning Director so long as the size of the BE/LOD area on the Lot remains the same. Driveways and Auto Courts shall be excluded from the BE/LOD calculation. Building Structure is allowed to the BE/LOD line and an additional ten (10) feet of temporary construction disturbance shall be allowed, restored, and re-vegetated.
4. All exterior lighting shall comply with Park City lighting requirements and shall be down directed and shielded. Amenities will not have exterior lighting meant to allow nighttime use.
5. Public safety access and public utility easements are hereby dedicated for the private road rights-of-way, Legacy Way and Legacy Court, and will be maintained by the Homeowner's Association. All roads, cul-de-sac, and utilities shall conform to current Park City standards.
6. The sprinklers will be required for new construction per the Chief Building Official at the time of review of a building permit. All buildings shall have fire sprinkler service on both the interior and exterior.
7. Lots 3–11 may require privately owned and operated wastewater ejector pumps for wastewater service. At the time of resurfacing of Legacy Way & Legacy Court, the Master Association shall be responsible to adjust wastewater manholes to grade according to Snyderville Basin Water Reclamation District (SBWRD) standards. Prior notification of adjustments and inspection by SBWRD is required. Trees, structures and retaining walls shall not be located within SBWRD easements.
8. No driveway access from Royal Street is permitted on any lot. A construction management plan that explicitly prohibits parking on Royal Street during construction will be required prior to the issuance of any building permits.
9. Additional Land A area = 44,818 sq ft = 1.03 acres
   Additional Land B area = 30,108 sq ft = 0.69 acres
   Lot 12 area (less Additional Land A & B) = 990,874 sq ft = 22.05 acres
   Additional Land A will remain as a private garage for the benefit of Lot 12. Except as provided otherwise in this note, Additional Land A & B will remain undeveloped and part of Lot 12. No further subdivision of these 10 Lots will be allowed with the exception of Additional Land A & B subject to an Amendment of the Deer Valley MPD and the incorporation of the adjacent PC–5–46–B–1 into the DV MPD as open space and dedication of this parcel to Park City Municipal Corporation. Any additional density will require City Council approval by plat amendment. Lot 12 will be the only lot allowed for future subdivision of the property.
10. Refer to Record of Survey S–10095 for boundary information.
11. All property corners are to be set with a 5/8" rebar and cap, "ALLIANCE ENGINEERING".
12. Public utility and wetwline easements are dedicated to Park City Water Service District for the purpose of accessing, operating, maintaining, eventual replacement and upgrade of one or more underground pipelines and appurtenances for conveyance, distribution, and/or transmission of water.
13. Prior to issuance of a building permit for individual Lots, the applicant or owner of the Lot shall submit a certified arborist assessment of the Lot that analyzes the health and viability of all significant vegetation on the property within 100 feet of the Building Envelope/Limits of Disturbance (LOD), including a tree preservation plan that indicates trees proposed for removal. Now trees will be protected during construction and a tree replacement plan. The plan shall also indicate that trees shall be limbed within a 15 foot radius of the house and that diseased and dead trees within 100 feet of the house will be removed, consistent with the submitted Forest Assessment dated March 28, 2020. This includes vegetation that is no longer standing. A 30-foot vegetation protection area will be required around dwellings with limited existing or new tree landscaping as approved by Park City Municipal Corporation and the Park City Fire District. The Park City Fire Marshal must approve a forest management plan prior to the issuance of a building permit.
14. If mine waste rock or mine waste impacted soils are encountered, they must be handled in accordance with State and Federal Law.
15. Each Lot within this subdivision shall be required to obtain a MS4 storm water permit prior to any construction activity.
16. This subdivision shall be served by an on-call van shuttle service that will transport guests to the Silver Lake or Snow Park area as well as the Main Street core and the surrounding resorts during peak vacation/holiday weeks in order to minimize the traffic impact from this subdivision. At a minimum, this shall include holiday weeks and three day weekends in perpetuity. The shuttle van shall utilize Royal Street and shall not utilize Hillside Avenue.

HUNTSMAN ESTATES FIRST AMENDED

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21 AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

THIS FIRST AMENDED PLAT SUPERSEDES HUNTSMAN ESTATE SUBDIVISION, RECORDED DECEMBER 17, 2020, AS ENTRY NO. 1150632

LEGEND

- Found Section Monument (As-noted)
- Set 5/8" rebar w/cap, "ALLIANCE ENGINEERING"
- Found Monument (As-noted)
- XXXX Address on Legacy Way and Legacy Court
- (E) Wastewater Ejector Pump Lots

SHEET 1 OF 3

(435) 649-9467
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
333 Main Street P.O. Box 2664 Park City, Utah 84060-2664

1/20/20 JOB NO.: 3-10-19 FILE: X:\Deer Valley\.dwg\srv\plat2019\031019.dwg

SNYDERVILLE BASIN WATER RECLAMATION DISTRICT	PLANNING COMMISSION	ENGINEER'S CERTIFICATE	APPROVAL AS TO FORM	COUNCIL APPROVAL AND ACCEPTANCE	CERTIFICATE OF ATTEST	PUBLIC SAFETY ANSWERING POINT APPROVAL	RECORDED
REVIEWED FOR CONFORMANCE TO SNYDERVILLE BASIN WATER RECLAMATION DISTRICT STANDARDS ON THIS _____ DAY OF _____, 2023 BY _____ ENGINEERING DEPARTMENT	APPROVED BY THE PARK CITY PLANNING COMMISSION THIS _____ DAY OF _____, 2023 BY _____ CHAIR	I FIND THIS PLAT TO BE IN ACCORDANCE WITH INFORMATION ON FILE IN MY OFFICE THIS _____ DAY OF _____, 2023 BY _____ PARK CITY ENGINEER	APPROVED AS TO FORM THIS _____ DAY OF _____, 2023 BY _____ PARK CITY ATTORNEY	APPROVAL AND ACCEPTANCE BY THE PARK CITY COUNCIL THIS _____ DAY OF _____, 2023 BY _____ MAYOR	I CERTIFY THIS RECORD OF SURVEY MAP WAS APPROVED BY PARK CITY COUNCIL THIS _____ DAY OF _____, 2023 BY _____ PARK CITY RECORDER	APPROVED THIS _____ DAY OF _____, 2023 BY _____ SUMMIT COUNTY GIS COORDINATOR	STATE OF UTAH, COUNTY OF SUMMIT, AND FILED AT THE REQUEST OF _____ FEE _____ RECORDER TIME _____ DATE _____ ENTRY NO. _____

LINE TABLE		
LINE	DIRECTION	LENGTH
L8	S 14°00'00" W	42.19'
L9	S 72°48'49" E	40.00'
L10	N 47°16'18" E	47.09'
L11	N 43°47'33" E	45.46'
L12	N 35°17'27" E	42.53'
L13	S 72°48'49" E	22.00'
L14	S 17°11'11" W	20.00'
L15	N 72°48'49" W	16.00'
L16	S 22°08'21" W	197.37'
L17	N 2°48'35" E	40.84'
L18	S 70°34'16" E	20.00'
L19	S 17°11'11" W	10.01'
L20	N 33°52'25" E	47.88'
L21	S 85°36'48" E	9.29'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C9	10.00'	6.54'	37°28'11"	S 42°34'43" W	6.42'
C10	230.00'	130.74'	32°34'07"	S 40°07'41" W	128.99'
C11	85.00'	51.18'	34°30'02"	S 73°39'46" W	50.41'
C12	13.00'	16.32'	71°55'24"	S 54°57'05" W	15.27'
C13	230.00'	45.37'	11°18'09"	S 13°20'18" W	45.30'
C14	23.00'	23.31'	58°03'25"	S 21°20'29" E	22.32'
C15	50.00'	251.03'	287°39'40"	N 86°32'21" W	59.02'
C16	23.00'	20.41'	50°50'46"	N 31°52'06" E	19.75'
C17	270.00'	60.88'	12°55'09"	N 12°54'18" E	60.75'
C18	13.00'	15.67'	69°04'59"	N 15°10'37" W	14.74'
C19	85.00'	27.01'	18°12'30"	N 40°36'52" W	26.90'
C20	210.00'	196.64'	53°38'58"	N 4°41'08" W	189.53'
C21	420.00'	109.21'	14°53'52"	N 14°41'25" E	108.90'
C22	570.00'	98.94'	9°56'42"	N 12°12'50" E	98.81'
C23	530.00'	91.99'	9°56'42"	S 12°12'50" W	91.88'
C24	460.00'	119.61'	14°53'52"	S 14°41'25" W	119.27'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C25	170.00'	159.18'	53°38'58"	S 4°41'08" E	153.43'
C26	45.00'	72.32'	92°04'38"	S 77°32'56" E	64.78'
C27	190.00'	108.00'	32°34'07"	N 40°07'41" E	106.55'
C28	50.00'	63.15'	72°21'47"	N 60°01'31" E	59.03'
C29	364.61'	41.95'	6°35'32"	S 71°19'20" W	41.93'
C30	50.00'	67.89'	77°48'04"	N 11°28'09" W	62.80'
C31	50.00'	40.00'	45°50'12"	N 50°20'59" E	38.94'
C32	50.00'	40.00'	45°50'12"	S 83°48'49" E	38.94'
C33	50.00'	103.14'	118°11'13"	S 1°48'07" E	85.80'
C34	23.00'	17.25'	42°57'53"	N 35°48'32" E	16.85'
C35	23.00'	3.16'	7°52'53"	N 10°23'09" E	3.16'
C36	210.00'	4.83'	1°19'00"	S 30°51'07" E	4.83'
C37	420.00'	71.93'	9°48'45"	N 17°13'58" E	71.84'
C38	420.00'	37.28'	5°05'07"	N 9°47'02" E	37.26'
C39	460.00'	64.06'	7°58'45"	N 11°13'52" E	64.01'
C40	460.00'	40.04'	4°59'16"	N 17°42'52" E	40.03'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C41	28.00'	15.83'	32°23'33"	S 56°37'03" E	15.62'
C42	28.00'	23.75'	48°35'25"	S 82°53'28" W	23.04'
C43	30.00'	35.13'	67°05'41"	N 57°23'28" E	33.16'
C44	210.00'	119.37'	32°34'07"	N 40°07'41" E	117.77'
C45	65.00'	104.46'	92°04'38"	S 77°32'56" E	93.57'
C46	190.00'	177.91'	53°38'58"	S 4°41'08" E	171.48'
C47	440.00'	114.41'	14°53'52"	S 14°41'25" W	114.08'
C48	550.00'	95.47'	9°56'42"	S 12°12'50" W	95.35'
C49	250.00'	98.83'	22°39'00"	N 14°08'04" E	98.19'
C50	65.00'	60.65'	53°27'29"	N 83°08'30" E	58.47'
C51	65.00'	43.81'	38°37'09"	S 50°49'12" E	42.99'
C52	270.00'	26.59'	5°38'35"	S 9°16'01" W	26.58'
C53	23.00'	3.16'	7°52'53"	S 10°23'09" W	3.16'
C54	23.00'	17.25'	42°57'53"	N 35°48'32" E	16.85'
C55	270.00'	34.29'	7°16'34"	S 15°43'35" W	34.26'

LEGEND

[XXXX] Address on Legacy Way or Legacy Court

(E) Wastewater Ejector Pump Lots

SHEET 2 OF 3

HUNTSMAN ESTATES FIRST AMENDED

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

SCALE: 1"=60'
(24"x36")

JOB NO.: 3-10-19 FILE: X:\Deer Valley\dwg\sra\plat2019\031019.dwg

(435) 649-9467
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
333 Main Street P.O. Box 2664 Park City, Utah 84060-2664

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED
AT THE REQUEST OF _____
FEE RECORDER
TIME _____ DATE _____ ENTRY NO. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that 5000 Royal Street Estates, LLC, a Utah limited liability company, as to Lots 1, 3, 4, 9, 10, 11, 13, 14 & 15, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

5000 Royal Street Estates, LLC, a Utah limited liability company

By: _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is _____ of _____ and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that STEN EES LLC, as to Lot 5, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

STEN EES LLC, a limited liability company

By: _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is _____, of STEN EES LLC, a limited liability company, and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that CAPC Partners LLC, a Ohio limited liability company, as to Lot 7, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

CAPC Partners LLC, a Ohio limited liability company

By: _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is _____ of CAPC Partners LLC, a Ohio limited liability company, and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that DV LODGE LLC, a Utah limited liability company, as to Lot 12, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

DV LODGE LLC, a Utah limited liability company

By: _____
Paul Hunsaker, Principal

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, Paul Hunsaker personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is Principal of DV LODGE LLC, a Utah limited liability company, and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that Kyle T. Ryland and Sarah Ryland, Co-trustees of the Kyle T. Ryland and Sarah Ryland Revocable Trust, dated November 22, 1999 amended and restated on June 4, 2013 and amended and restated on November 14, 2019, as to Lot 2, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and do hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owners also hereby convey to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owners also hereby convey any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2022.

Kyle T. Ryland and Sarah Ryland, Co-trustees of the Kyle T. Ryland and Sarah Ryland Revocable Trust, dated November 22, 1999 amended and restated on June 4, 2013 and amended and restated on November 14, 2019

By: _____
Kyle T. Ryland, Co-Trustee

In witness whereof, the undersigned set his hand this _____ day of _____, 2022.

Kyle T. Ryland and Sarah Ryland, Co-trustees of the Kyle T. Ryland and Sarah Ryland Revocable Trust, dated November 22, 1999 amended and restated on June 4, 2013 and amended and restated on November 14, 2019

By: _____
Sarah Ryland, Co-Trustee

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, Kyle T. Ryland personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is a Co-Trustee of the Kyle T. Ryland and Sarah Ryland Revocable Trust, dated November 22, 1999 amended and restated on June 4, 2013 and amended and restated on November 14, 2019 and that said document was signed by him on behalf of said Trust by authority of the trust, and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, Sarah Ryland personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that she is a Co-Trustee of the Kyle T. Ryland and Sarah Ryland Revocable Trust, dated November 22, 1999 amended and restated on June 4, 2013 and amended and restated on November 14, 2019 and that said document was signed by her on behalf of said Trust by authority of the trust, and she acknowledged to me that she executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that Legacy Holdings DV LLC, a Utah limited liability company, as to Lot 6, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

Legacy Holdings DV LLC, a Utah limited liability company

By: _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is _____, of Legacy Holdings DV LLC, a Utah limited liability company, and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that SEE DV Partners LLC, a Ohio limited liability company, as to Lot 8, hereby causes this plat amendment to be prepared, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES FIRST AMENDED and does hereby dedicate for the perpetual use of the public the areas shown on this plat amendment as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat amendment, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat amendment to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this _____ day of _____, 2023.

SEE DV Partners LLC, a Ohio limited liability company

By: _____

ACKNOWLEDGMENT

State of _____)
:ss.
County of _____)

On this _____ day of _____, 2023, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is _____, of SEE DV Partners LLC, a Ohio limited liability company, and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES FIRST AMENDED.

By: _____
Notary Public

_____
Printed Name

Residing in: _____

My commission expires: _____

Commission No. _____

HUNTSMAN ESTATES FIRST AMENDED

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

(435) 649-9467
CONSULTING ENGINEERS · LAND PLANNERS · SURVEYORS
323 Main Street · P.O. Box 2664 · Park City, Utah 84060-2664

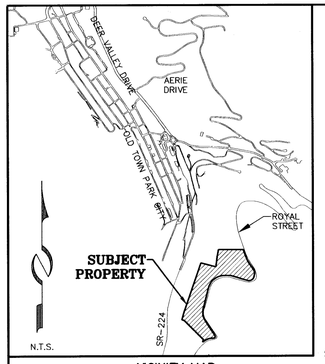
SHEET 3 OF 3

1/30/23 JOB NO.: 3-10-19 FILE: X:\Deer Valley\dwg\sra\plat2019\031019.dwg

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED
AT THE REQUEST OF _____

_____ _____
FEE RECORDER

TIME _____ DATE _____ ENTRY NO. _____



VICINITY MAP

SURVEYOR'S CERTIFICATE

I, Michael Demkowicz, do hereby certify that I am a Professional Land Surveyor, and that I hold License No. 4857264, as prescribed under the laws of the State of Utah. I further certify that by authority of the owner, I have made a survey of the tract of land shown on this plat and described hereon, and have combined said tract of land into lots, together with streets, hereafter to be known as HUNTSMAN ESTATES and that the same has been correctly surveyed and monumented on the ground as shown on this plat.

PROFESSIONAL LAND SURVEYOR No. 4857264 MICHAEL DEMKOWICZ 12/7/20 STATE OF UTAH

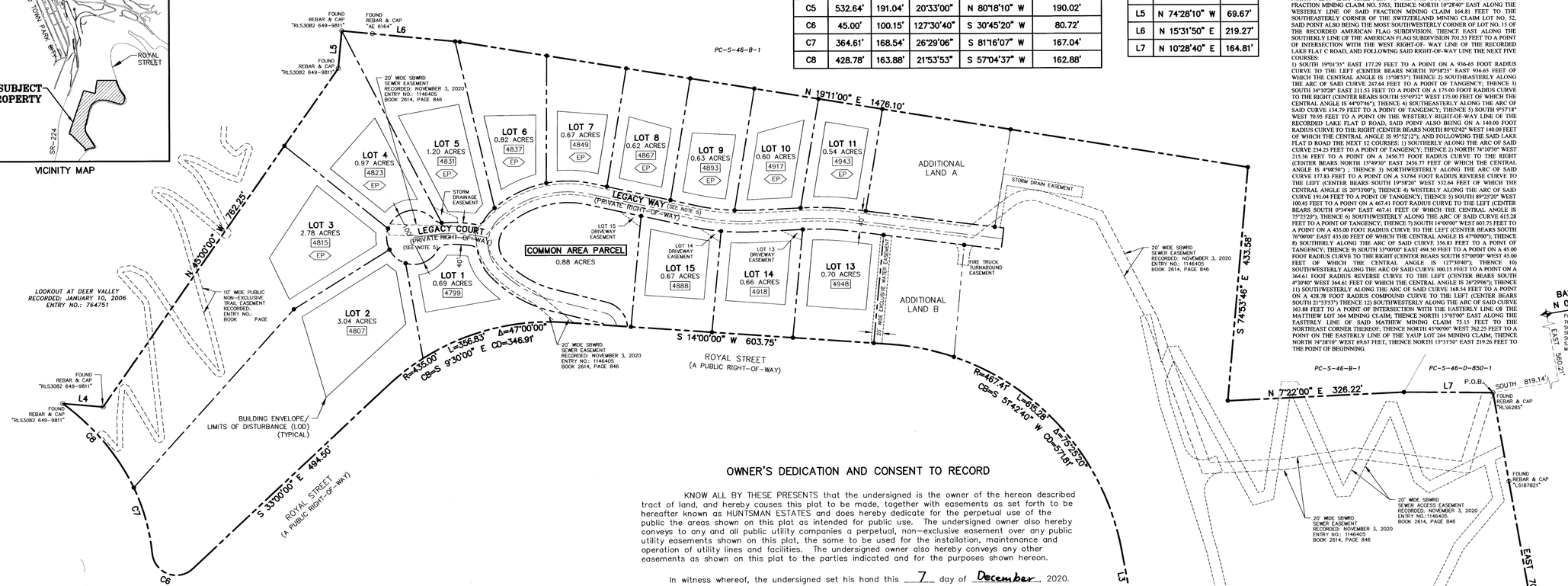
CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	936.65'	247.63'	15°08'53"	S 26°36'02" E	246.91'
C2	175.00'	134.79'	44°07'46"	S 12°06'35" E	131.48'
C3	140.00'	234.25'	95°52'12"	S 57°53'24" W	207.87'
C4	2456.77'	177.83'	4°08'50"	N 72°06'05" W	177.79'
C5	532.64'	191.04'	20°33'00"	N 80°18'10" W	190.02'
C6	45.00'	100.15'	127°30'40"	S 30°45'20" W	80.72'
C7	364.61'	168.54'	26°29'06"	S 81°16'07" W	167.04'
C8	428.78'	163.88'	21°53'53"	S 57°04'37" W	162.88'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S 19°01'35" E	177.29'
L2	S 9°57'18" W	70.95'
L3	S 89°25'20" W	100.45'
L4	N 15°05'00" E	75.15'
L5	N 74°28'10" W	69.67'
L6	N 15°31'50" E	219.27'
L7	N 10°28'40" E	164.81'

LEGAL DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 2664.15 FEET AND WEST 350.68 FEET FROM THE SOUTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, AND NORTH 85°04'14" WEST 383.10 FEET FROM THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THE PORT ARTHUR MINING CLAIM NO. 5762; AND RUNNING THENCE NORTH 19°11'00" EAST ALONG THE EASTERLY LINE OF SAID MINING CLAIM 1476.10 FEET TO THE NORTHEAST CORNER THEREOF, SAID POINT ALSO BEING ON THE SOUTHERLY LINE OF THE SINGER MINING CLAIM NO. 5763; THENCE SOUTH 74°53'46" EAST ALONG THE SOUTHERLY LINE OF SAID CLAIM 433.58 FEET TO A POINT OF INTERSECTION WITH A LINE EXTENDED FROM THE NORTHEASTERLY CORNER OF THE TRUMP MINING CLAIM NO. 265 AND THE SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5763; THENCE NORTH 7°22'00" EAST 326.22 FEET TO THE SAID SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5763; THENCE NORTH 10°28'40" EAST ALONG THE WESTERLY LINE OF SAID FRACTION MINING CLAIM 164.81 FEET TO THE SOUTHEASTERLY CORNER OF THE SWITZERLAND MINING CLAIM LOT NO. 52, SAID POINT ALSO BEING THE MOST SOUTHWESTERLY CORNER OF LOT NO. 15 OF THE RECORDED AMERICAN FLAG SUBDIVISION; THENCE EAST ALONG THE SOUTHERLY LINE OF THE AMERICAN FLAG SUBDIVISION 701.53 FEET TO A POINT OF INTERSECTION WITH THE WEST RIGHT-OF- WAY LINE OF THE RECORDED LAKE FLAT C ROAD, AND FOLLOWING SAID RIGHT-OF-WAY LINE THE NEXT FIVE COURSES:
1) SOUTH 19°01'35" EAST 177.29 FEET TO A POINT ON A 936-65 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS NORTH 70°58'25" EAST 936.65 FEET OF WHICH THE CENTRAL ANGLE IS 15°08'53"); THENCE 2) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 247.64 FEET TO A POINT OF TANGENCY; THENCE 3) SOUTH 34°10'28" EAST 211.53 FEET TO A POINT ON A 175.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 55°49'32" WEST 175.00 FEET OF WHICH THE CENTRAL ANGLE IS 44°07'46"); THENCE 4) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 134.79 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 9°57'18" WEST 70.95 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF THE RECORDED LAKE FLAT D ROAD, SAID POINT ALSO BEING ON A 140.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 80°02'42" WEST 140.00 FEET OF WHICH THE CENTRAL ANGLE IS 95°52'12"); AND FOLLOWING THE SAID LAKE FLAT D ROAD THE NEXT 12 COURSES: 1) SOUTHERLY ALONG THE ARC OF SAID CURVE 234.25 FEET TO A POINT OF TANGENCY; THENCE 2) NORTH 74°10'30" WEST 215.36 FEET TO A POINT ON A 2456.77 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 15°49'30" EAST 2456.77 FEET OF WHICH THE CENTRAL ANGLE IS 4°08'50") ; THENCE 3) NORTHWESTERLY ALONG THE ARC OF SAID CURVE 177.83 FEET TO A POINT ON A 532'64 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 19°58'20" WEST 532.64 FEET OF WHICH THE CENTRAL ANGLE IS 20°33'00"); THENCE 4) WESTERLY ALONG THE ARC OF SAID CURVE 191.04 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 89°25'20" WEST 100.45 FEET TO A POINT ON A 467.41 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 0°34'40" EAST 467.41 FEET OF WHICH THE CENTRAL ANGLE IS 75°25'20"); THENCE 6) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 615.28 FEET TO A POINT OF TANGENCY; THENCE 7) SOUTH 14°00'00" WEST 603.75 FEET TO A POINT ON A 435.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 76°00'00" EAST 435.00 FEET OF WHICH THE CENTRAL ANGLE IS 47°00'00"); THENCE 8) SOUTHERLY ALONG THE ARC OF SAID CURVE 356.83 FEET TO A POINT OF TANGENCY; THENCE 9) SOUTH 33°00'00" EAST 494.50 FEET TO A POINT ON A 45.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 57°00'00" WEST 45.00 FEET OF WHICH THE CENTRAL ANGLE IS 127°30'40"); THENCE 10) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 100.15 FEET TO A POINT ON A 364.61 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 4°30'40" WEST 364.61 FEET OF WHICH THE CENTRAL ANGLE IS 26°29'06"); THENCE 11) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 168.54 FEET TO A POINT ON A 428.78 FOOT RADIUS COMPOUND CURVE TO THE LEFT (CENTER BEARS SOUTH 21°53'53") THENCE 12) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 163.88 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF THE MATTHEW LOT 364 MINING CLAIM; THENCE NORTH 15°05'00" EAST ALONG THE EASTERLY LINE OF SAID MATHEW MINING CLAIM 75.15 FEET TO THE NORTHEAST CORNER THEREOF; THENCE NORTH 45°00'00" WEST 762.25 FEET TO A POINT ON THE EASTERLY LINE OF THE YAUP LOT 264 MINING CLAIM; THENCE NORTH 74°28'10" WEST 69.67 FEET, THENCE NORTH 15°31'50" EAST 219.26 FEET TO THE POINT OF BEGINNING.

BUILDING ENVELOPE /LOD AREA TABLE	
LOT	ACRE
1	0.21
2	0.58
3	0.49
4	0.30
5	0.40
6	0.23
7	0.21
8	0.21
9	0.21
10	0.25
11	0.25
12	–
13	0.31
14	0.28
15	0.29



NOTES

1. This plat is subject to the Conditions of Approval in Ordinance 2020-31.
2. The property contains 40.69 acres and is zoned as Residential Development (RD) with an MPD overlay. The overall development parcel shall contain a minimum of 88% open space and otherwise comply with the Deer Valley MPD and all applicable zoning regulations including building height of 28 feet.
3. All Lots are limited to single family dwellings and accessory units. All buildings must be within the Building Envelopes (BE)/Limits Of Disturbance (LOD) areas as shown on this Plat. Minor adjustments to the BE/LOD areas shall be allowed by the Planning Director so long as the size of the BE/LOD area on the Lot remains the same.
4. All exterior lighting shall comply with Park City lighting requirements and shall be down directed and shielded. Amenities will not have exterior lighting meant to allow nighttime use.
5. Public safety access and public utility easements are hereby dedicated for the private road rights-of-way, Legacy Way and Legacy Court, and will be maintained by the Homeowner's Association. All roads, cul-de-sac, and utilities shall conform to current Park City standards.
6. Fire sprinklers will be required for new construction per the Chief Building Official at the time of review of a building permit. All buildings shall have fire sprinkler service on both the interior and exterior.
7. Lots 3-11 may require privately owned and operated wastewater ejector pumps for wastewater service. At the time of resurfacing of Legacy Way & Legacy Court, the Master Association shall be responsible to adjust wastewater manholes to grade according to Snyderville Basin Water Reclamation District (SBWRD) standards. Prior notification of adjustments and inspection by SBWRD is required. Trees, structures and retaining walls shall not be located within SBWRD easements..
8. No driveway access from Royal Street is permitted on any lot. A construction management plan that explicitly prohibits parking on Royal Street during construction will be required prior to the issuance of any building permits.
9. Additional Land A area = 44,819 sq ft = 1.03 acres
   Additional Land B area = 30,108 sq ft = 0.69 acres
   Lot 12 area (less Additional Land A & B) = 950,874 sq ft = 22.05 acres
   Additional Land A will remain as a private garage for the benefit of Lot 12. Except as provided otherwise in this note, Additional Land A & B will remain undeveloped and part of Lot 12. No further subdivision of these 15 Lots will be allowed with the exception of Additional Land A & B subject to an Amendment of the Deer Valley MPD and the incorporation of the adjacent PC-S-46-B-1 into the DV MPD as open space and dedication of this parcel to Park City Municipal Corporation. Any additional density will require City Council approval by plat amendment. Lot 12 will be the only lot allowed for future subdivision of the property.
10. Refer to Record of Survey S-10095 for boundary information.
11. All property corners are to be set with a 5/8" rebar and cap, "ALLIANCE ENGINEERING".
12. Public utility and waterline easements are dedicated to Park City Water Service District for the purpose of accessing, operating, maintaining, eventual replacement and upgrade of one or more underground pipelines and appurtenances for conveyance, distribution, and/or transmission of water.
13. Prior to issuance of a building permit for individual Lots, the applicant or owner of the Lot shall submit a certified arborist assessment of the Lot that analyzes the health and viability of all significant vegetation on the property within 100 feet of the Building Envelope/Limits of Disturbance (LOD), including a tree preservation plan that indicates trees proposed for removal, how trees will be protected during construction and a tree replacement plan. The plan shall also indicate that trees shall be limited within a 15 foot radius of the house and that diseased and dead trees within 100 feet of the house will be removed, consistent with the submitted Forest Assessment dated March 28, 2020. This includes vegetation that is no longer standing. A 30-foot vegetation protection area will be required around dwellings with limited existing or new tree landscaping as approved by Park City Municipal Corporation and the Park City Fire District. The Park City Fire Marshal must approve a forest management plan prior to the issuance of a building permit.
14. If mine waste rock or mine waste impacted soils are encountered, they must be handled in accordance with State and Federal Law.
15. Each Lot within this subdivision shall be required to obtain a MS4 storm water permit prior to any construction activity.
16. The subdivision shall be served by an on-call van shuttle service that will transport guests to the Silver Lake or Snow Park area as well as the Main Street core and the surrounding resorts during peak vacation/holiday weeks in order to minimize the traffic impact from this subdivision. At a minimum, this shall include holiday weeks and three day weekends in perpetuity. The shuttle van shall utilize Royal Street and shall not utilize Hillside Avenue.

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL BY THESE PRESENTS that the undersigned is the owner of the hereon described tract of land, and hereby causes this plat to be made, together with easements as set forth to be hereafter known as HUNTSMAN ESTATES and does hereby dedicate for the perpetual use of the public the areas shown on this plat as intended for public use. The undersigned owner also hereby conveys to any and all public utility companies a perpetual, non-exclusive easement over any public utility easements shown on this plat, the same to be used for the installation, maintenance and operation of utility lines and facilities. The undersigned owner also hereby conveys any other easements as shown on this plat to the parties indicated and for the purposes shown hereon.

In witness whereof, the undersigned set his hand this 7 day of December, 2020.

DV LODGE LLC, a Utah limited liability company

By: Paul Huntsman
Paul Huntsman, Principal

ACKNOWLEDGMENT

State of Utah)
: ss.
County of Salt Lake)

On this 7th day of December, 2020, Paul Huntsman personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he is the Principal of DV LODGE LLC, a Utah limited liability company and that said document was signed by him on behalf of said limited liability company by authority of its operating agreement and he acknowledged to me that he executed HUNTSMAN ESTATES.

By: Pamela G. Bailey
Notary Public
Pamela G. Bailey
Printed Name
Residing in: Salt Lake City, UT
My commission expires: 6-4-2024
Commission No. 712-116

HUNTSMAN ESTATES

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

(435) 649-9467
Alliance Engineering Inc.
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

12/7/20 JOB NO.: 3-10-19 FILE: X:\Deer Valley\dwg\srv\plat2019\031019.dwg

SHEET 1 OF 2

PUBLIC SAFETY ANSWERING POINT APPROVAL
APPROVED THIS 16 DAY
OF December, 2020
BY S. Chappell for Jeff Ward
SUMMIT COUNTY GIS COORDINATOR

SNYDERVILLE BASIN WATER RECLAMATION DISTRICT
REVIEWED FOR CONFORMANCE TO SNYDERVILLE BASIN WATER RECLAMATION DISTRICT STANDARDS ON THIS 7th
DAY OF December, 2020
BY
ENGINEERING DEPARTMENT

PLANNING COMMISSION
APPROVED BY THE PARK CITY PLANNING COMMISSION THIS 27TH
DAY OF MAY, 2020
BY
CHAIR

ENGINEER'S CERTIFICATE
I FIND THIS PLAT TO BE IN ACCORDANCE WITH INFORMATION ON FILE IN MY OFFICE THIS 8th
DAY OF December, 2020
BY
PARK CITY ENGINEER

APPROVAL AS TO FORM
APPROVED AS TO FORM THIS 10TH
DAY OF December, 2020
BY
PARK CITY ATTORNEY

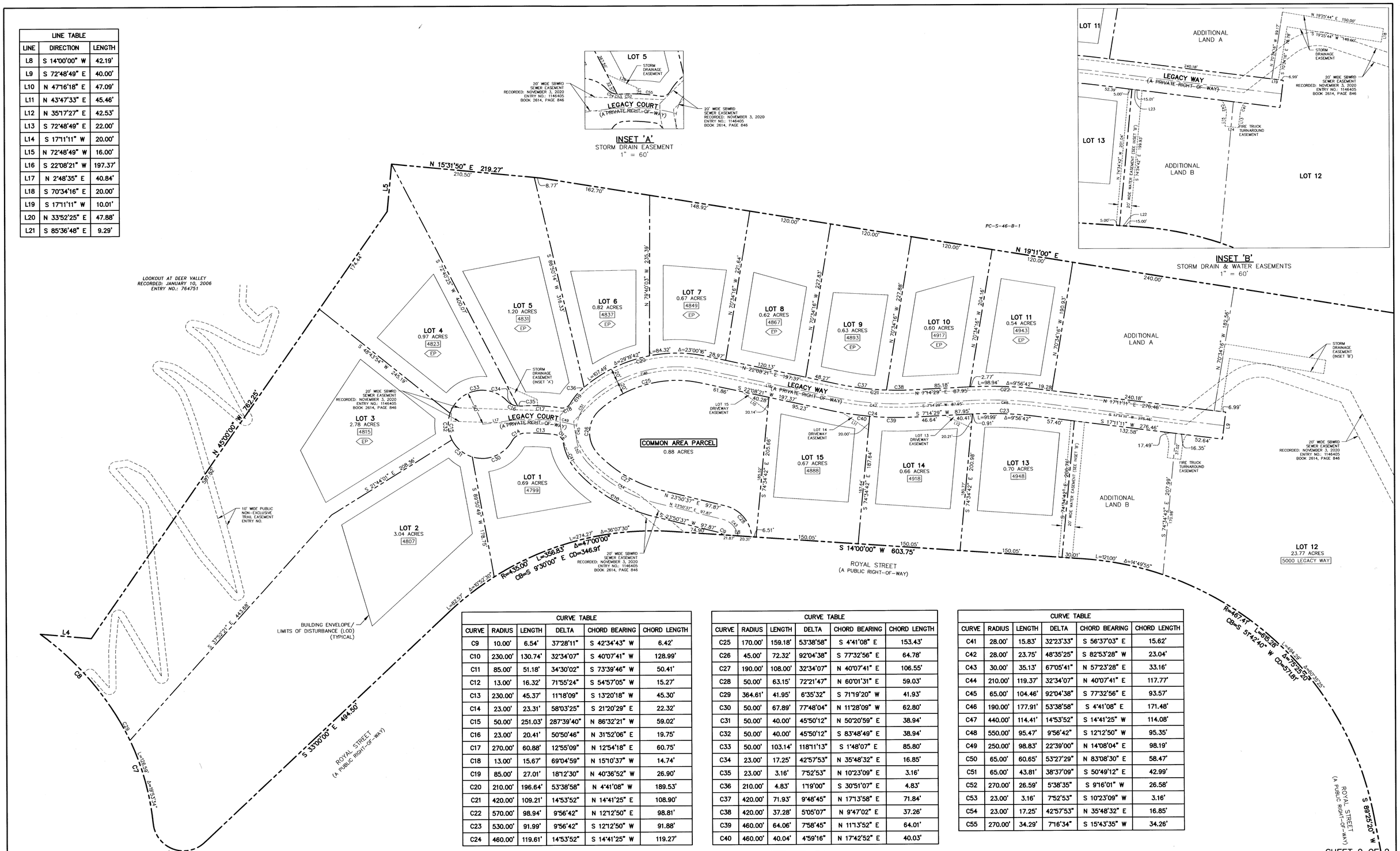
COUNCIL APPROVAL AND ACCEPTANCE
APPROVAL AND ACCEPTANCE BY THE PARK CITY COUNCIL THIS 9TH DAY OF JULY, 2020
BY
MAYOR

PARK CITY SUMMIT COUNTY UTAH CORPORATE Seal MARCH 1, 1884

CERTIFICATE OF ATTEST
I CERTIFY THIS RECORD OF SURVEY MAP WAS APPROVED BY PARK CITY COUNCIL THIS 9TH DAY
OF JULY, 2020
BY
PARK CITY RECORDER

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED
AT THE REQUEST OF First American Title Insurance Company
130.00 Pallen Donaldson Deputy Recorder
FEE RECORDER
TIME 11:52 A.M DATE 12/17/2020 ENTRY NO. 01150132

LINE TABLE		
LINE	DIRECTION	LENGTH
L8	S 14°00'00" W	42.19'
L9	S 72°48'49" E	40.00'
L10	N 47°16'18" E	47.09'
L11	N 43°47'33" E	45.46'
L12	N 35°17'27" E	42.53'
L13	S 72°48'49" E	22.00'
L14	S 17°11'11" W	20.00'
L15	N 72°48'49" W	16.00'
L16	S 22°08'21" W	197.37'
L17	N 2°48'35" E	40.84'
L18	S 70°34'16" E	20.00'
L19	S 17°11'11" W	10.01'
L20	N 33°52'25" E	47.88'
L21	S 85°36'48" E	9.29'



CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C9	10.00'	6.54'	37°28'11"	S 42°34'43" W	6.42'
C10	230.00'	130.74'	32°34'07"	S 40°07'41" W	128.99'
C11	85.00'	51.18'	34°30'02"	S 73°39'46" W	50.41'
C12	13.00'	16.32'	71°55'24"	S 54°57'05" W	15.27'
C13	230.00'	45.37'	11°18'09"	S 13°20'18" W	45.30'
C14	23.00'	23.31'	58°03'25"	S 21°20'29" E	22.32'
C15	50.00'	251.03'	287°39'40"	N 86°32'21" W	59.02'
C16	23.00'	20.41'	50°50'46"	N 31°52'06" E	19.75'
C17	270.00'	60.88'	12°55'09"	N 12°54'18" E	60.75'
C18	13.00'	15.67'	69°04'59"	N 15°10'37" W	14.74'
C19	85.00'	27.01'	18°12'30"	N 40°36'52" W	26.90'
C20	210.00'	196.64'	53°38'58"	N 4°41'08" W	189.53'
C21	420.00'	109.21'	14°53'52"	N 14°41'25" E	108.90'
C22	570.00'	98.94'	9°56'42"	N 12°12'50" E	98.81'
C23	530.00'	91.99'	9°56'42"	S 12°12'50" W	91.88'
C24	460.00'	119.61'	14°53'52"	S 14°41'25" W	119.27'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C25	170.00'	159.18'	53°38'58"	S 4°41'08" E	153.43'
C26	45.00'	72.32'	92°04'38"	S 77°32'56" E	64.78'
C27	190.00'	108.00'	32°34'07"	N 40°07'41" E	106.55'
C28	50.00'	63.15'	72°21'47"	N 60°01'31" E	59.03'
C29	364.61'	41.95'	6°35'32"	S 71°19'20" W	41.93'
C30	50.00'	67.89'	77°48'04"	N 11°28'09" W	62.80'
C31	50.00'	40.00'	45°50'12"	N 50°20'59" E	38.94'
C32	50.00'	40.00'	45°50'12"	S 83°48'49" E	38.94'
C33	50.00'	103.14'	118°11'13"	S 1°48'07" E	85.80'
C34	23.00'	17.25'	42°57'53"	N 35°48'32" E	16.85'
C35	23.00'	3.16'	7°52'53"	N 10°23'09" E	3.16'
C36	210.00'	4.83'	1°19'00"	S 30°51'07" E	4.83'
C37	420.00'	71.93'	9°48'45"	N 17°13'58" E	71.84'
C38	420.00'	37.28'	5°05'07"	N 9°47'02" E	37.26'
C39	460.00'	64.06'	7°58'45"	N 11°13'52" E	64.01'
C40	460.00'	40.04'	4°59'16"	N 17°42'52" E	40.03'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C41	28.00'	15.83'	32°23'33"	S 56°37'03" E	15.62'
C42	28.00'	23.75'	48°35'25"	S 82°53'28" W	23.04'
C43	30.00'	35.13'	67°05'41"	N 57°23'28" E	33.16'
C44	210.00'	119.37'	32°34'07"	N 40°07'41" E	117.77'
C45	65.00'	104.46'	92°04'38"	S 77°32'56" E	93.57'
C46	190.00'	177.91'	53°38'58"	S 4°41'08" E	171.48'
C47	440.00'	114.41'	14°53'52"	S 14°41'25" W	114.08'
C48	550.00'	95.47'	9°56'42"	S 12°12'50" W	95.35'
C49	250.00'	98.83'	22°39'00"	N 14°08'04" E	98.19'
C50	65.00'	60.65'	53°27'29"	N 83°08'30" E	58.47'
C51	65.00'	43.81'	38°37'09"	S 50°49'12" E	42.99'
C52	270.00'	26.59'	5°38'35"	S 9°16'01" W	26.58'
C53	23.00'	3.16'	7°52'53"	S 10°23'09" W	3.16'
C54	23.00'	17.25'	42°57'53"	N 35°48'32" E	16.85'
C55	270.00'	34.29'	7°16'34"	S 15°43'35" W	34.26'

SHEET 2 OF 2

HUNTSMAN ESTATES

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

60' 0 60' 120'
SCALE: 1"=60'
(24"x36")

LEGEND

XXXX Address on Legacy Way or Legacy Court

EP Wastewater Ejector Pump Lots

12/7/20 JOB NO.: 3-10-19 FILE: X:\Deer Valley\dwg\srv\plat2019\031019.dwg

(435) 649-9467
Alliance Engineering Inc.
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED
AT ENTRY NO. 01150632
12/17/2020 11:52:53 AM B: 2626 P: 1468
Plat PAGE 1/1
RHONDA FRANCIS, SUMMIT COUNTY RECORDER
FEE 130.00 BY FIRST AMERICAN TITLE INSURANCE COMPANY
TIME _____ DATE _____ ENTRY NO. _____

DocuSign Envelope ID: CDA46094-A00E-417C-ACC3-9C120ACFC159

Ordinance No. 2020-31

AN ORDINANCE APPROVING THE HUNTSMAN ESTATES SUBDIVISION PLAT LOCATED AT 5000 ROYAL STREET, PARK CITY, UTAH

WHEREAS, the owner of the property located at 5000 Royal Street petitioned the City Council for approval of the fifteen lot (15-lot) Huntsman Estates Subdivision; and

WHEREAS, on May 13, 2020, the property was posted and notice was mailed according to the requirements of the Land Management Code; and

WHEREAS, legal notice was published in the Park Record on May 13, 2020, according to requirements of the Land Management Code; and

WHEREAS, the Planning Commission held a Public Hearing on May 27, 2020, to receive input on the Huntsman Estates Subdivision; and

WHEREAS, the Planning Commission forwarded a positive recommendation to City Council; and

WHEREAS, on June 25, 2000, the City Council held a public hearing to receive input on the Subdivision Plat and continued the item to July 9, 2020; and

WHEREAS there is good cause and it is in the best interest of Park City Utah, to approve the Subdivision Plat.

NOW, THEREFORE BE IT ORDAINED by the City Council of Park City, Utah as follows:

SECTION 1. APPROVAL. The Subdivision Plat as shown in Attachment 1 is approved subject to the following Findings of Facts, Conclusions of Law and Conditions of Approval.

Findings of Fact:

1. The property contains 40.69 acres and is zoned Residential Development (RD) and is located within the Deer Valley MPD Overlay.
2. 5000 Royal Street is improved with a large family estate house as well as accessory buildings including a carriage house and underground garage.
3. The Parcel is known as the Westview Parcel located in the North Silver Lake Community of Deer Valley and is assigned 15 Density Units in Exhibit 1 of the Twelfth Amendment and Restated Deer Valley MPD with one Unit already developed.
4. The Subdivision is classified as a Major Subdivision according to LMC Section 15-7.1-3(A)(2) as it contains four (4) or more lots. The subdivision contains 16 lots including one common parcel.

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5. The Planning Commission held a Work Session on this item on February 12, 2020.
6. Staff checked for compliance with the Deer Valley MPD and Deer Valley is compliant with its Employee Housing obligations.
7. There are no Maximum House Size limitations or Unit Equivalent limitations on this parcel.
8. Building Height is limited to 28 feet for this parcel with an exception for the existing house which was granted in 1987 as part of the Conceptual MPD approval for the Westview MPD.
9. This Subdivision vacates the previous Westview MPD.
10. Nothing in this approval shall prevent the applicant from transferring up to two Units of density from the adjoining Estate zoned 19.51 acre parcel into this Subdivision in the future subject to a Plat Amendment, an amendment to the Deer Valley MPD and the dedication of this adjacent parcel to the City as Open Space.
11. The proposed Major Subdivision has been reviewed for compliance with all Sections of LMC 15-7, Subdivision General Provisions.
12. Single Family Dwellings are an allowed Use within the RD District.
13. Lockout Units require a CUP.
14. Nightly Rentals are allowed in the area unless HOA rules prohibit them.
15. The proposed 15 lots and Common Area Parcel meet the Lot and Site Requirements of the RD Zone and the Deer Valley MPD.
16. All future buildings shall be reviewed for compliance with the Architectural Design Guidelines of LMC Section 15-5.
17. The applicant submitted a Forrest Assessment from a certified arborist that evaluated the health and viability of the site and makes recommendations on thinning and removing dead standing trees in order to balance the need for tree removal for forest health, build out and wildfire prevention with the visibility of the site.
18. Care shall be taken in the siting of houses and driveways to limit the removal of Significant Vegetation. The applicant submitted LOD Areas for each of the individual lots in a file titled Lot Exhibit dated 4/15/20.
19. The property is located outside the Park City Landscaping and Maintenance of Soil Cover Ordinance.
20. A 40-foot right-of-way will serve the Subdivision from Royal Street. The road will be private and will be maintained by the Homeowner's Association but shall be constructed to City Standards.
21. The Snyderville Basin Sewer Improvement District has an easement for a sewer trunk line through this property that will be maintained.
22. The applicant submitted a Visual Analysis of what the development may look like at full build out from the Historic District and various other points in Park City with considerations made for removal of Significant Vegetation. The Visual Analysis shows that the site as developed should have minimal visual impact on the Historic District.
23. There should be minimal impact on surrounding properties including shadows, loss of solar access, air circulation, views or ridgeline intrusion due to required setbacks and because the building height limitation of 28 feet is less than the height of surrounding trees.

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24. In compliance with LMC Section 15-7.3-8, Sidewalks, Hiking Trails, Bike Paths, and Horse Trails, the applicant has agreed to grant an easement to the City and post a bond with the City up to $25,000 for the construction of a new trail connection between the intersection of the Lookout and Rossi Hill Trails and Royal Street. This new trail would provide a connection for alternative forms of transportation between Old Town and Deer Valley.
25. The traffic impacts for this 15-lot Subdivision are expected to be well within the capacity of Royal Street. In order to reduce traffic from the Subdivision the applicant is proposing an on-call van that will transport owners and guests to the Silver Lake area as well as the Main Street core and the surrounding resorts.
26. A traffic Study was not required for this application as the Deer Valley MPD accounts for 15 Units of Density on the site.
27. The applicant has agreed to cooperate with and not restrict or obstruct aerial transportation that may be developed in the future over the property.

Conclusions of Law:

1. There is Good Cause for the Huntsman Estates Subdivision. The proposed Subdivision complies with the Land Management Code requirements and the Deer Valley MPD and is within the Density previously approved for the parcel in 1987.
2. The Huntsman Estates Subdivision is consistent with the 2014 Park City General Plan and the Park City Land Management Code including Sections 15-7.1-3(C) and 15-12-15(B)(4) and (9) and applicable State Law regarding Subdivisions.
3. Neither the public nor any person will be materially injured by the proposed Subdivision.
4. Approval of this Subdivision does not adversely affect the health, safety, and welfare of the citizens of Park City.

Conditions of Approval:

1. The City Planner, City Attorney, and City Engineer will review and approve the final form and content of the Subdivision Plat for compliance with State Law, the Land Management Code, and the Conditions of Approval, prior to recordation of the Plat.
2. The applicant will record the Plat at the County within two (2) years from the date of City Council approval. If recordation has not occurred within two (2) years time, this approval for the Plat will be void, unless a request for an extension is made in writing prior to the expiration date and an extension is granted by the City Council.
3. A Plat Note shall indicate that all roads, cut-de-sac and utilities shall conform to current City Standards.
4. A Plat Note shall indicate that the lots are limited to Single Family Dwellings and Accessory Buildings.
5. A Plat Note shall indicate that all buildings in the Huntsman Estate Subdivision shall be fire sprinkled on both the interior and exterior.
6. A Plat Note shall indicate that the overall development parcel shall contain a minimum of 88% open space and otherwise comply with the Deer Valley MPD and all applicable zoning regulations including building height of 28 feet.

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7. A Plat Note shall indicate that all building must be within the LOD Area shown on Lot Exhibit dated 4/15/20. Minor adjustments to the LOD Area shall be allowed by the Planning Director so long as the size of the LOD Area on the lot remains the same.
8. A Plat Note shall indicate that none of the amenities shall have exterior lighting meant to allow for nighttime use. All exterior lighting shall comply with the City's Lighting requirements and shall be down directed and shielded.
9. A Plat Note shall indicate that prior to the issuance of building permits for individual lots the applicant or owner of the lot shall submit a certified Arborists Assessment of the lot that analyzes the health and viability of all Significant Vegetation on the property within 100 feet of the LOD, includes a Tree Preservation Plan that indicates trees proposed for removal, how trees will be protected during construction and a tree replacement plan. Plans shall also indicate that trees shall be limited within a 15 foot radius of the house and that diseased and dead trees within 100 feet of the house will be removed, consistent with the submitted Forrest Assessment dated March 28, 2020. This includes vegetation that is no longer standing.
10. A Plat Note shall indicate that the applicant will work with the Park City Fire Marshall and manage the forest according to his or her expectations and approval prior to being issued the first building permit.
11. A Plat Note shall indicate that if the developer encounters mine waste or mine waste impacted soils they must handle the material in accordance to State and Federal law.
12. A Plat Note shall indicate that no private driveways will be permitted from Royal Street.
13. Prior to Plat recording, the applicant shall grant and easement and post a bond with the City up to $25,000 for the construction of a new trail connection between the Lookout/Rossi Hill Trail and Royal Street.
14. Should the applicant move forward with Phase 2 of this project, a Condition of approval will be placed on the Plat Amendment that the applicant shall deed the adjacent parcel to the City as natural Recreational Open Space.
15. A Plat Note shall indicate that the Subdivision shall be served by an on-call van/shuttle service that will transport owners and guests to the Silver Lake area as well as the Main Street core and the surrounding resorts during peak vacation/holiday weeks in order to minimize the traffic impact from this Subdivision. At a minimum this shall include holiday weeks and three day weekends in perpetuity. The shuttle shall utilize Royal Street and shall not utilize Hillside Avenue.
16. A Construction Management Plan that explicitly prohibits parking on Royal Street during construction will be required prior to the issuance of any building permits.
17. A Plat Note shall indicate that there shall be no further subdivision of these 15 lots with the exception of Additional Land East and Additional Land West subject to an Amendment of the Deer Valley MPD and the incorporation of the adjacent PC-S-46-B-1 into the DV MPD as Open Space and dedication of this parcel to Park City Municipal Corporation.
18. The Huntsman Estates Subdivision development exceeds one (1) acre and shall meet the requirements of the municipal separate storm sewer system (MS4) storm water program. A plat note shall indicate that each lot within this common

development shall be required to obtain a MS4 storm water permit prior to any construction activity.

19. A Plat Note shall indicate that with the exception of Phase 2 for Lot 12, there shall be no further subdivision of the property.

SECTION 2. EFFECTIVE DATE. This Ordinance shall take effect upon publication.

PASSED AND ADOPTED this 9th day of July, 2020.

PARK CITY MUNICIPAL CORPORATION

DocuSigned by:

0340104CDC42481...

MAYOR, Andy Beerman

ATTEST:

DS

DocuSigned by:

Michelle Kellogg, City Recorder

APPROVED AS TO FORM:

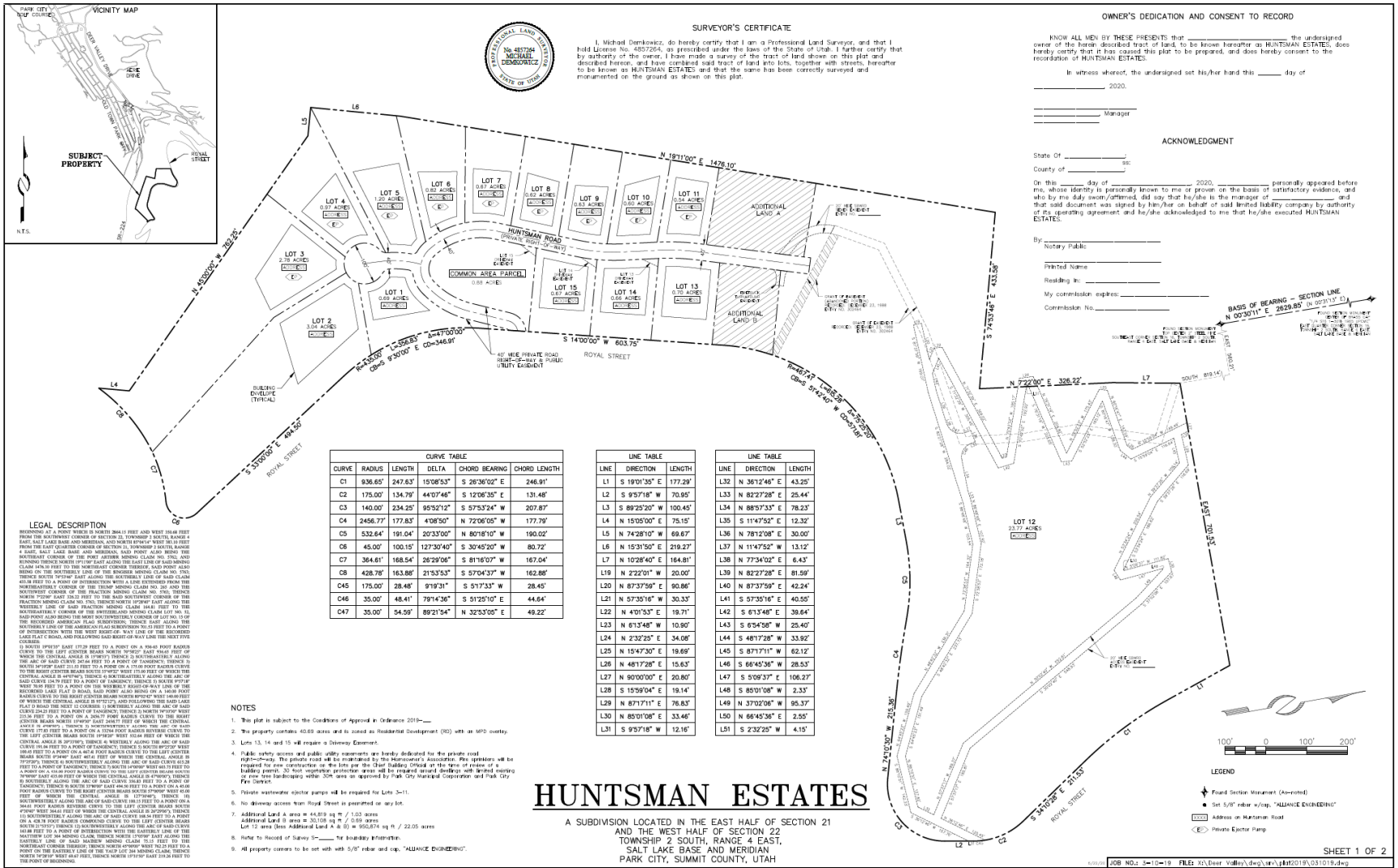
DocuSigned by:

Mark Harrington

City Attorney's Office

Attachment A: Approved Plat

DocuSign Envelope ID: CDA46094-A00E-417C-ACC3-9C120ACFC159



SURVEYOR'S CERTIFICATE

I, Michael Demkowicz, do hereby certify that I am a Professional Land Surveyor, and that I hold License No. 4857264, as prescribed under the laws of the State of Utah. I further certify that by authority of the owner, I have made a survey of the tract of land shown on this plat and described hereon, and have combined said tract of land into lots, together with streets, hereafter to be known as HUNTSMAN ESTATES and that the same has been correctly surveyed and monumented on the ground as shown on this plat.

PROFESSIONAL LAND SURVEYOR No. 4857264 MICHAEL DEMKOWICZ STATE OF UTAH

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL MEN BY THESE PRESENTS that _____ the undersigned owner of the herein described tract of land, to be known hereafter as HUNTSMAN ESTATES, does hereby certify that it has caused this plat to be prepared, and does hereby consent to the recordation of HUNTSMAN ESTATES.

In witness whereof, the undersigned set his/her hand this _____ day of _____, 2020.

_____
_____, Manager
_____

ACKNOWLEDGMENT

State Of _____;
ss:
County of _____;

On this _____ day of _____, 2020, _____ personally appeared before me, whose identity is personally known to me or proven on the basis of satisfactory evidence, and who by me duly sworn/affirmed, did say that he/she is the manager of _____ and that said document was signed by him/her on behalf of said limited liability company by authority of its operating agreement and he/she acknowledged to me that he/she executed HUNTSMAN ESTATES.

By: _____
Notary Public

_____
Printed Name

_____
Residing In: _____

My commission expires: _____

Commission No. _____

LEGAL DESCRIPTION

BEGINNING AT A POINT WHICH IS SOUTH 3644.15 FEET AND WEST 350.68 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, AND NORTH 85°04'54" WEST 385.10 FEET FROM THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, SALT LAKE BASE AND MERIDIAN, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THE PORT ARTHER MINING CLAIM NO. 5761, AND RUNNING THENCE NORTH 19°11'00" EAST ALONG THE EAST LINE OF SAID MINING CLAIM 1478.10 FEET TO THE NORTHEAST CORNER THEREOF, SAID POINT ALSO BEING ON THE SOUTHERLY LINE OF THE KINGSBIR MINING CLAIM NO. 5763; THENCE SOUTH 7°45'46" EAST ALONG THE SOUTHERLY LINE OF SAID CLAIM 433.58 FEET TO THE SOUTHEAST CORNER THEREOF, SAID POINT ALSO BEING THE NORTHEASTERLY CORNER OF THE TRUMP MINING CLAIM NO. 265 AND THE SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5763; THENCE NORTH 7°22'00" EAST 326.22 FEET TO THE SAID SOUTHWEST CORNER OF THE FRACTION MINING CLAIM NO. 5763; THENCE NORTH 10°28'40" EAST ALONG THE WESTERLY LINE OF SAID FRACTION MINING CLAIM 164.81 FEET TO THE SOUTHEASTERLY CORNER OF THE SWITZERLAND MINING CLAIM LOT NO. 32, SURVEY NUMBER 38, AS SHOWN ON THE OFFICIAL PLAT THEREOF ON FILE IN THE RECORDED AMERICAN FLAG SUBDIVISION; THENCE S48°41'00W 190.02' ALONG THE SOUTHERLY LINE OF THE AMERICAN FLAG SUBDIVISION 70.31 FEET TO A POINT OF INTERSECTION WITH THE WEST RIGHT-OF- WAY LINE OF THE RECORDED LAKE FLAT C ROAD, AND FOLLOWING SAID RIGHT-OF-WAY LINE THE NEXT FIVE COURSES:
1) SOUTH 19°01'35" EAST 177.29 FEET TO A POINT ON A 936.65 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS NORTH 70°58'25" EAST 936.65 FEET OF WHICH THE CENTRAL ANGLE IS 15°08'53") THENCE 2) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 247.83 FEET TO A POINT OF TANGENCY; THENCE 3) SOUTH 34°10'28" EAST 211.53 FEET TO A POINT ON A 175.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 55°49'32" WEST 175.00 FEET OF WHICH THE CENTRAL ANGLE IS 44°07'46"); THENCE 4) SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 134.79 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 9°57'18" WEST 70.95 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF THE RECORDED LAKE FLAT D ROAD, SAID POINT ALSO BEING ON A 140.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 82°02'42" EAST 140.00 FEET OF WHICH THE CENTRAL ANGLE IS 57°12'25") AND FOLLOWING THE SAID LAKE FLAT D ROAD RIGHT-OF-WAY LINE THE NEXT FIVE COURSES: 1) SOUTHERLY ALONG THE ARC OF SAID CURVE 234.23 FEET TO A POINT OF TANGENCY; THENCE 2) NORTH 34°50'50" WEST 215.38 FEET TO A POINT ON A 245.17 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 15°49'10" EAST 245.17 FEET OF WHICH THE CENTRAL ANGLE IS 49°00'00") ; THENCE 3) NORTHWESTERLY ALONG THE ARC OF SAID CURVE 175.03 FEET TO A POINT ON A 137.94 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 35°50'20" WEST 102.64 FEET OF WHICH THE CENTRAL ANGLE IS 28°20'00"); THENCE 4) WESTERLY ALONG THE ARC OF SAID CURVE 100.16 FEET TO A POINT OF TANGENCY; THENCE 5) SOUTH 89°27'20" WEST 217.53 FEET TO A POINT ON A 245.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 0°32'40" EAST 467.41 FEET OF WHICH THE CENTRAL ANGLE IS 79°27'20"); THENCE 6) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 455.28 FEET TO A POINT OF TANGENCY; THENCE 7) SOUTH 0°05'00" WEST 60.75 FEET TO A POINT ON A 116.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 78°09'00" EAST 415.00 FEET OF WHICH THE CENTRAL ANGLE IS 47°00'00"); THENCE 8) SOUTHERLY ALONG THE ARC OF SAID CURVE 190.43 FEET TO A POINT OF TANGENCY; THENCE 9) SOUTH 31°09'00" EAST 484.50 FEET TO A POINT ON A 428.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 58°51'00" WEST 45.00 FEET OF WHICH THE CENTRAL ANGLE IS 123°50'00"); THENCE 10) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 100.13 FEET TO A POINT ON A 364.41 FOOT RADIUS REVERSE CURVE TO THE LEFT (CENTER BEARS SOUTH 67°59'00" WEST 364.41 FEET OF WHICH THE CENTRAL ANGLE IS 26°20'00"); THENCE 11) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 168.34 FEET TO A POINT ON A 428.78 FOOT RADIUS COMPOUND CURVE TO THE LEFT (CENTER BEARS SOUTH 21°59'15") THENCE 12) SOUTHWESTERLY ALONG THE ARC OF SAID CURVE 356.83 FEET TO A POINT ON THE SOUTHERLY LINE OF THE SAID MINING CLAIM MATTHEW LOT 364 MINING CLAIM; THENCE NORTH 17°05'00" EAST ALONG THE EASTERLY LINE OF SAID MATHEW MINING CLAIM 75.15 FEET TO THE NORTHEAST CORNER THEREOF; THENCE NORTH 49°00'00" WEST 762.25 FEET TO A POINT ON THE EASTERLY LINE OF THE YALP LOT 364 MINING CLAIM; THENCE NORTH 74°10'30" WEST 48.47 FEET; THENCE NORTH 15°15'55" EAST 219.26 FEET TO THE POINT OF BEGINNING.

NOTES

1. This plat is subject to the Conditions of Approval in Ordinance 2019-__
2. The property contains 40.69 acres and is zoned as Residential Development (RD) with an MPD overlay.
3. Lots 13, 14 and 15 will require a Driveway Easement.
4. Public safety access and public utility easements are hereby dedicated for the private road right-of-way. The private road will be maintained by the Homeowner's Association. Fire sprinklers will be required for new construction on the lots per the Chief Building Official on the time of review of a building permit. 30 foot vegetation protection areas will be required around dwellings with limited existing or new tree landscaping within 30ft area as approved by Park City Municipal Corporation and Park City Fire District.
5. Private wastewater ejector pumps will be required for Lots 3-11.
6. No driveway access from Royal Street is permitted on any lot.
7. Additional Land A area = 44.819 sq ft / 1.03 acres
   Additional Land B area = 30,108 sq ft / 0.69 acres
   Lot 12 area (less Additional Land A & B) = 950,874 sq ft / 22.05 acres
8. Refer to Record of Survey S-____ for boundary information.
9. All property corners to be set with with 5/8" rebar and cap, "ALLIANCE ENGINEERING".

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	936.65'	247.83'	15°08'53"	S 26°36'02" E	246.91'
C2	175.00'	134.79'	44°07'46"	S 12°06'35" E	131.48'
C3	140.00'	234.25'	95°52'12"	S 57°53'24" W	207.87'
C4	2456.77'	177.83'	4°08'50"	N 72°06'05" W	177.79'
C5	532.64'	191.04'	20°33'00"	N 80°18'10" W	190.02'
C6	45.00'	100.15'	127°30'40"	S 30°45'20" W	80.72'
C7	364.61'	168.54'	26°29'06"	S 81°16'07" W	167.04'
C8	428.78'	163.88'	21°53'53"	S 57°04'37" W	162.88'
C45	175.00'	28.48'	9°19'31"	S 51°33' W	28.45'
C46	35.00'	48.41'	79°14'36"	S 51°25'10" E	44.64'
C47	35.00'	54.59'	89°21'54"	N 32°53'05" E	49.22'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S 19°01'35" E	177.29'
L2	S 9°57'18" W	70.95'
L3	S 89°25'20" W	100.45'
L4	N 15°05'00" E	75.15'
L5	N 74°28'10" W	69.67'
L6	N 15°31'50" E	219.27'
L7	N 10°28'40" E	164.81'
L19	N 2°22'01" W	20.00'
L20	N 87°37'59" E	90.86'
L21	N 57°35'16" W	30.33'
L22	N 4°01'53" E	19.71'
L23	N 61°13'48" W	10.90'
L24	N 2°32'25" E	34.08'
L25	N 15°47'30" E	19.69'
L26	N 48°17'28" E	15.63'
L27	N 90°00'00" E	20.80'
L28	S 15°59'04" E	19.14'
L29	N 87°17'11" E	76.83'
L30	N 85°01'08" E	33.46'
L31	S 9°57'18" W	12.16'

LINE TABLE		
LINE	DIRECTION	LENGTH
L32	N 36°12'46" E	43.25'
L33	N 82°27'28" E	25.44'
L34	N 88°57'33" E	78.23'
L35	S 11°47'52" E	12.32'
L36	N 78°12'08" E	30.00'
L37	N 11°47'52" W	13.12'
L38	N 77°34'02" E	6.43'
L39	N 82°27'28" E	81.59'
L40	N 87°37'59" E	42.24'
L41	S 57°35'16" E	40.55'
L42	S 61°13'48" E	39.64'
L43	S 6°54'58" W	25.40'
L44	S 48°17'28" W	33.92'
L45	S 87°17'11" W	62.12'
L46	S 66°45'36" W	28.53'
L47	S 5°09'37" E	106.27'
L48	S 85°01'08" W	2.33'
L49	N 37°02'06" W	95.37'
L50	N 66°45'36" E	2.55'
L51	S 2°32'25" W	4.15'

HUNTSMAN ESTATES

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

SHEET 1 OF 2

JOB NO.: 3-10-19 FILE: R:\Deer Valley\dwg\sra\plat2019\031019.dwg

(435) 649-9467
Alliance
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

SNYDERVILLE BASIN WATER RECLAMATION DISTRICT
REVIEWED FOR CONFORMANCE TO SNYDERVILLE BASIN WATER RECLAMATION DISTRICT STANDARDS ON THIS _____
DAY OF _____, 2020
BY _____
S.B.W.R.D.

PLANNING COMMISSION
APPROVED BY THE PARK CITY PLANNING COMMISSION THIS ____
DAY OF _____, 2020
BY _____
CHAIR

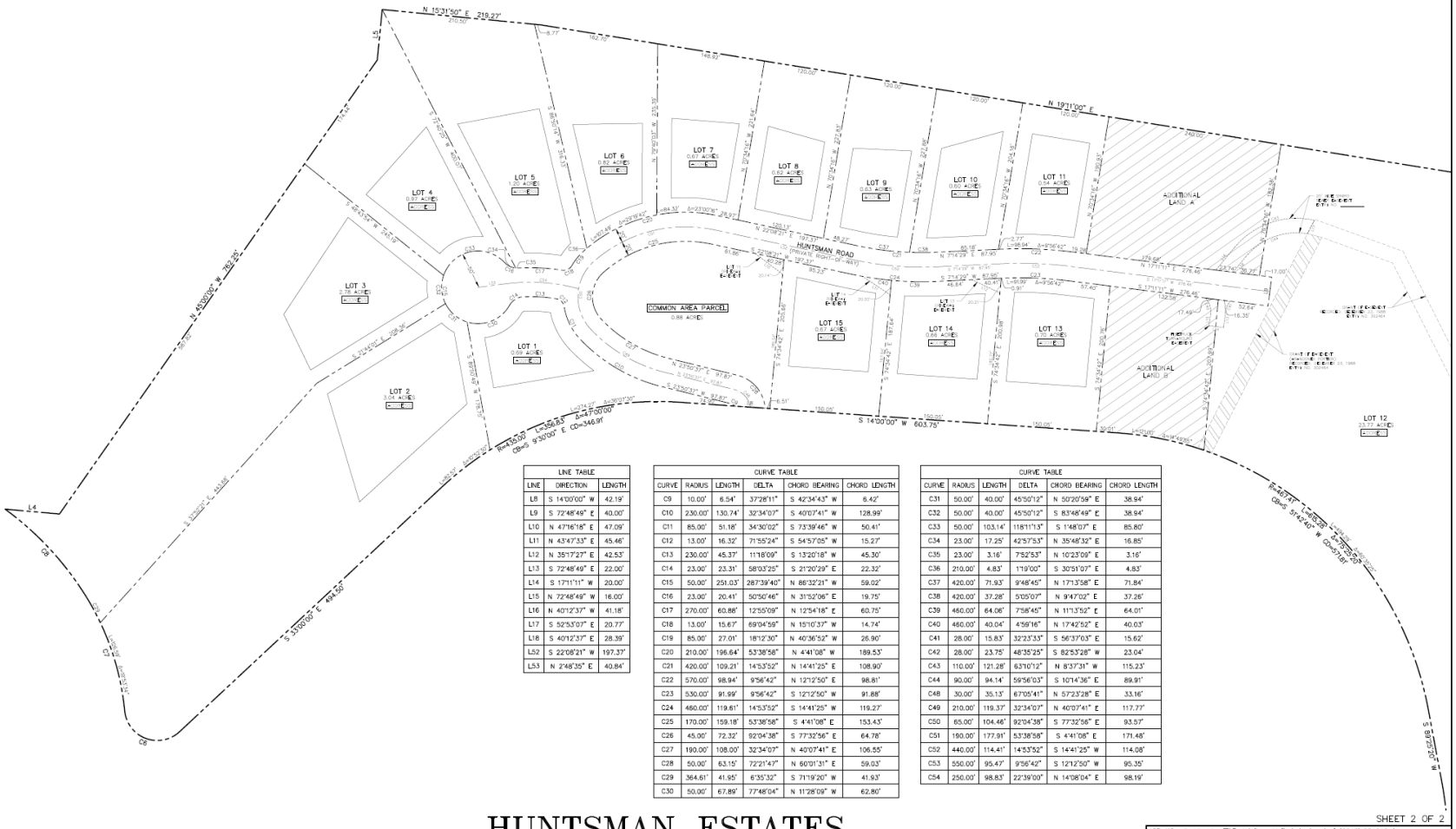
ENGINEER'S CERTIFICATE
I FIND THIS PLAT TO BE IN ACCORDANCE WITH INFORMATION ON FILE IN MY OFFICE THIS ____
DAY OF _____, 2020
BY _____
PARK CITY ENGINEER

APPROVAL AS TO FORM
APPROVED AS TO FORM THIS _____
DAY OF _____, 2020
BY _____
PARK CITY ATTORNEY

COUNCIL APPROVAL AND ACCEPTANCE
APPROVAL AND ACCEPTANCE BY THE PARK CITY COUNCIL THIS _____ DAY OF _____, 2020
BY _____
MAYOR

CERTIFICATE OF ATTEST
I CERTIFY THIS RECORD OF SURVEY MAP WAS APPROVED BY PARK CITY COUNCIL THIS _____ DAY OF _____, 2020
BY _____
PARK CITY RECORDER

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED AT THE REQUEST OF _____
_____ FEE
_____ RECORDER
TIME _____ DATE _____ ENTRY NO. _____



LINE TABLE		
LINE	DIRECTION	LENGTH
L8	S 14°00'00" W	42.19'
L9	S 72°48'49" E	40.00'
L10	N 47°16'18" E	47.09'
L11	N 43°47'33" E	45.46'
L12	N 35°17'27" E	42.53'
L13	S 72°48'49" E	22.00'
L14	S 17°11'11" W	20.00'
L15	N 72°48'49" W	16.00'
L16	N 40°12'37" W	41.18'
L17	S 52°53'07" E	20.77'
L18	S 40°12'37" E	28.39'
L52	S 22°08'21" W	197.37'
L53	N 2°48'35" E	40.84'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C9	10.00'	6.54'	37°28'11"	S 42°34'43" W	6.42'
C10	230.00'	130.74'	32°34'07"	S 40°07'41" W	128.99'
C11	85.00'	51.18'	34°30'02"	S 73°39'46" W	50.41'
C12	13.00'	16.32'	71°55'24"	S 54°57'05" W	15.27'
C13	230.00'	45.37'	11°18'09"	S 13°20'18" W	45.30'
C14	23.00'	23.31'	58°03'25"	S 21°20'29" E	22.32'
C15	50.00'	251.03'	287°39'40"	N 86°32'21" W	59.02'
C16	23.00'	20.41'	50°50'46"	N 31°52'06" E	19.75'
C17	270.00'	60.88'	12°55'09"	N 12°54'18" E	60.75'
C18	13.00'	15.67'	69°04'59"	N 15°10'37" W	14.74'
C19	85.00'	27.01'	18°12'30"	N 40°36'52" W	26.90'
C20	210.00'	196.64'	53°38'58"	N 4°41'08" W	189.53'
C21	420.00'	109.21'	14°53'52"	N 14°41'25" E	108.90'
C22	570.00'	98.94'	9°56'42"	N 12°12'50" E	98.81'
C23	530.00'	91.99'	9°56'42"	S 12°12'50" W	91.88'
C24	460.00'	119.61'	14°53'52"	S 14°41'25" W	119.27'
C25	170.00'	159.18'	53°38'58"	S 4°41'08" E	153.43'
C26	45.00'	72.32'	92°04'38"	S 77°32'56" E	64.78'
C27	190.00'	108.00'	32°34'07"	N 40°07'41" E	106.55'
C28	50.00'	63.15'	72°21'47"	N 60°01'31" E	59.03'
C29	364.61'	41.95'	6°35'32"	S 71°19'20" W	41.93'
C30	50.00'	67.89'	77°48'04"	N 11°28'09" W	62.80'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C31	50.00'	40.00'	45°50'12"	N 50°20'59" E	38.94'
C32	50.00'	40.00'	45°50'12"	S 83°48'49" E	38.94'
C33	50.00'	103.14'	118°11'13"	S 1°48'07" E	85.80'
C34	23.00'	17.25'	42°57'53"	N 35°48'32" E	16.85'
C35	23.00'	3.16'	7°52'53"	N 10°23'09" E	3.16'
C36	210.00'	4.83'	1°19'00"	S 30°51'07" E	4.83'
C37	420.00'	71.93'	9°48'45"	N 17°13'58" E	71.84'
C38	420.00'	37.28'	5°05'07"	N 9°47'02" E	37.26'
C39	460.00'	64.06'	7°58'45"	N 11°13'52" E	64.01'
C40	460.00'	40.04'	4°59'16"	N 17°42'52" E	40.03'
C41	28.00'	15.83'	32°23'33"	S 56°37'03" E	15.62'
C42	28.00'	23.75'	48°35'25"	S 82°53'28" W	23.04'
C43	110.00'	121.28'	63°10'12"	N 8°37'31" W	115.23'
C44	90.00'	94.14'	59°56'03"	S 10°14'36" E	89.91'
C48	30.00'	35.13'	67°05'41"	N 57°23'28" E	33.16'
C49	210.00'	119.37'	32°34'07"	N 40°07'41" E	117.77'
C50	65.00'	104.46'	92°04'38"	S 77°32'56" E	93.57'
C51	190.00'	177.91'	53°38'58"	S 4°41'08" E	171.48'
C52	440.00'	114.41'	14°53'52"	S 14°41'25" W	114.08'
C53	550.00'	95.47'	9°56'42"	S 12°12'50" W	95.35'
C54	250.00'	98.83'	22°39'00"	N 14°08'04" E	98.19'

HUNTSMAN ESTATES

A SUBDIVISION LOCATED IN THE EAST HALF OF SECTION 21
AND THE WEST HALF OF SECTION 22
TOWNSHIP 2 SOUTH, RANGE 4 EAST,
SALT LAKE BASE AND MERIDIAN
PARK CITY, SUMMIT COUNTY, UTAH

100' 0 100' 200'

SHEET 2 OF 2

6/22/20 JOB NO.: 3-10-19 FILE: X:\Deer Valley\dwg\or\plat2019\031015.dwg

(435) 649-9467

CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

RECORDED
STATE OF UTAH, COUNTY OF SUMMIT, AND FILED
AT THE REQUEST OF _____

FEE RECORDER

TIME _____ DATE _____ ENTRY NO. _____

DocuSign Envelope ID: CDA46094-A00E-417C-ACC3-9C120ACFC159

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Building
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Approve Resolution 12-2023, a Declaration of Restriction on Open Sources of Ignition, Open Flames, and/or Fireworks
(A) Public Input (B) Action

Suggested Action:

Attachments:
Open Flames Prohibition Staff Report
Exhibit A: Determination of Restrictions on Open Sources of Ignition
Exhibit B: Open Flames Prohibition Resolution

City Council Staff Report

Subject: **Resolution Prohibiting Use of Ignition Sources, Including Open Flames**
Author: **Cherie Wellmon, Fire Marshal**
Department: **Community Development/Building**
Date: **July 13, 2023**
Type of Item: **Legislative**

The International Fire Code (IFC), as adopted by the State of Utah, and Park City Municipal Code, Section 11-9-3, allows the City Council to prohibit ignition or use of ignition sources and open flames when the Park City Fire Marshal determines that existing or historical hazardous environmental conditions within the City necessitate restrictions on those ignition sources.

This year the above-average precipitation and cooler-than-normal temperatures caused an increased loading of fine fuels, such as tall grasses, leaves, and branches. Weather data forecasts predict rising summer temperatures and below-average mid to late-summer monsoonal rains.

As the fine fuels dry throughout July and August, we will experience higher fire danger as the summer continues. Historical hazardous environmental conditions coupled with the established wildland fire areas throughout the City create fire safety concerns for residents, structures, and wildland areas.

As a result, we recommend Council consider proactive restrictions on the use of ignition sources.

Criteria and Declaration

The following criteria (Exhibit A) were considered in determining that hazardous environmental conditions will most likely exist, making it our recommendation to enact restrictions on the use of ignition sources, including open flames:

1. Great Basin Coordinating Center (GBCC) predictive services intelligence and outlook reports, including daily, 7-day, and monthly/seasonal reports
2. Dead and live fuel moisture reports
3. Current and forecasted temperatures
4. Humidity
5. Dew point
6. Winds
7. Local and regional weather forecasts, including warnings, watches, and lightning probabilities

8. Energy release component (ERC)

Using the criteria outlined above, the Park City Fire Marshal recommends that the Council consider prohibiting ignition sources, including open flames. The recommendation is made with assistance from the Chief of Police, Emergency Manager, Community Engagement Manager, and the Park City Fire District. The prohibition is recommended effective August 1, 2023, through October 31, 2023.

Requests for an exception to the prohibition can be applied for through the Building Department by requesting a Fire Operational Permit. Permit requests are evaluated for compliance with the International Fire Code, Land Management Code, and local environmental conditions at the time of application.

The Building Department will continue its work with the Community Engagement Team to provide community notification and information regarding an open flame prohibition.

Exhibit A – Determination of Restrictions on Open Sources of Ignition
Exhibit B – Proposed Resolution Prohibiting Use of Ignition, and Open Flames in Park City

Attachment A

July 5, 2023

From: Park City Municipal Corporation Fire Marshal

Subject: DETERMINATION OF RESTRICTION ON OPEN SOURCES OF IGNITION AND OPEN FLAMES

Reference: (a) Park City Municipal Code 11-9-3
(b) PCMC Policy and Procedure for the Regulation of Open Sources of Ignition & Open Flames

1. Per references (a) and (b), a prohibition on open sources of ignition and open flames, is recommended. Exceptions to this prohibition include the following:

Utah Code 53-7-225 – which allows use of Class C fireworks during specific holiday periods.

2. Except for areas specifically listed below, the recommendation is that this prohibition be effective as of August 1, 2023, for all areas within City limits, and remain in effect through October 31, 2023. Specifically exempted areas include the following:

None

3. The following criteria were considered in determining to recommend restrictions on the use of open sources of ignition and open flames:

a. Great Basin Coordination Center Predictive Services Intelligence and Outlook reports
(Additional sheets may be attached as necessary). Overall trends are to be considered and listed in all cases, instead of relying solely on specific conditions present on a given date.

Monthly/Seasonal Report:	The wetter weather pattern has prolonged green-up, and delayed the fire season. However, new fine fuel and sagebrush growth is significant and monsoon weather may be delayed or weakened as temperatures rise throughout the summer. What is considered low fire danger may quickly switch to above normal when fuels cure toward July and August.
b. Dead and live fuel moistures:	Dead and live fuel moisture is currently normal.
c. Temperatures:	Forecasts show currently lower-than-average temperatures, but an increase of 5-10 degrees above normal is expected through July and August.
d. Humidity:	Current maximum humidity between 48-57% and a minimum of 15-24%.
e. Dew Point:	Currently 45 degrees.

f. Wind:

Variable, but a high-pressure system coming in mid-summer will likely bring more windy conditions as we gradually move from La Niña into El Niño.

g. Local and regional weather forecasts, including warnings, watches, and lightning probabilities: *Overall trends are to be considered and listed in all cases, instead of relying solely on specific conditions present on a given date.*

The US Forest Service indicates the current fire danger is low, but due to forecasted conditions, it will move to above normal in August. The growth of fine fuels and sagebrush coupled with predicted below-normal precipitation and increased temperatures create fire ignition concerns.

h. Energy Release Component (ERC):

Currently at 30, the ERC average increases to a projection as high as 63 in late July.

i. Other applicable information relied upon in enacting this ban:

Current data shows a mid-summer high-pressure system bringing an increase in dry conditions, higher temperatures, and wind in July and August resulting in an increase in fire danger. Due to this information, we advise enacting the open flame prohibition.

Copy to:
City Manager
Fire Marshal
Chief of Police
Emergency Manager
Community Engagement Manager / Public Information Officer
Park City Fire District
Summit County Fire Warden

Resolution 12-2023

A RESOLUTION PROHIBITING THE USE OF IGNITION SOURCES AND OPEN FLAMES IN PARK CITY

WHEREAS, the City Council of Park City, Utah, and the Park City Fire Marshal have the desire to reduce the threat of wildfires, which may cause extensive damage and economic hardship within the City; and

WHEREAS, pursuant to Utah Code § 15A-5-202.5 and Park City Municipal Code § 11-9-3, when the City Fire Marshal determines that existing or historically hazardous environmental conditions necessitate controlled use of an ignition source and open flames, City Council may prohibit the ignition or use of an ignition source in mountainous, brush-covered, forest-covered, dry grass-covered, and wildland urban interface areas, as well as areas near waterways, trails, canyons, washes, ravines, or similar areas; and

WHEREAS, the City Fire Marshal has determined that existing hazardous environmental conditions— increased fine fuel loading, rising temperatures, along with the forecasted weather data and dropping fuel moisture content of live and dead vegetation— necessitate controlled use of ignition sources throughout the City, which is entirely made up of the above-identified areas;

BE IT ORDAINED BY THE CITY COUNCIL OF PARK CITY, UTAH, THAT:

Unless explicitly approved through the issuance of a written permit, the Park City Council prohibits the use of any ignition source, including open flames, throughout the Park City municipal boundaries from August 1, 2023, through October 31, 2023.

This resolution passed and adopted this 13th day of July, 2023.

PARK CITY MUNICIPAL CORPORATION

_____
Mayor Nann Worel

Attest:

_____
Michelle Kellogg, City Recorder

Approved as to form:

_____

City Attorney's Office

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Building
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Approve Building Permit and Impact Fee Waivers for the Engine House Affordable Housing Project, Located at 1875 Homestake Road, Not to Exceed $2,000,000
(A) Public Hearing (B) Action

Suggested Action:

Attachments:
Engine House Affordable Housing Project Fee Waiver Staff Report
Exhibit A: Homestake Fee Adjustment Application
Exhibit B: Breakdown of Estimated Permitting and Impact Fees

City Council Staff Report

Subject: Engine House Affordable Housing Project – Fee Waiver Request
Author: Dave Thacker
Department: Building Department
Date: July 13, 2023
Type of Item: Administrative

Summary Recommendation

Consider a request from JF ENGINEHOUSE DEVELOPER, LLC (an affiliate of J. Fisher) to approve building permit and impact fee waivers not to exceed $2,000,000 to support the creation of 99 units of affordable rental housing on City-owned property at 1875 Homestake Road (Property), in accordance with Municipal Code section 11-12-15.

When receiving building permit and impact fee waiver requests, Park City convenes an internal Fee Adjustment Committee to apply predictable and equitable scoring criteria prior to making a recommendation to City Council. The criteria include Council/community goals, overall community benefit, applicant's need, and other City funding/support if already provided.

After considerable review, the Committee recommends Council consider approving the Engine House's building permit and impact fee waiver request, not to exceed $2,000,000.

Background

- The Engine House Affordable Housing Project applied to waive all Building, Planning, Engineering, and impact fees (including water impact fees) to reduce the cost to produce 99 deed-restricted affordable rental units (Exhibit A).

- The total estimated valuation for the Engine House affordable rental housing development is $27,295,250. The fee estimate (Exhibit B) was processed according to PCMC's Fee Schedule. The significant construction project will require a corresponding amount of professional staff time, primarily from the Building, Planning, Public Utilities, and Engineering Departments.

- Impact Fees (including public safety, water, and streets) are calculated based upon the valuation of a development. Council may authorize the waiver of impact fees for "construction of affordable housing" pursuant to Municipal Code 11-13-4.

- Fees for Building, Planning, and Engineering are calculated according to the adopted fee schedule to offset the cost of providing services related to the development. The General Fund absorbs waived fees, and water impact fees are absorbed by the Water Fund.

- Municipal Code section 11-12-15 allows Council to waive fees to be reduced or waived for public projects which are "deemed to serve a beneficial public purpose."

- City Council adopted its Administrative Policy for the Adjustment or Waiver of Construction and Development and Impact Fees and the creation of the Fee Adjustment Committee on April 13, 2017 (staff report, page 119).

- Fee waivers requiring Council approval are reviewed by an internal Fee Adjustment Committee that provides fee adjustment recommendations applying scoring criteria. The Committee consists multiple departments and internal professionals.

Analysis

While $2,000,000 is a significant decrease in revenue that would otherwise go to the General Fund to offset the costs of professional staff time and effort, Park City can absorb a one-time loss of revenue given the economic growth in exchange to forward a Critical Community Priority – affordable housing

In terms of affordable housing, there are many ways to support and incentivize production, including zoning, density bonuses, financing, public-private partnerships, and fee waivers. As the housing crisis has increased, so too has the processing of fee waivers to help support production – for example, public-private affordable housing projects also received similar waivers recently in Vail, CO, Aspen, CO, Bend, OR, Jackson Hole, WY, and Salt Lake City, UT.

Park City has a long history of approving fee waivers to forward and support community goals. Some of the most recent include the National Ability Center (NAC) Mountain Center, Woodside Phase I Affordable Housing, and the NAC ropes course expansion. Each project received a formal waiver after consideration by the Mayor and Council, often consistent with the level of recommendation from the Fee Adjustment Committee.

The Committee's recommendation, while a large sum and absorbed by the General and Water Funds, is consistent with other Housing Authority's across the country seeking to support and produce more affordable, deed-restricted community housing.

Department Review

Engineering, Planning, Budget, Water, Attorney's Office, and Executive Departments have reviewed this staff report.

Attachments

EXHIBIT A Homestake (Engine House) fee adjustment application
EXHIBIT B Breakdown of Estimated Permitting and Impact Fees

Construction and Development
Fee Reduction Application
Park City Municipal Corporation

Please provide two **(2)** hard copies and an electronic copy of this application and all other requested information to the Building Office**.**

(1) Applicant Contact Information

Name Homestake Affordable Housing Project – Contact: Jason Glidden

Address 1875 Homestake Drive, Park City, UT 84060

Phone 435-615-5268 Fax N/A

E-mail jglidden@parkcity.org

Permit(s) N/A

(2) Indicate the applicable Criteria for Eligibility:

X Affordable Housing Project ☐ Non-Profit

☐ Project Receiving a Historic District Grant ☐ Youth Group

(3) Indicate the applicable items for which a waiver is being requested (all that apply):

X Building Plan Review ☐ Annexation Application Fee

X Engineering Plan Review ☐ Condo Plat Application Fee

X Planning Plan Review ☐ Plat Amendment Application Fee

X CUP Application Fee ☐ Historic District Design Review

X MPD Application Fee X Water Fees (interior)

X Building Permit Fee X Water Fees (exterior)

X Parks, Trails, Open Space, Police, Roadway Facilities

☐ Other: Please explain _____

(4) Projected total of all fees: $1,700,000

(5) Total construction cost of subject project: $35,000,000

(6) Project Description: Please provide no more than two pages of narrative addressing the following topics.

a) **Contributing to a City Council Goals**
Traffic Mitigation, Affordable Housing; Green Construction; Decreased Carbon Emissions; Involved Citizenry; Economic Diversity; Thriving Mountain Community; Arts & Culture; Preserving and Enhancing the Natural Environment: The Homestake Affordable Housing Development

will help advance many of the City Councils' goals. The project is looking to deliver 100 affordable units at an affordability level of 60% of the Area Median Income (AMI). This will obviously help to further affordable housing in Park City. Additionally, affordable housing, by nature, helps to address the issue of a thriving mountain community by helping to provide much-needed housing to the local workforce and adding diversity to the community. In addition, based on the project's location and the amenities designed to promote alternative modes of transportation, the project will help reduce traffic and carbon emissions by providing housing for people who will no longer need to drive into town to work.

b) **Description of the Public Benefit:** Affordable housing helps the community in a variety of different ways. First, it provides homes for the local workforce. This workforce helps keep the local businesses running and feeds our economy. Affordable Housing also helps to create a more vibrant and diverse community.

c) **Demonstrated need for a Waiver:** Fee waivers help to increase the overall affordability of the project. By waiving fees, the project's total cost will be reduced, allowing lower rents to be charged to the tenants. In addition, the City does not have a ongoing funding source for housing so there is currently only a set amount of funds available to create new units. Our intent is to stretch these limited funds to maximize the number of units created.

(7) Please attached the following documents:

a) Description of the organization, institution or business entity, how long in business, accomplishments to date, key personnel in organizational leadership. (Information may include partner entities that support or share in the mission of the applicant organization.)

b) Organizational governing documents such as business license, by-laws, and/or incorporation documents.

c) Financial information for your organization including current budget, 2 years of financial statements such as Balance Sheet, Income Statement, Statement of Financial Position, Activity Statement, etc. or include Independent Auditors' Reports.

Signed: *Jason Glidden* – Housing Development Manager **Date:** September 6, 2022

Permit Type:	Commercial- New	VB
Main Floor Sq. Ft:		R-3
Second Floor Sq. Ft:		R-3
Basement Sq. Ft:		R-3
Unfinished Basement:		
Patio Sq. Ft:		U
Garage Sq. Ft:		U
Other Sq. Ft:		R-3
Number of Units:		
Lot Footage:		
Fire Line Size:		
Water Line Size:		
Total Valuation	$0.00	

PERMIT FEE ESTIMATE

Park City
445 Marsac Ave
Park City, UT 84060
(435) 615-5100

Building Fee:	$	285,600.00
Plan Check Fee:	$	185,640.00
Parks, Trails, Open Space Impact Fee:	$	584,269.35
Public Safety Impact Fee:	$	80,118.71
Roadway Facilities Impact Fee:	$	95,002.00
Water Meter Fee:	$	2,910.96
State Fee:	$	3,162.96
Electrical Fee:	$	14,368.75
Outdoor Water Impact Fee:	$	38,204.98
Indoor Water Impact Fee (# of units):	$	518,854.16
L.O.D. Trust & Agency:	$	0.00
Mechanical Fee:	$	8,163.75
Plumbing Fee:	$	8,163.75
Plan Check Totals (65% of Permit Fees):	$	185,640.00
Permit Fee Subtotal:	$	316,296.25
TOTAL:	$	1,824,459.37

Date: 12/01/2022

Council Agenda Item Report

Meeting Date: July 13, 2023
Submitted by: Michelle Kellogg
Submitting Department: Sustainability
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Adopt Resolution 13-2023, a Resolution Adopting Park City's Community Wildfire Risk Assessment
(A) Public Input (B) Action

Suggested Action:

Attachments:
Community Wildfire Risk Assessment Staff Report
Exhibit A: Community Wildfire Risk Assessment Resolution
Exhibit B: Community Wildfire Risk Assessment Final Report June 2023

City Council Staff Report

Subject: Community Wildfire Risk Assessment
Author: Heinrich Deters- Trails & Open Space Manager
Department: Sustainability
Date: July 13, 2023
Type of Item: Administrative

Recommendation

The Trails & Open Space Department and the Community Wildfire Risk Assessment (CWRA) consultant team will summarize the process and findings from the year-long planning effort. Council should review, discuss and consider approving a resolution (Exhibit A) adopting the final report (Exhibit B).

Background

In May of 2021, Park City adopted the Community Wildfire Preparedness Plan which serves as the baseline wildfire planning instrument for the Park City Community and identifies 'next steps' in planning and implementing wildfire mitigation efforts. The Community Wildfire Risk Assessment provides the 'action plan' in which the Park City Community can identify and prioritize mitigation projects. The assessment further provides an essential basis for future grant opportunities.

The Trails & Open Space Manager presented Community Wildfire Risk Assessment Plan concept to the Council and the community at the September 2021 and February 2022 Council Retreats.

On April 28, 2022, City Council approved a contract with Alpine Forestry to produce the CWRA.

Analysis

The CWRA provides the framework to achieve the following goals:

- **Resource Identification:** Provide significant data collection, ground proofing, and mapping of 'High-Value Resources and Assets' (HVRA) within the project area;
- **Prioritized Mitigation Efforts:** Analyze fire behavior within the project area and identify high-risk locations prioritized for planning and mitigation;
- **Federal and State Grant Support:** Provide baseline planning information for future State and Federal grant applications; and
- **Community Engagement and Information:** Provide wildfire-related

information, awareness, and best practices for HOAs and residents.

CWRA Public Outreach
The CWRA utilized several methods to engage the community throughout the year-long planning process. We created a project website to establish the goals and intent. The website also provided a portal for survey information and current mitigation projects. The project established a technical stakeholders committee, which assisted in documenting HVRAs and reviewing the final report. The committee included the following partners:

- Deer Valley and Vail Resorts
- Utah Open Lands and Summit Land Conservancy
- Mountain Trails Foundation
- A Representative from the Home Insurance Industry
- Rocky Mountain Power & Dominion Energy
- Summit and Wasatch County
- Park City Fire District and the Summit County Fire Warden
- Utah Forestry Fire and State Lands
- Snyderville Basin Special Recreation District
- Extell Development
- Swaner Nature Preserve

Community Survey
A community survey was developed and advertised from September through October 2022. The survey received 409 responses and over 300 comments. A survey summary will be presented to Council at the July 13th meeting. Key findings include:

- 96% of respondents believe the community is at risk of a wildfire, and impacts would be economically significant on the region, and 94% believe a wildfire would be catastrophic for our resort economy.
- 85% expressed moderate to high levels of concern about the impacts of a wildfire on water quality. In comparison, 89% expressed a high level of concern about the effects of wildfire smoke on air quality.
- Residents strongly supported the idea that each landowner was responsible for mitigation efforts and that local government was in a position to enforce associated ordinances.
- Residents preferred an in-person review or assessment of their wildfire risks and what to do about them. They were supportive of other educational or information programs and opportunities.

Public Open Houses
The project hosted three public open houses, July 20, 2022, August 18, 2022, and June 27, 2023. We collected public input on the final draft via the project website from June 27-July 10th. We also presented the final report to the Forestry Board on July 6 and the Planning Commission on July 12.

Department Review

This report has been reviewed by City Manager, Sustainability, and Legal Departments.

Funding Source

Funding is not being requested as part of this report.

Resolution 13-2023

A RESOLUTION ADOPTING PARK CITY'S COMMUNITY WILDFIRE RISK ASSESSMENT

WHEREAS, the Park City Council recognizes the importance of addressing critical issues that impact our community's well-being and safety; and

WHEREAS, Park City is entirely located within the Wildland Urban Interface (WUI), which is the area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels; and

WHEREAS, human activities were responsible for 89% of wildfires nationwide in 2022, resulting in 61,429 fires and 3,370,160 acres burned, as reported by the National Interagency Fire Center; and

WHEREAS, the 2021 Hazard Mitigation Plan for Wasatch, Utah, and Summit Counties identified wildfire as the most likely natural catastrophe to impact the study area; and

WHEREAS, a significant wildfire in Park City could cause severe and long-lasting physical and economic devastation; and

WHEREAS, the Community Wildfire Risk Assessment (CWRA) builds upon existing planning efforts and designations, such as the Community Wildfire Preparedness Plan (CWPP) and the Firewise Community Designation, incorporating data collection, stakeholder input, and national standards to create a practical roadmap; and

WHEREAS, preventing wildfires requires collective action, including resilient landscape planning, local ordinances, defensible spaces, grant applications, and community involvement.

NOW, THEREFORE, BE IT RESOLVED by the Park City Council that the Community Wildfire Risk Assessment, attached as exhibit A, is adopted as a planning and prioritization tool to foster community engagement and reduce the likelihood and impact of wildfires.

PASSED AND ADOPTED this 13th day of July, 2023.

PARK CITY MUNICIPAL CORPORATION

_____

Nann Worel, Mayor

Attest:

_____
Michelle Kellogg, City Recorder

Approved as to form:

_____
City Attorney's Office

June 2023

Park City Municipal Corporation

Community Wildfire Risk Assessment

Presented By

Alpine Forestry

Blue Mountain Environmental Consulting

The Ember Alliance

Sageland Collaborative

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1.0 Introduction

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1.1 Introduction

Communities in the wildland-urban interface (WUI) are increasingly vulnerable to wildfire as development expands further into surrounding natural areas. The desire to live on nature's doorstep draws people to places like Park City, Utah. Increasing numbers of people living in a natural habitat can present real challenges in mitigating the effects from natural disasters. In the case of wildfires across the nation, wildlands are burning more intensely, endangering lives, destroying homes and damaging valuable ecosystems that support wildlife and water resources.

It is not all bad news, however. Local officials from all levels of government, residents, and stakeholders can address this risk with a nationally recognized framework designed to help protect communities and the natural environment. It is through understanding and planning for the risks, that people can safely live, work, and play among this scenic environment.

To meet this challenge, the Park City Municipal Corporation (PCMC) set out to determine how wildfire could affect Park City. The Community Wildfire Risk Assessment (CWRA) helps us better understand the effects of wildfire, and plan a way forward to reduce some of its potential impacts.

The CWRA combines analysis of the community and environment to determine specific risk factors for the Park City Area. Ultimately, this helped produce specific recommendations to address the inherent risks of wildfire

Figure 1-0-1. Landowners work together to clear logs and branches from a tree thinning meant to reduce threat to a nearby home

ABBREVIATIONS

CWRA

Community Wildfire Risk Assessment

HVRA

High Value Resources and Assets

PCFPD

Park City Fire Protection District

PCMC

Park City Municipal Corporation

QWRA

Quantitative Wildfire Risk Assessment

WUI

Wildland Urban Interface

How did we get here?

The Human Influence and Expansion of Wildland-Urban Interface (WUI)

Park City is situated in a diverse landscape where its urban area is nestled against the Wasatch Mountains. The town was built here after thousands of years of use and management by the Shoshone and Ute Native American tribes. Fires were allowed to burn naturally and benefited the Native Americans through increased hunting and foraging and travel corridors. In the 19th century, settlers moved to the area for the rich mining opportunities. This eventually gave way to tourism in the mid to late 20th century.

Recreation is boundless with summer and wintertime activities drawing in more people each year. Due to its popularity and scenic setting, the urban areas have expanded across the landscape. The topography around Park City varies from gentle to steep terrain where a mixture of low to high density housing has been built within canyons and along ridgetops. Ski resort infrastructure spans the slopes around town. A large amount of this urban growth occurred in the last 30 years. This has spurred the preservation of open space for recreation and preservation purposes. Along with this, a need to manage these lands for fire protection has arisen.

A high percentage of wildfires in the western region of the US involve homes, businesses, and critical services (e.g. power lines). With a significant population, and a large proportion of landscape in the wildland-urban interface (WUI) intermix, even small wildfires can threaten structures and increase the risk and complexity for firefighters (National Strategy). Not only are fires in the WUI harder to control for firefighters, but there are more ignitions and letting natural, beneficial fires burn becomes impossible (Radeloff et al. 2018).

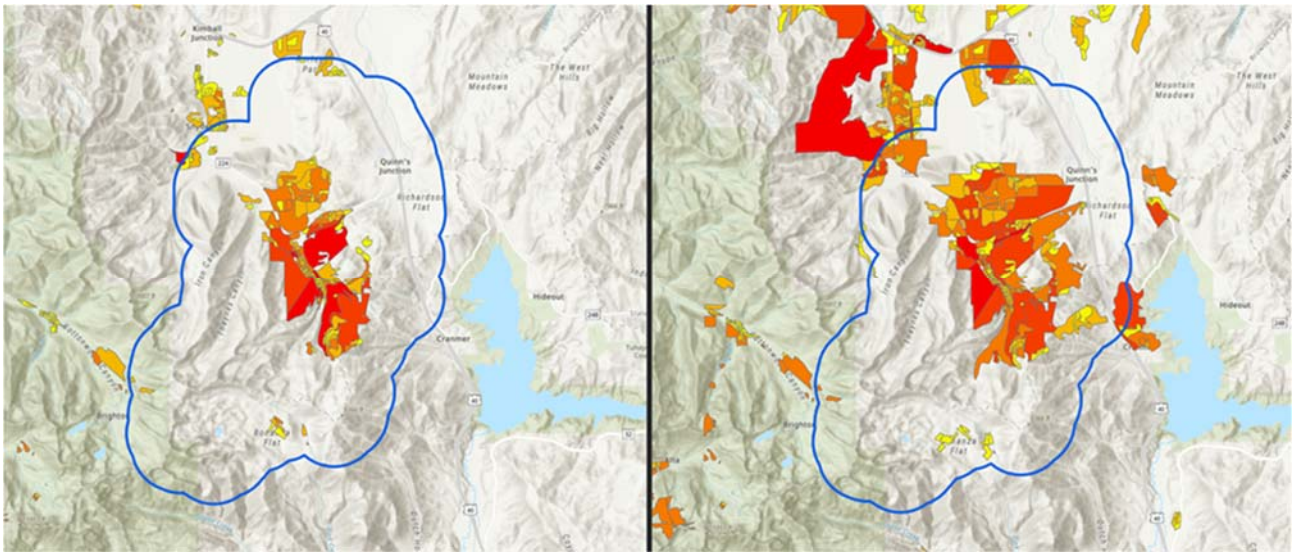

Figure 1-0-2. Park City's wildland-urban interface has expanded over 6,000 acres from 1990 (left) to 2020 (right).

Using data produced by Radeloff et al. 2022, the WUI within the risk assessment boundary (the blue line on the map) has increased by almost 6,000 acres during the period of 1990 to 2020. The 2022 Pre-Disaster Mitigation Plan projects that Summit County population growth will exceed another 20,000 people by 2050, many of which may choose to live in or near Park City. This information follows the national trend of more people choosing to live in the wildland-urban interface in the future.

Changes to Forests, Shrubs and Grassland Ecosystems

Many different types of vegetation surround Park City. Similar to other mountain towns in the western U.S., human use and development has changed forests. The resistance (the ability to resist or avoid change) and resilience (the ability to bounce back from change) of these ecosystems have adapted in a relatively small amount of time. The introduction of non-native species, such as cheatgrass, have increased the amount of damage from fire to sagebrush. Homes and recreation (e.g., trails and ski runs) fragment forests, shrub lands and grasses.

In the case of forests around Park City, past management from grazing, mining and timber removal has changed the types of trees and their density. This has resulted in a smaller average tree size as many large trees were cut down in the past. These practices, combined with a century of wildfire suppression, allowed surface fuels to build up in the form of both living and dead trees and shrubs in denser conditions.

The removal of natural fire from the landscape has led to the growth of small conifers under aspen, changing the way aspen and fire interact. In the past, fire acted as a natural method for thinning forests or removing them entirely (also known as a “stand-replacing” or “high-severity” fire). Some of the vegetation types around Park City naturally burned at high intensities with a longer time between fires. This was especially true in portions of conifer forests and some aspen groves. Unfortunately, allowing this full range of natural fire severity is now impossible with the increase in the wildland-urban interface and recreational use of the area. (The National Strategy, Fire Behavior Report, Treasure Hill Mgmt Plan).

The widespread changes to these forests have increased their susceptibility to insects and disease. Many of the insects are native but are now causing more extensive tree mortality than what was seen in the past (The National Strategy, Treasure Hill Management Plan, Fire Behavior Report, Implementation Report).

Shrub and grass vegetation types have experienced an increase in fire frequency, contributing to a rise in invasive species such as cheatgrass. This has further altered fire regimes and led to other ecosystem impacts (The National Strategy). These areas may still have an impact on nearby forests by carrying fire upslope into the trees. Declines in sagebrush due to increasing fire frequency means less forage for wildlife, a reduction in water holding capacity, and an overall reduction in biodiversity among other concerns (USU Extension Services, 2014).

What does all of this mean for our community?

While it is known that fires benefit ecosystems in their natural regimes, wildfires today are often more threatening than beneficial to communities. Impacts to communities and ecosystems include:

- threats to human health, safety, and infrastructure
- increased erosion potential,
- changes to vegetation,

- impacts to wildlife habitat,
- degradation of water quality and supply
- cost of suppressing and cleaning up after wildfires

The cost to a community to react to and recover from a wildfire can be significant. Revenue is lost as business is interrupted and portions of the population lose their livelihoods. It takes time, money and materials to rebuild as shown in other places (Mulholland, 2022; Senz, 2021). The Congressional Budget Office cited multiple studies that range from 30 million to hundreds of millions of dollars to rebuild post wildfire. These costs include insurance payments, federal assistance, or personal funding (Congressional Budget Office).

Multiple fires in the region and around Park City destroyed hundreds of structures and burned over 200,000 acres in recent years (Fire and Fuels Report, Sediment Delivery). Fire suppression costs have skyrocketed over time. The most recent data from the Parley's Canyon fire in 2022 indicates that it cost three million dollars to suppress a 541-acre fire (Fire Behavior Report).

Figure 1-0-3. Fires not only threaten human communities but also wildlife habitat and other resources.

There are other serious indirect costs associated with wildfire to water supply, wildlife habitat, and human health.

Water resources for Park City and nearby communities rely on a large portion of this area for fresh, safe drinking water. Hundreds of millions of dollars have been spent in other communities on repairing damaged water supplies and rebuilding infrastructure from fire damage and post-fire debris flows (Sediment Report).

Wildlife habitat surrounds the town and other human infrastructure (homes, businesses, hospitals, schools, power lines, resorts, places for recreation, etc.). Important mammal, bird, fish, and amphibian species make this area their home. While fire can have a positive impact on habitat, many fires today threaten it. For example, patchy fires may create foraging habitat for ungulates (e.g., deer, moose). On the other hand, the loss of large trees during a severe fire can reduce available nesting habitat for certain types of birds.

Smoke from wildfires often emit a significant amount of pollutants. This can impact all people during a wildfire event, but is often more problematic for people with underlying health conditions. Steps can be taken to reduce this impact to all of us, especially our most vulnerable populations.

Park City faces many challenges in the event of a wildfire. There are numerous resources, assets, and people potentially at risk. However, there are also proven strategies to proactively plan for and prepare the city and surrounding landscape should a fire occur.

What can we do about the threat of wildfires?

Wildfires may cause unwanted effects to the things people care about, also known as “values.” As such, it is critical to identify where fires are most likely to be the most intense, and how they may spread across a community. Information from past fire incidents and modeling programs can help explore these unknowns and identify what “values” are threatened. Once this is understood, steps can be taken to protect threatened values from wildfire using best available science and active community education and engagement.

Listed below are the individual CWRA reports with their associated goals and objectives that, when combined, provide a wider view of potential wildfire impacts to Park City. These reports describe pre-fire and post-fire mitigation strategies to prepare the city for an unplanned fire event.

1.2 How to Use This Document

This document includes sections that give an overview of areas of particular risk due to wildfires, and includes an Executive Summary, Background, Methods, Findings and Recommendations. Use The Table of Contents hyperlinks to navigate to areas that you find of particular interest. Information is presented at a broad level and not necessarily applicable at the smallest scale.

Below is a brief overview of sections and their information.

Resilient Landscapes – the potential effects of wildfire to the human environment and natural resources in and around Park City.

- Avalanche Terrain Assessment
- Post-Fire Erosion
- Stream Conditions

Fire-Adapted Communities – knowledge and perceived risk of wildfire and its impact to the Park City Community.

- Community Survey Results

Suppression Response – existing resources and their ability to respond in the event of a wildfire.

- Suppression Response Summary

Wildfire Risk Assessment – prioritizing wildfire risk in the project area

- Quantitative Wildfire Risk Assessment Process

Planning and Resources – Action steps to be taken to lessen risk in the community.

- Implementation Planning
- Implementation Guidelines

Appendices

Avalanche Terrain Assessment

Avalanches are slides of snow, rock, ice and soil that naturally occur in the mountains. However, loss of trees and vegetation can affect how often and where they occur. The goal of this report was to determine where wildfire, or removal of trees and vegetation, would likely influence avalanche activity around the community.

The objectives included:

1. Mapping locations and the extent of potential avalanche release areas (PRAs) and avalanche paths (hazard areas) around the project area.
2. Incorporating potential release areas into the Quantitative Wildfire Risk Assessment (QWRA) to understand the additional risk to the community following a wildfire.
3. Identifying areas that would need further analysis prior to forest management activities and post wildfire.

Figure 1-0-4. The force of an avalanche carrys snow and other debris, damaging anything in its path. Credit: Sawtooth Avalanche Center.

Post-Fire Sediment Delivery

The threat of wildfire does not end once the fire is out. The primary goal of the sediment delivery report is to understand the likelihood of flooding and erosion after a fire and where it may occur.

The objectives included:

1. Determining the impacts caused by flooding and erosion to residents, managers, and emergency responders.
2. Identifying the most at-risk areas and values within the project area.
3. Prioritizing and recommending locations that would benefit from proactive fuel treatments to lessen flooding or erosion impacts.

Figure 1-0-5. The effects of fire may continue long after the flames are extinguished.

Stream Health Condition

The streams, rivers, and wetlands in our watersheds are some of our most prized assets because they supply water for drinking, recreation and wildlife. The primary goal is understanding which streams and rivers are at risk for high-intensity wildfire and impacts.

The objectives included:

1. Locating areas of greatest importance (Highly valued resources and assets) to include in the QWRA,
2. Determining which water resources and habitats may benefit from mitigation.
3. Recommending responsible implementation strategies to prevent damage during wildfire.

Figure 1-0-6. East Canyon Creek.

Community Survey

The community survey provided insight and understanding of residents' views on wildfire risk and mitigation strategies. Community engagement and education empowers residents, stakeholders, and city managers alike to thoroughly plan for wildfire.

The objectives of the survey included:

1. Assessing knowledge of wildfire preparedness among residents.
2. Identifying the challenges and opportunities for mitigating hazards both around individual homes and across the WUI.
3. Determining the level of resident preparedness in the event of an evacuation.
4. Providing recommendations for further educational resources, materials, and outreach.

Figure 1-0-7. Park City Fire Department firefighters.

Wildfire Suppression Response

Safe and effective wildfire response is one of the central goals of the nation-wide wildfire strategy. Local fire departments have a big role in ensuring the response to a wildfire follows this approach.

The objectives included:

1. Assessing and summarizing the ability of the Park City Fire Protection District (PCFPD) to respond to a wildfire.
2. Developing recommendations based on industry standards and lessons learned from other fire districts in the western United States.

Quantitative Wildfire Risk Assessment (QWRA)

Figure 1-0-8. A surface fire burns through the understory of a forest.

Fire Behavior

City managers need a proactive plan for how fire may impact the city to strengthen their emergency response strategies. The primary goal of the fire behavior report was to understand how fire can ignite and move through the area.

The objectives included:

1. Analyzing and modeling where fires may ignite, how they spread, and the potential impacts to resources.
2. Rating which areas have the lowest to highest risk of fire based on model simulations.
3. Using the results to guide the Quantitative Wildland Risk Assessment (QWRA).

Fire has two sides: it can be a negative force on some things while positive for others. The QWRA helps us better understand how fire either threatens or benefits community assets and natural resources within the project area.

The objectives included:

1. Identifying important community features, also known as “Highly Valued Resources and Assets.” These typically provide essential services or hold a high intrinsic value, such as critical infrastructure and natural resources.
2. Map and rank High Value Resource or Assets (HVRA) so city managers may plan, prioritize, and implement effective wildfire mitigation strategies across a large area.
3. Determine the extent of whether fire either positively or negatively impacts or has a neutral impact on highly valued resources and assets (HVRAs) in the community.
4. Use this information to help prioritize fuel treatments.

Implementation Planning and Guidelines

The National Strategy calls for the use of fuel treatments to reduce flammable vegetation around communities. Doing so may lower fire intensity and subsequently the loss or damage of homes and businesses. The goal is to prioritize PCMC-owned lands where immediate mitigation is needed, and identify other areas where treatments could be considered in the future.

The objectives included:

1. Prioritizing areas for treatment on Park City-owned land to reduce risk in the community and surrounding area.
2. Developing maps for land use planners, fire personnel, emergency managers, resorts and homeowner associations showing areas of importance.

3. Identifying wildfire mitigation strategies and industry best practices for community members to address fire risk across multiple vegetation types common to Park City.
4. Listing potential grant opportunities to fund wildfire mitigation projects.

Figure 1-0-9. Landscapes showing before and after fuel reduction treatment.

Other Resources - Education and Project Communications

This risk assessment also includes other valuable educational information and communication resources.

A community that has the most current wildfire risk information in their area is more likely to be prepared in an emergency. Identifying knowledge gaps within the community, based on community meetings and the community survey, help inform PCMC on how to target future outreach and education.

The objective was to:

1. Provide links to information from subject matter experts to help citizens better prepare for wildfire.

StoryMap

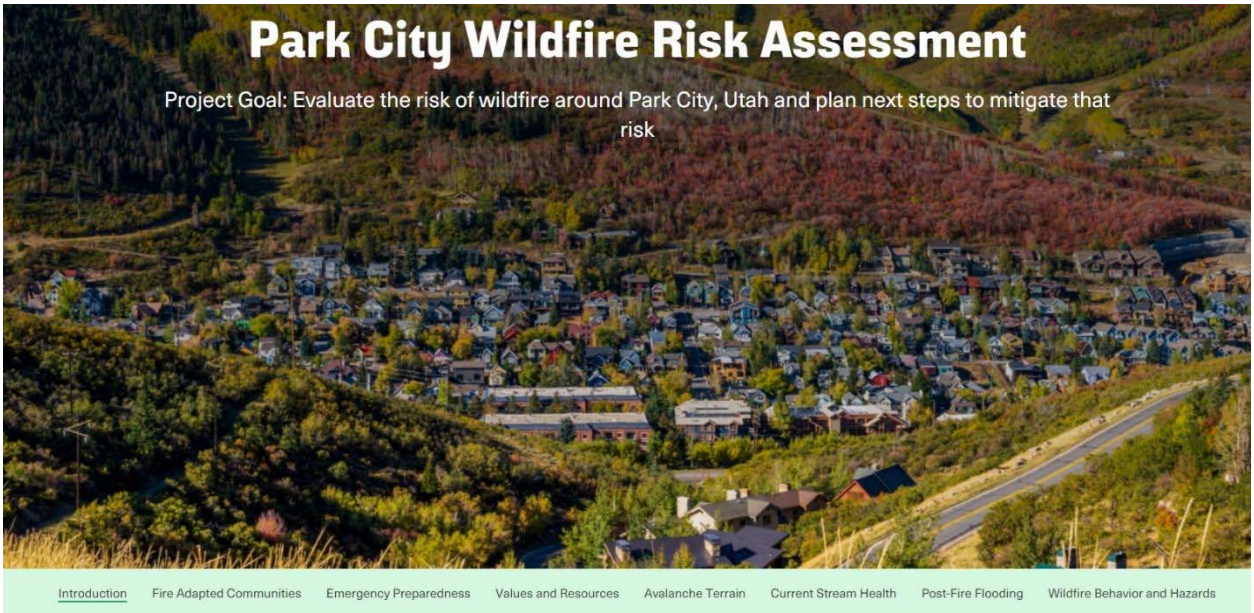

Figure 1-0-10. The CWRA StoryMap provides an overview of the project for anyone to view online.

This web-based resource provides a visual story of project development and findings for the public to access.

The objectives included:

2. Creating a web page that provides updates and key findings during project phases.
3. Developing an understandable and engaging interactive tool where the public can interact with, and better understand the project.
4. Providing an educational resource that could be expanded, updated, and improved through all stages of the project.

1.3 National Cohesive Wildland Fire Strategy

How do we determine risk?

There is always some level of wildfire risk when communities are located within surrounding wildlands. This wildfire risk assessment follows the framework provided by the National Cohesive Wildland Fire Management Strategy (The National Strategy) to highlight ways in which local government and residents can make their community safer.

The National Strategy draws upon decades of research and lessons learned from wildfire incidents and outcomes across the USA. Developed by government and non-government organizations, it recognizes how wildfire activity is changing over time and provides insight on how communities can prepare themselves. It describes a variety of mitigation strategies developed from reputable scientific findings, many of which have been tested by wildfires.

The National Strategy encourages collaboration among all stakeholders across all landscapes, using best science, to make meaningful progress towards three goals:

1. Creating Resilient Landscapes
2. Creating Fire Adapted Communities
3. Promoting a Safe, Effective, and Risk-based Wildfire Response.

Congress saw this need due to the lack of a comprehensive plan to address the threat of fire throughout the nation. The vision of this strategy is to:

"Safely and effectively extinguish fire when needed; use fire where allowable; manage our natural resources; and collectively, learn to live with wildland fire."

Resilient Landscapes

Summit County, Utah, is listed as a high priority for broad scale fuels management as well as for community planning and coordination in the National Strategy. Communities with an increased threat of wildfires must manage the forest and vegetation around them. This is particularly important for communities located in the WUI with fire-adapted native vegetation. To be effective, fuel treatments must reduce wildfire intensities under the conditions most likely to result in destruction.

The three primary means of managing fuels are:

1. Prescribed fire
2. Managing wildfire for ecological purposes and resource objectives
3. Non-fire treatments involving mechanical (e.g. thinning trees), biological (e.g. grazing), or chemical methods (e.g. use of herbicides)

Treatments can be coordinated by themselves or in combination, depending on management objectives and resource availability.

Fire-Adapted Communities

Community wildfire risk is a combination of the frequency and extent of wildfires and distribution and density of homes and other structures. Another risk factor is the susceptibility of certain people ("social groups") that may experience a higher probability of death or impacts to health, financial loss, or disruption of livelihood (FEMA). There are many programs emphasizing the importance of reducing combustible materials within the vicinity of buildings. Reducing the likelihood fire will burn next to vegetation is also one of the best ways to reduce losses. Residents and business owners can take many actions, but it is the collective action of the community as a whole that can be most effective.

The wildfire risk mapping for Summit County demonstrates a need for combining individual defensible space actions with overall community planning. Addressing these two areas is essential to reducing the loss of buildings and infrastructure that provide crucial services to the local population.

Opportunities:

1. Updating building codes
2. Reducing the chance of fire starting in the first place
3. Continued education and resources to help community members plan for a wildfire.

Safe, Effective, Risk-based Wildfire Response

Coordinating a safe and effective response to wildfire is essential. Fire department response is the last line of defense and action after a fire has started. The organized response of emergency responders is a complex, nationwide issue that is constantly being adapted to meet the challenges of each incident.

To prepare, communities are encouraged to consider:

1. Preparing for large, long-duration wildfire
2. Protecting structures and targeting ignition prevention

Park City is considered to be at "very high risk" of wildfire, higher than 93% of communities in the US (wildfirerisk.org). There is a need and an opportunity to explore tactics used in suppression and containment of fires in this area. Effective action could lead to enhanced ecological benefits, reduced firefighting costs, and perhaps less direct risk to firefighters.

1.4 Project Area

This Community Wildfire Risk Assessment (CWRA) covers approximately 33,000 acres around the Park City urban core and Bonanza Flat. The project area is located in western Summit County, much of which falls within the response area of the Park City Fire Department.

The project area covers the lands around what is called the "Park City Urban Core." Models for fire behavior and spread have not been fully developed for urban areas, but the assessment does use the most up-to-date available information to determine fire behavior in natural vegetation types and WUI surrounding the city.

The primary purpose of this risk assessment is to determine how the following either affect, or are affected by, wildfire within this area:

- Critical city services
- Social, economic, and ecological values
- Post-fire sediment delivery
- Avalanche hazards
- Emergency access, response, and human safety

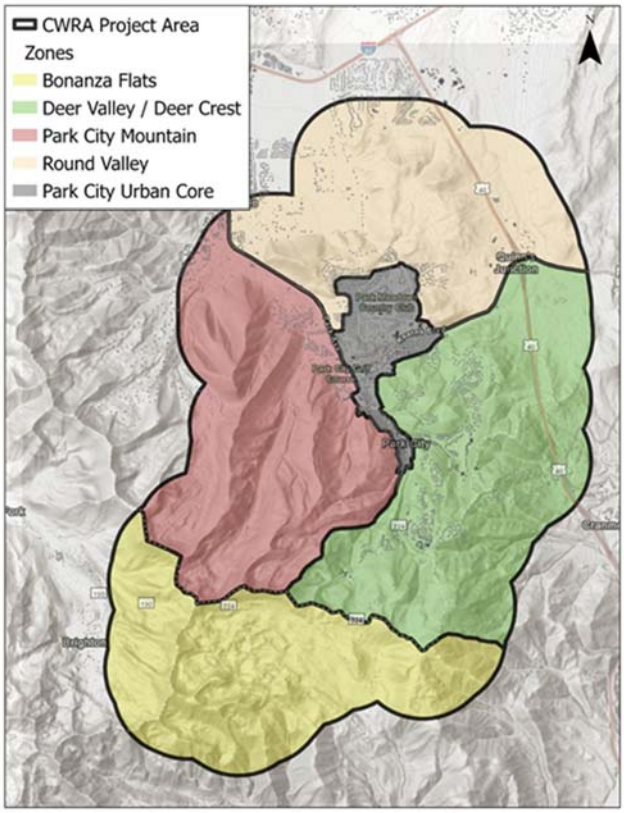

Figure 1-0-11. The CWRA project area with project zones identified.

The report also provides information about fuel treatments, a review of wildfire suppression and response and educational resources.

1.5 Local Climate

The Park City area tends to have hot and dry summers with minimal precipitation. There can be occasional rain from monsoons, but this moisture quickly evaporates due to the high temperatures and low humidity. The winter months bring most of the area's precipitation in the form of snow. Flooding can be a concern in the months of May and June due to snow melt.

Like many mountainous areas of the west, climate change is causing average low temperatures to elevate, which increases wildfire risk. Drought has been a concern in this area, as well. The loss of snowfall combined with continuing drought will contribute to increased wildfire risk over the next decade and for years to come.

Figure 1-0-12. Park City depends on snowfall for many reasons, notably recreation and drinking water. (Photo of Park City Resort).

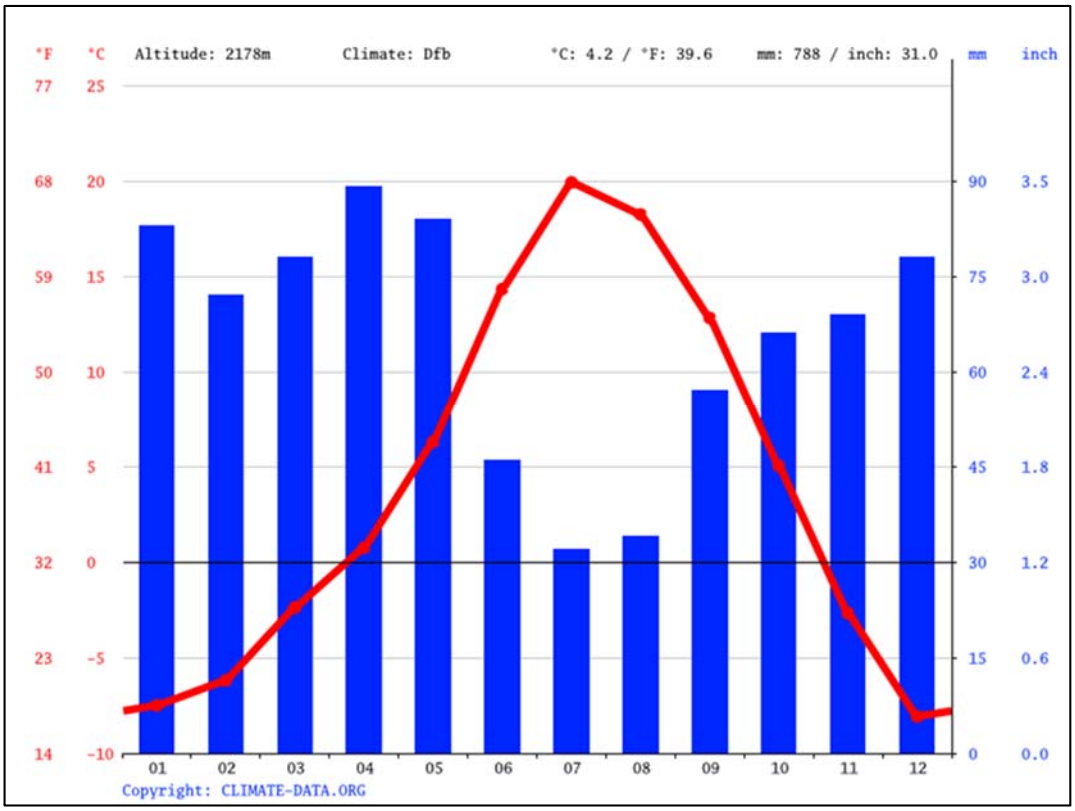

Figure 1-0-13. Average temperature and precipitation for Park City, Utah.

Of special note is how the climate may be impacted by changes to water levels in the Great Salt Lake. Snowfall in the Wasatch is enhanced by “lake effect” snow. While the southern Wasatch around Big and Little Cottonwood Canyons receive the greatest impact, it does enhance snowfall in the Park City area as well. Researchers at Brigham Young University recently released a report showing the lake at 37 percent of its former volume. Drought brought on by climate change and overconsumption is contributing to rapid declines in the lake level. According to this report drafted by more than 30 scientists from 11 universities, unless drastic action is taken to cut the amount of water used by the state, the lake will go completely dry within five years (Kaplan & Dennis, 2023).

1.6 Project Team

The Consultants who worked on this project and produced this report consist of four organizations with extensive expertise and experience in wildfire analysis, ecological sciences and forestry. They include the following organizations.

Alpine Forestry is uniquely situated to address the threat facing the Northern Utah mountain community. They possess more than 100 years of experience specializing in fire and emergency response, forestry and GIS mapping. Their detailed, systematic approach to their work provides communities and homeowners with relevant recommendations and quality results. Their mission is to assist homeowners and community members with producing a healthier forest while mitigating the risks of wildfire. Alpine played a critical role in fire behavior modeling and avalanche risk with the CWRA.

The Alpine forestry staff includes:

- David Telian – Co-owner, Fire and Fuels Specialist, Suppression Response and Implementation Planning
- Matt Castellon – Co-owner, Fire and Fuels Specialist, Suppression Response and Implementation Planning
- Reba Broyles – Logistics and Technical Review
- Robby Young – Avalanche Specialist and GIS analyst, Avalanche Terrain Assessment
- Alan Spadafora -- Operations Manager and GIS analyst, Implementation Planning
- Katharine Napier-Janz – Forester, Implementation Planning
- Brad Washa – Consulting Fire and Fuels Specialist, Fire Behavior Report, Quantitative Wildfire Risk Assessment

Blue Mountain Environmental Consulting (BMEC) provides services in resource management, conservation planning and wildfire mitigation. Their goal is to achieve project outcomes in an efficient and responsible manner by providing scientific expertise within a regulatory framework. They seek to help property owners and managers achieve their goals and outcomes while sustaining the environment. BMEC coordinated most of the planning for the final report by leading the communications and outreach for the CWRA.

The BMEC staff working on this project includes:

- Matt Tobler – Director, Planning and Report Production
- Leslie Brodhead – Wildfire Mitigation Specialist, Community Engagement Lead
- Brett Haberstick – Wildfire Specialist, Suppression Response
- Amy Randell – Technical Writer, Report Production

The Ember Alliance (TEA) is a nonprofit dedicated to socially just fire management and community engagement that supports people, landscapes, and the planet. TEA consists of the Resilient Communities and Forests team and the Fire Operations Team. The TEA team has over 70 years of combined fire experience and wide-ranging knowledge and technical expertise, including wildfire pre-planning, fire behavior modeling, fire adapted communities, collaborative decision-making, outreach and education, design and implementation of fuel treatments, and forest ecology. TEA played an important role in coordinating impacts to post-fire landscapes, human health risks and community survey feedback.

The ETA staff who assisted include:

- Brianna Baker – Program Director, Project Coordinator
- Stacy Armbruster – Program Manager, Community Survey Coordinator
- Meg Matonis – Senior Wildfire Analyst, Post-fire landscapes
- Kenzie Hartt – Wildfire Analyst, StoryMap Coordinator

Sageland Collaborative is a non-profit organization that facilitates conservation in Utah of wildlife habitat and open lands. Their philosophy includes addressing obstacles to effective conservation through providing data based on science. They believe wildlife and its habitat can be conserved when data informs decision-making by stakeholders and other decision makers. Sageland provided critical data to the CWRA on stream side habitats.

The Sageland Collaborative staff includes:

- Janice Gardner – Conservation Ecologist, Stream Condition Surveys
- Rose Smith-Stream - Ecologist, Stream Condition Surveys

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2.0 Resilient Landscapes

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2.3 Stream Condition 101

2.1 Avalanche Terrain Assessment

Executive Summary

The identification of potential avalanche release areas is necessary to account for elevated or newly created avalanche hazard following wildfire or forest management activities. Avalanches and wildfire have a relationship within the forested and subalpine mountain environments; both have the ability to alter landscapes and cause forest fragmentation, where the occurrence of one natural disturbance may potentially alter the magnitude and frequency of the other (Bebi et al., 2009).

Forest structure can offer protection from avalanche release, both mechanically through anchoring plant stems and through localized thermodynamic influences on snowpack processes (Bebi et al., 2001), also known as a 'protective effect.' Forest fragmentation by fire has shown over recent history that it can increase the frequency and/or magnitude of avalanche events, in examples both studied (Germain & Hetu, 2005; Campbell et al., 2019) and observed. In communities that reside within the mountain environment where avalanches are possible, the introduction of new or additional avalanche hazard through forest fragmentation or destruction may prove to elevate the avalanche risk to adjacent infrastructure and to public safety. For this reason, the identification of potential avalanche hazard is an integral part of this Quantitative Wildfire Risk Assessment (QWRA).

Figure 2-0-1. An avalanche within the project area (Homelite - 2019).

Goals and objectives of this avalanche hazard indication assessment include:

1. Develop geospatial datasets that identify avalanche potential release areas (PRAs) and avalanche paths (hazard areas) for forest management and silvicultural planning.
2. Develop geospatial datasets of the release areas and hazard areas to trigger a hazard analysis if forest management activities are desired, or if a fire were to occur in the future.
3. Incorporate applicable PRAs into the QWRA that may introduce additional risk to the community in a post-fire setting.

In total, 249 active PRAs and their corresponding avalanche paths / hazard areas were identified within the PCMC project area (33,074 acres). An additional 208 PRAs were identified that possess some level of 'protective effect' from forest and vegetation composition. The areas are stored as geospatial data and displayed in the maps contained within this assessment. Where community habitation, infrastructure, or high-use recreation areas may be vulnerable to additional avalanche hazard in a post-fire setting, the corresponding PRAs were incorporated into the Highly Valued Resources or Assets (HVRA) datasets as inputs to the QWRA

Background

Wildfire risk assessments and fuels treatments have, historically, remained independent of avalanche hazard assessments within the United States. However, with continued and/or accelerated development in mountain communities in recent years, combined with the growing risks of wildfire associated with long-term drought conditions and climate change (USGCRP, 2018), it is important to view natural hazard management practices through a multi-hazard field of view. Avalanches, wildfire and forest-altering management practices all can alter forested landscapes, increase forest fragmentation and subsequently change the frequency and magnitude of other interacting natural hazards.

Figure 2-0-2. Aerial view of forest destruction and fragmentation resulting from frequent avalanche activity.

Interaction of avalanches and forest composition has garnered attention in research, most frequently regarding the risks to economic resource loss in the timber harvesting industry, as well as within the role of public safety as 'protection forest' management practices are being used as mitigation measures for mountain communities, most notably in the European Alps (Brang et al., 2006). Much of what has been studied and is widely accepted has been developed for these other purposes listed above; however, a foundational forest-avalanche interaction knowledgebase can be applied across forest management practices with a variety of desired project outcomes.

Figure 2-0-3. Post-fire wet slab avalanche that impacted an unoccupied home (Sawtooth Avalanche Center).

Structural Support of the Snowpack – Tree stems of adequate durability and arranged with sufficient stem densities may provide structural support against snow slab release within release areas. Durable tree stems also affect flow velocities and play a role in debris detrainment within tracks and runouts of active avalanche paths for small- and medium-sized avalanches, up to threshold impact pressures (Bartelt & Stockli, 2001). In addition, recently developed Avalanche Terrain Exposure Scale (ATES) methodologies have proposed forest categories based on both stem densities and spacing (Campbell & Gould, 2016). Following wildfire, stem densities may retain some of their protective effect on avalanche release; however, as stems decompose, the protective effect is lost over time prior to forest regeneration. For hazard indication mapping at a landscape scale, stem-density

data is difficult to quantify at the necessary resolution and is more easily incorporated into the hazard analysis phase of an assessment at the avalanche path/slope scale.

Canopy Cover - Criteria for 'protection-forests' used as mitigation methods to protect life and infrastructure are also determined by percentage of canopy cover, and criteria for protection have been proposed and implemented (Table 2-1). Where sufficient canopy cover is present, localized thermodynamics within and above the snowpack surface is affected by forests and their canopy cover. Sufficient canopy cover (%) results in less snow accumulation on the ground and a diminished ability to develop persistent weak snow grain types such as facets and surface hoar. For large-scale hazard indication mapping, canopy cover (%) is both quantifiable and easily obtained through remote sensing techniques. European protective forest management offers numerous correlative guidelines between canopy cover (%) and 'protective effect' for both total canopy cover for all tree species (TCCP) and for only evergreen species (WCCP) (Table 2-1).

Table 2-1. For all tree species, total canopy cover percentage (TCCP) and for evergreen species (WCCP) offering 'high' levels of protection according to NaiS European protective forest management guidelines (Frehner et al., 2005).

GUIDELINE	NAIS	SFP	GSM-N
Level of Protection	"high"	"high"	"high"
Slope	TCCP	TCCP	WCCP
≥30°	>50%	>50%	>50%
≥35°	>50%	>50%	>50%
≥40°	>50%	>50%	>70%

While stem and canopy criteria may be implemented in assessing a forest's protective efficacy against avalanching, the complex interactions between ecological condition, snowpack complexities and meteorological conditions will result in variability in the 'protective effect.' The datasets created within the scope of this project are primarily focused on PRAs, where the prevention and limitation of avalanche initiation (release) by vegetation and forest composition is the most efficient and important protective effect that forests provide against avalanche hazards.

Methods Overview

A generalized framework for assessing avalanche hazard is shown in Figure 2-0-4, in accordance with the Canadian Avalanche Association Avalanche Hazard Assessment Framework (CAA, 2016), with 'Hazard Identification' being performed for the PCMC QWRA. The following data sets and modeling processes were utilized to identify *potential release areas* and *avalanche paths*:

- Written and Oral Avalanche History
- Climatology
- Snowpack Analysis
- Modeling Process 1: Development of Potential Release Datasets
    - Terrain Modeling – Digital measurements of terrain parameters
    - Forest Canopy

        - Multi-Resolution Land Characteristics Consortium
        - Tree Canopy Cover (%)
        - Normalized Difference Vegetation Index
    - Ground Roughness / Vegetation Height
        - Landfire (EVH)
        - Vegetation Height (VHM)
- Modeling Process 2: Avalanche Hazard Area Indication
- Hazard Area Runout Modeling (TauDEM)
- Numerical Dynamic Modeling (RAMMS)

(For the PCMC QWRA project area, as in much of North America, historical avalanche records, dynamic model calibration and long-term documentation of snow and weather information is limited and presents challenges for high-confidence modeling of avalanche hazard when methodologies are used in isolation. However, with digital mapping techniques and the combination of the above methodologies avalanche hazard identification within the project area is possible at the regional scale (1:15,000).

Detailed methods are available here

Figure 2--0-4. Generalized framework for Avalanche Hazard Assessment (CAA, 2016).

Key Findings

All the geospatial datasets (shapefiles) identified within this hazard identification are intended to trigger a subsequent hazard analysis based upon the hazard assessment framework, Figure 2-0-4 (CAA, 2016), where forest health, fuel reduction or silvicultural activities are proposed. In addition, the datasets produced here within may provide further guidance or indication of need for an avalanche hazard assessment in a post-fire setting, if future fire were to occur within the project area. The datasets developed in this assessment are organized into the following four categories:

1. Potential Release Areas (Active) – PRAs that have been determined to be sufficient for avalanche release based on a digital and manual delineation outlined in the Methods Overview section. Many of these PRAs have been validated as 'active' based on observed and recorded avalanche occurrences and consultation with local avalanche professionals.
2. Potential Release Areas (Forest-Protected) – PRAs that meet slope and terrain curvature criteria but possess forest canopy cover >50%. Canopy cover is largely a result of conifer forest; however, some areas of mixed deciduous and conifer were considered to meet this criterion. While forest avalanching is possible, a significant reduction in frequency is notable (McClung, 2001; Schneebeli & Bebi, 2004).
3. Potential Release Areas (Roughness-Protected) – PRAs that meet slope and terrain curvature criteria but possess robust hardwood shrub ground cover at heights that, on average, exceed expected design release depths (drel). These areas are very infrequent or inactive avalanche release areas, that typically require anomalous or atypical snowpack conditions to allow for avalanche release.
4. Avalanche Hazard Areas – When PRAs were categorized as 'Active,' modeled track and runout areas were identified utilizing topographical runout and/or numerical runout modeling.

While the recommended outcome is the same for all four (4) categorical datasets; guidance and methodology for a subsequent avalanche hazard analysis may differ based on this initial categorization.

Potential Release Area Datasets

PRA datasets are displayed spatially in the Avalanche Hazard and Release Area Indication Maps. Naming criteria includes a location ID, PRA 'qualifier' and a unique numerical ID that matches the ID of its associated avalanche hazard area, if applicable. An alphabetical sub qualifier is used when more than one PRA are located within the same avalanche hazard area. For example, a forest-protected PRA with no associated avalanche hazard area will contain a location ID and a numerical ID (>250), i.e., THYNPRA312. An active PRA in a large avalanche hazard area containing multiple PRAs will contain all the naming criteria shown in Table 2-2 (i.e., SNKPRA30b).

Table 2-2. PRA naming workflow.

LOCATION ID		PRA	UNIQUE NUMERICAL ID	ALPHABETICAL ID*
Big Cottonwood Canyon	BCC	PRA	# (1-249) - Matching Associated Avalanche Hazard Area # (250-458) - Forest / Roughness Protected	a-z
Bonanza Flats	BNZ			
Caribou Basin	CAR			
Daly/Empire Canyon	DALY			
Deer Valley Resort	DV			
Iron Canyon	IRO			
Lavina Creek	LAV			
Mayflower Resort	MAY			
Ontario Canyon	ONT			
Park City Mountain Resort	PC			
Pine Creek	PIN			
Snake Creek	SNK			
Thaynes Canyon	THYN			
Silver Creek Corridor	SIL			
Drain Tunnel Creek	DRN			
White Pine Canyon	WP			

** Optional when >1 PRA lies within same Avalanche Hazard. Area.*

A complete tabular list of avalanche hazard areas and PRAs are included in Section 2.2.

Avalanche Hazard Area Indication

Avalanche hazard areas are displayed spatially in the Avalanche Hazard and Release Area Indication Maps and are provided naming criteria (Path ID) with a locational identifier and a unique numerical ID organized from west-east (ex. MAY225). Where a known avalanche path or area has a formal name, that name is used in place of the path ID in the maps. Named paths are also provided a unique path ID within the geospatial dataset attributes.

Table 2-3. Avalanche Hazard Area naming workflow.

LOCATION ID		UNIQUE NUMERICAL ID
Big Cottonwood Canyon	BCC	# (1-249)
Bonanza Flats	BNZ	
Caribou Basin	CAR	
Daly/Empire Canyon	DALY	
Deer Valley Resort	DV	
Iron Canyon	IRO	
Lavina Creek	LAV	
Mayflower Resort	MAY	
Ontario Canyon	ONT	
Park City Mountain Resort	PC	
Pine Creek	PIN	
Snake Creek	SNK	
Thaynes Canyon	THYN	
White Pine Canyon	WP	

Limitations and Uncertainty

Weather and Climate: Weather and climate, injecting uncertainty into any assessment by nature, are two primary factors affecting avalanche behavior. The effects of recent climate change on avalanches have been a topic of recent avalanche research (Bellaire et al., 2016; Eckert et al., 2013; Sinickas, 2016) and records from recent history show a shortening of winter seasons and a decrease in snowpack depths, particularly at lower elevations, with Park City particularly susceptible to early snowpack-related climatological change given its elevation (Steenberg, 2014). These trends are expected to continue and a change in avalanche behavior is anticipated. Whether this alters or eliminates avalanche hazard in lower-elevation areas of the project area is very difficult to project, and incorporation of anticipated climatological changes was not performed in this assessment.

Avalanche Hazard Mitigation Programs: The project area includes some or all of three ski resorts that actively perform avalanche mitigation activities as part of their operation. While information gathered from local avalanche mitigation activities was incorporated into this assessment, the identification of avalanche hazard areas was done as part of a project-wide systematic approach, and considerations of avalanche mitigation programs were omitted. Avalanche mitigation operations are typically only performed during a specific operational period, and as occurred during the COVID-19 shortened ski season of 2020, may be suspended during the winter season. Observed avalanche path extent, vegetation and trim line observations and other pertinent data for avalanche hazard identification may be altered due to the frequency of mitigation work performed and the assumed associated reduction in large-magnitude event frequencies.

Terrain: Numerous PRAs and avalanche hazard areas identified within the project area are unlikely or very infrequent producing release areas due to the ground roughness provided by hardwood shrub ecosystems and snow-supply limitations. In above-normal snowpack conditions these areas may become active as deep snowpacks smooth terrain and depths exceed vegetation height. Temporally, this may only occur over centuries. The changes in individual slope characteristics due to this winter snowpack coverage are difficult

to evaluate and inject uncertainty into this assessment and will continue in later phases of hazard analysis and evaluation, if performed.

Resolution: Given the scale, resolution and size criteria of the PRA dataset, small slopes were omitted from this analysis. Terrain traps, cutbanks and other small avalanche hazard areas may pose a risk to humans in extreme conditions and may have been omitted due to geographical scale and extent of this project.

Validation

Previous region-wide avalanche hazard mapping efforts have not been performed within the project area. Avalanche path identification has been performed as part of avalanche mitigation documentation within the operational footprints of the Park City ski areas. While consultations with local avalanche professionals have broadly supported PRA-detection efficacy, digital (pixel-scale) validation of the delineation methods is not possible; the ski areas within the project area do not have PRAs mapped in geospatial datasets. Qualitative validation of PRAs with these local experts was performed between June and August of 2022, and included avalanche technicians at Deer Valley, Park City and Brighton ski resorts. Formal names of avalanche paths (avalanche hazard areas) were also synchronized with local ski-area nomenclature based on these personal communications.

Outside of this project, validation of the auto-generative methodologies used in this assessment is ongoing as large-scale avalanche hazard mapping techniques are being continually refined across regions of North America, Europe and Asia.

Recommendations and Conclusion

Under the scope of this project, the potential for avalanche hazard is outlined utilizing authoritative digital resources, covering a large area (33,074ac) where field surveys would prove to be time-exhaustive and costly. The datasets produced will allow for more thoughtful and responsible forest management planning, all working towards the goal of building more fire-resilient communities while minimizing additional risk from interacting avalanche hazard. As part of the PCMC QWRA, avalanche hazard area and PRA geospatial datasets serve as an indication of potential hazard and are intended to trigger subsequent hazard analysis where desired forest management treatments and avalanche hazard/release areas spatially overlap. The same recommendation applies to the project area in a post-fire setting if wildfire were to occur; particularly where changes in avalanche behavior are anticipated near community values and resources.

Forest management activities and wildfire share similarities in how they may affect the forest-avalanche relationship. Further hazard analysis in the event of planned silvicultural treatments or wildfire should be performed at higher resolution, at the PRA/hazard area scale and should evaluate anticipated or observed changes to:

- PRA size resulting from deforestation or stem density reduction
- Anchoring stem density (by species) within a PRA
- Canopy cover (%) within a PRA
- Wind-loading index resulting from deforestation adjacent to PRAs
- Ground roughness provided by hardwood shrub ecosystems
- Forest conditions affecting flow regimes and detrainment potential in track and runout areas

- Dynamically simulated runout extent, flow heights, velocity and impact pressures prior to and following forest alteration (Campbell et al., 2019).

Methods Detail

Written and Oral Avalanche History

Historical avalanche events offer valuable information about individual avalanche paths that can be integrated into large-scale hazard indication mapping. Within the PCMC project area, recorded avalanche events and their spatial extent, if known, were used to validate the project-wide digital methodologies, validate snowpack and snow-supply calculations (particularly at low and mid elevations), and in some instances help refine avalanche hazard area extent based on known impacts to historical structures.

Figure 2-0-5. Written and oral avalanche history. Photo credit (Park City Historical Society and Museum).

Park City underwent rapid development in the late 1800s due to precious metal mining strikes, and because of town expansion and mining infrastructure development, much of the forest and vegetation was removed to accommodate construction and for burning firewood. Historical photos during this era are plentiful, all showing nearly bare hillsides around the historical district of Park City and up adjacent canyons (Empire, Ontario, Walker and Webster among others). Rapid growth, deforestation and a deficit of avalanche knowledge resulted in numerous buildings impacted and many lives lost during the early part of Park City's mining history. As a result, written records of avalanche events in the area are plentiful; however, reference to spatial extent is minimal and therefore PRA and path extent derived from historical records is only relevant for a small percentage of the avalanche paths within the project area. Additionally, widespread deforestation has made avalanche path delineation difficult to discern based on the forest characteristics typically found in avalanche hazard areas. Indicative stem densities, species diversity and historical tree damage records within old-growth stands have been altered by deforestation, masking many of the signals of historical avalanche occurrences that predate the mining-boom of the late 1800s.

Limited path information may be inferred by locating historical structures and sites that were impacted using a variety of resources including historical photography, Sanborn Insurance Maps (University of Utah, Marriott Library; 1889, 1900, 1907), US Census Records and Park Record newspaper archives (since 1880). A summary of notable events, some of which have validated refined Avalanche Hazard Area extent include:

Jan 1, 1884	Treasure Hill	Residence of T.A. Clark impacted on Woodside & 3rd Ave (now 5th). Citizens warned about cutting trees on Treasure Hill. (PRA identification codes PCPRA372, PCPRA370)
Feb 18, 1884	Ontario Canyon	Mrs. Harris & 3 children (Reich family) were killed, multiple homes destroyed (Unknown PRA on the West side of Ontario Canyon, where terrain has been significantly altered)

March 1884	McHenry Canyon	Mine buildings destroyed at the Hawkeye Mine & Lowell Shaft (DV235, DV245)
Jan 21, 1886	Empire Canyon	Mr. & Mrs. Peterson killed in their home
Jan 30, 1886	Thaynes Canyon	Near the Crescent Mine, 6 miners swept into Thaynes Canyon below, 4 killed (PC124)
Jan 7, 1888	Caribou Gulch	Avalanches at Himalayan and Rochester Mine buried 3 miners, 1 (Joe Baxter) killed
	Anchor Mine	Bunkhouse and half of the boarding house swept into canyon below, sweeping away half the men in an active card game in the boarding house (Daly Bowl / Chutes). DALY MINE (#1); Engine room impacted with one injured (DV183 - Lady Morgan Area)
Feb 19, 1897	Woodside Gulch	Silver King Mine boiler room smashed, 2 buried and survived (Berg's Bowl North)
Mar 12, 1897	Empire Canyon	Daly Mine (#1) hit, destroying two (2) bunkhouse and a boarding house, burying 9 miners, 4 killed. (DV-183 - Lady Morgan Area)
Jan 31, 1903	Empire Canyon	Hillside behind Quincy Mine released, destroying the hoist, burying nine (9) miners and killing three (3). Avalanche wrapped around the 'prow' towards the Daly West Mine, and nearly hit the Little Bell Mine to the south. (DVPRA353)
Dec 29, 1916	Empire Canyon	Francis Trythall killed collecting firewood near the Daly West mine
Mar 10, 1916	Park City	Alma Kimball killed while attempting to 'blast' cornice above the Crescent Mine Road (PC178, PC180 - Rocky Point)
Feb 10, 1949	Empire Canyon	Herbert Savage buried and killed 'just above the last home in Empire Canyon (DALYPRA374)
Dec 31, 1965	Park City	Three (3) buried while inbounds skiing at Park City Mountain (Treasure Mountain), 1 killed (PC179 - Berg's Bowl North)
Feb 18, 1984	Big Cottonwood Canyon	Skier (Lane) buried and killed (BCC14 - Lane's Leap)
Mar 19, 1985	Park City	One skier buried and killed after out-of-bounds skiers ducked into closed area and triggered wet slab avalanche on open terrain below (PC168 - Gobbler's Knob)
Feb 17, 1986	Big Cottonwood Canyon	Snowboard (Brad Lindsey) buried and killed, Utah's first snowboarder avalanche fatality (BCC2 - Brighton Hill)
Feb 26, 2004	Empire Canyon	One snowshoer caught, carried and killed. (DALY194)
Mar 3, 2004	Empire Canyon	Close call with snowboarders in the path immediately adjacent to the Feb 26 fatality, with debris reaching the roadway (DALY197)
2002, 2007, 2012	Park City	Three notable wet slab avalanche cycles along the Crescent Ridge including Gobbler's Knob (PC168) and Rocky Point (PC180) reaching modern observed extents, altering vegetation. (Sauer, 2014)
Jan 2017	Iron Canyon	Numerous avalanches triggered on a buried surface hoar layer within Iron and White Pine Canyons; most notably occurring as low as 6600

feet above mean sea level. (Iron Bowl #2 – IRO106 & Sharp's Bowl – IRO69)

Climatology

The PCMC project area lies within the Northern Mountain Utah Climate Division (#5). The climate is categorized as humid continental, with warm to hot summers and cold (sometimes severe) winters with significant snowfall. Categorically, the region is considered wet all year; however, due to the seasonal positioning of the polar jet stream, northern Utah receives more precipitation during winter months as strong Pacific storm systems pass through the region from the northwest (Gillies & Ramsey, 2009). These factors have led to the Wasatch Range (and Park City) becoming notorious with abundant snowfall and winter recreation, specifically alpine skiing. Subsequent development of the region has been driven by the demand for mountain recreation since the post-mining era began.

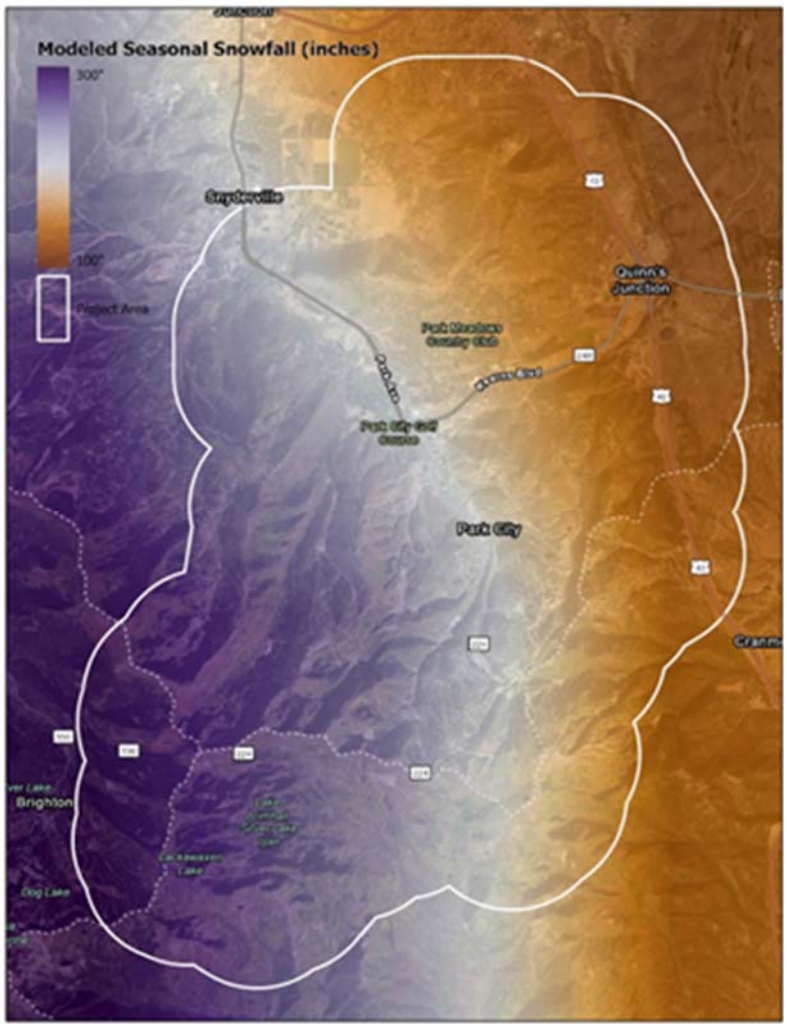


Figure 2-0-6. Modeled seasonal snowfall. Created from data sourced from the National Gridded Snowfall Analysis program; resampled to 50m GRID using cubic interpolation for visual efficacy. Data derived from existing snowfall data observations as well as quantitative precipitation estimates from forecasting models (water year 2009-present).

Local climatology plays an important role in snowfall amount and distribution, and subsequent avalanche behavior (frequency and magnitude). The project area, while relatively small in aerial coverage, sees a marked change in seasonal precipitation amounts (specifically winter snowfall) from the western boundary to the east due to an overall decrease in elevation, as well as its positioning within the rain/precipitation shadow of the greater Central Wasatch Mountains. Avalanche behavior varies as a result. As an intermountain snow climate, the Wasatch Range exhibits the avalanche characteristics of both a maritime and continental climate from year to year, and often within a single season. Early season snowfall often develops into weak faceted snow, occasionally resulting in persistent avalanche failure planes near the ground surface persisting into the latter part of the winter season. In

winters of average or above average snowpack conditions, early-season weak layers typically become dormant, strengthened through metamorphism, compression and insulation under a strong and deep overlying snowpack. Given the lesser snowfall of the Park City area, early-season weak snow development tends to persist for longer periods than the central portion of the range, just a few kilometers to the west.

Snowpack

Figure 2-0-6 shows a modeled visual representation of seasonal snowfall accumulations derived from the National Oceanic and Atmospheric Administration's 'National Gridded Snowfall Analysis.' This program incorporates observed snowfall data as well as quantitative precipitation estimates derived from forecasting models (NOAA, 2022). While data included in this dataset covers the previous 13 water-years, it is noted that the drought conditions currently in place across Utah result in an underestimation of seasonal snowfall totals; however, useful derivation of local climatology related to precipitation decrease per unit elevation was still inferred from this data.

Table 2-4 summarizes the location and snow depth data from three (3) snow observation sites utilized in this assessment. As is the case in most of North America, long-term snowfall data is not available. These three sites do not meet the minimum number of sample years (n=30) preferred for a long-term extreme value statistical analysis; however, additional data points within the sample period were used in the statistical analysis of the Thaynes Site to meet the 30-year criteria. Given the period, and the scope of this project, nearly 30 years of record provide confidence in a 30-year estimation, with greater uncertainty in the estimation of a 100-year snow supply (presumably underestimated).

From these sites, design avalanche release depths were calculated using a Gumbel extreme-value distribution of annual maximum three-day change in height of snow (ΔHS3), to determine release depths (drel) at 30- and 100-year intervals (Salm et al., 1990). While a frequency analysis for individual avalanche paths was not considered in this hazard indication assessment, calculated release depths at designated elevation bands will incorporate a more accurate depiction of runout extent by elevation in the 'Hazard Indication Maps' produced here within; specifically, those that were modeled dynamically where release depth inputs effect avalanche runout extent (Section 2.2.3.5). In addition, estimated release depths allow for a maximum destructive potential (release mass and volume) calculation, used further to filter out PRAs that are not large enough to be deemed harmful to humans or infrastructure (<D2). Design release depths calculated from each snow observation site were averaged and spatially categorized by elevation as shown in Table 2-5.

Table 2-4. Snow observation site summary.

SITE	ELEVATION (FT/M)	SNOW DEPTH (M)	
		Annual Maximum Average	Range of Annual Maximum
Parleys	7,585/2,312	1.17	0.8 – 1.56
Brighton	8,766/2,671	1.51	1.0 – 2.62
Thaynes	9,230/2,813	1.65	0.9 – 2.83

Table 2-5. Calculated design release depths (d_{rel}) for the Project Area at different elevation bands. All design release depths are slope-adjusted to 28 degrees and presumed to be leeward.

		PARLEYS SUMMIT (7,585 FT)	BRIGHTON (8,766 FT)	THAYNES (9,230 FT)	AVERAGE
Return	Elevation (ft)	Design (m)	Design (m)	Design (m)	Design Depth (m)
30-year	< 7,500	0.97	0.82	0.74	0.84
	7,500 – 8,500	1.12	0.96	0.89	0.99
	8,500 – 9,500	1.37	1.21	1.13	1.24
	> 9,500	1.61	1.46	1.38	1.48
100-year	< 7,500	1.14	0.97	0.89	1.00
	7,500 – 8,500	1.28	1.12	1.04	1.15
	8,500 – 9,500	1.53	1.36	1.28	1.39
	> 9,500	1.78	1.61	1.53	1.64

Modeling Process 1: Potential Release Area (PRA) Delineation

Automatic PRA delineation has been the subject of recent avalanche research, and methodologies have been proposed and refined by several practitioners including Magioni and Gruber (2003) and Buhler et al. (2013). While the foundational sequencing of GIS functions described throughout this area of work shares similarities, tailoring the process for the project scope, mapping scale/resolution and goals/objectives is warranted. In the case of avalanche hazard indication mapping for the PCMC QWRA, forest parameters were both categorically utilized and omitted in the auto-generation of PRAs, to further evaluate PRAs for the following scenarios:

1. Altered avalanche behavior in a post-fire setting (QWRA input)
2. Altered avalanche behavior for forest-management and silvicultural activity planning
3. Existing avalanche hazard areas under current forest/vegetation composition

For the scope and objectives of this project, the GIS-based PRA delineation workflow is outlined below (Figure 2-0-7).

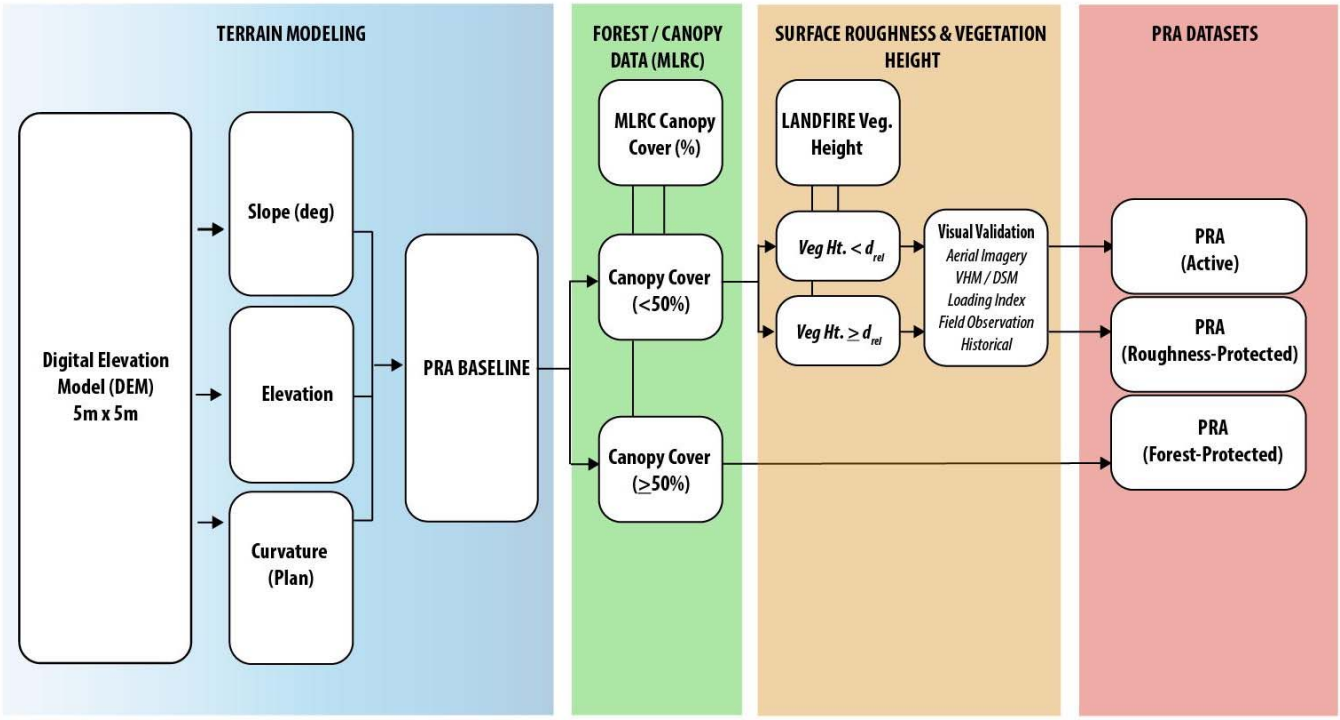


Figure 2-0-7. Simplified PRA-delineation workflow.

Terrain Modeling: 1-meter digital elevation models (DEMs) were used for terrain modeling within the project area. Utilizing ArcGIS Spatial Analyst, several other surface parameters were extracted, and raster datasets were generated including but not limited to:

- Aspect
- Slope angle
- Curvature (Plan and Profile)
- Pit-filled DEM
- Flow direction
- 5m DEM (resampled)

While 1-meter DEMs offer some of the highest resolution elevation data that is available, avalanche modeling (both dynamic and statistical) benefits from smoothed attributes of a 5-meter DEM to better represent a snow-covered landscape (where ground roughness is marginally subdued). Additionally, slopes derived from 5-meter DEMs reduce noise and limit additional digital processes to reduce small and insignificant terrain features that are insufficient for avalanche release.

Forest Canopy: Two (2) forest layers were acquired and/or developed for this assessment including *Multi-Resolution Land Characteristics Consortium (MLRC) and Normalized Difference Vegetation Index (NDVI)* which are discussed in detail below.

Multi-Resolution Land Characteristics Consortium (MLRC) – Tree Canopy Cover (%): Tree canopy cover (%) derived from remote sensing at 30-meter resolution by the MLRC (USGS et al., 2016) where different percentage classifications may be symbolized (or reclassified) to meet desired canopy percentage criteria. For the application of PRA identification, this layer was resampled (cubic interpolation to 5 meters) and reclassified to simple integer where '0' indicates <50% canopy cover and '1' indicates >50% canopy cover; as per NaiS European protective forest management guidelines –Total Canopy Cover Percentage for all tree species (Frehner et al., 2005) This dataset was used in calculations during the auto-generative delineation of the PRA dataset.

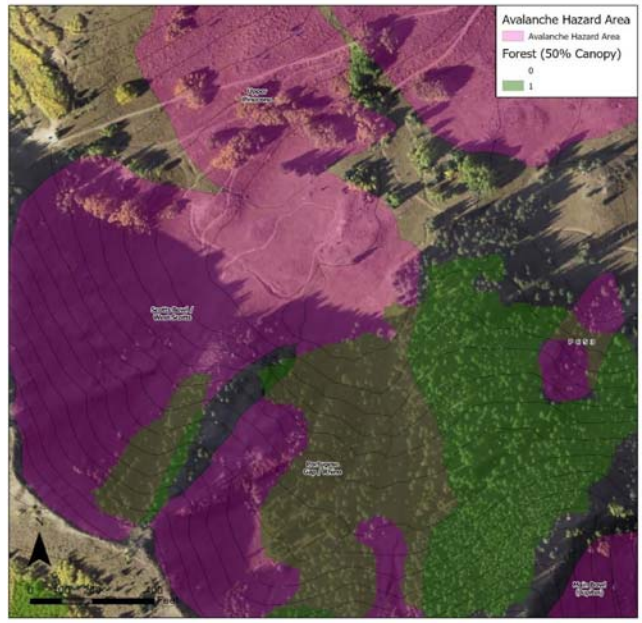


Figure 2-0-8. Avalanche hazard area. Resampled (5m) MLRC Canopy Cover Percentage (>50%).

Normalized Difference Vegetation Index (NDVI) – Normalized difference vegetation index (NDVI) is a dimensionless index used to display the differences between visible and near-infrared reflectance of vegetation (Weier & Herring, 2000). Using 4-band (RGB and near-infrared) NAIP imagery from the fall of 2018, reflectance ranges were identified that highlight conifer, deciduous and dense hardwood shrub; while omitting dry short grasses, non-burnable areas and short intermittent brush and herbaceous ground cover. This dataset was referenced as a high resolution (0.3m) to refine the MLRC canopy cover (%) data during the visual validation of the PRA-delineation process.

Ground Roughness/Vegetation Height: At mid and low elevations (<8,500 feet) within the project area, particularly on solar aspects (SW-S-SE), hardwood shrub/brush ecosystems are spatially continuous. Dominant species within these shrub forests are dense and durable hardwood including maple and Gambel oak (most abundant). While aerial coverage of hardwood shrub can be delineated digitally with high accuracy, its effectiveness on avalanche abatement is highly variable and difficult to quantify. One dataset evaluated in British Columbia showed that 90% of avalanching occurred in areas where vegetation height was less than 2 meters in height (McClung, 2001); however, localized snow-loading patterns and vegetation durability will result in localized variability.

What is broadly understood is that robust brush height and spatial continuity plays a significant role in the susceptibility to avalanche release, avalanche behavior (frequency and magnitude) and PRA-delineation through the introduction of ground/surface roughness. Ground roughness provided by robust hardwood shrub aids in the interruption of the development of a consistently stratified snowpack; however, when snowpack depths approach or exceed vegetation height, avalanching may become increasingly frequent. While not computed into the auto-generative portion of PRA delineation, brush height was incorporated into this assessment as part of the manual categorization and visual validation segment of PRA delineation. Where average brush height across a PRA exceeded the calculated design release depth (drel), PRAs were

categorized as 'roughness-protected PRAs.' All assessments of ground roughness, vegetation height and the affected release areas were made manually for each individual affected PRA using high-resolution aerial imagery, DSM-derived vegetation height models (VHM) and field observations. The digital datasets utilized in the assessment of ground roughness as it pertains to brush/shrub conditions include the following:

LANDFIRE Existing Vegetation Height (EVH) – The LANDFIRE system is a shared program between the US Department of Agriculture, Forest Service and the US Department of the Interior, providing fire and land resource management data. Existing vegetation height (EVH) data is provided at landscape resolution (30m) and provides an average of brush height across PRAs delineated within the project.

Figure 2-0-9. Hardwood/Deciduous shrub ecosystems in Daly/Empire Canyon where hardwood shrub heights range from 0.8m (left) to over 2m (right).

Vegetation Height Model (VHM) – A portion of the project area is covered by 0.5-meter digital surface modeling (DSM) from the National Resource Conservation Service and the Utah Division of Emergency Management. Data from this DSM is utilized to estimate (relative) brush height and distribution, as well as identify the location and size of 'forest gaps' potentially excluded by the 30-meter resolution of the MLRC canopy cover (%) dataset utilized in PRA delineation.

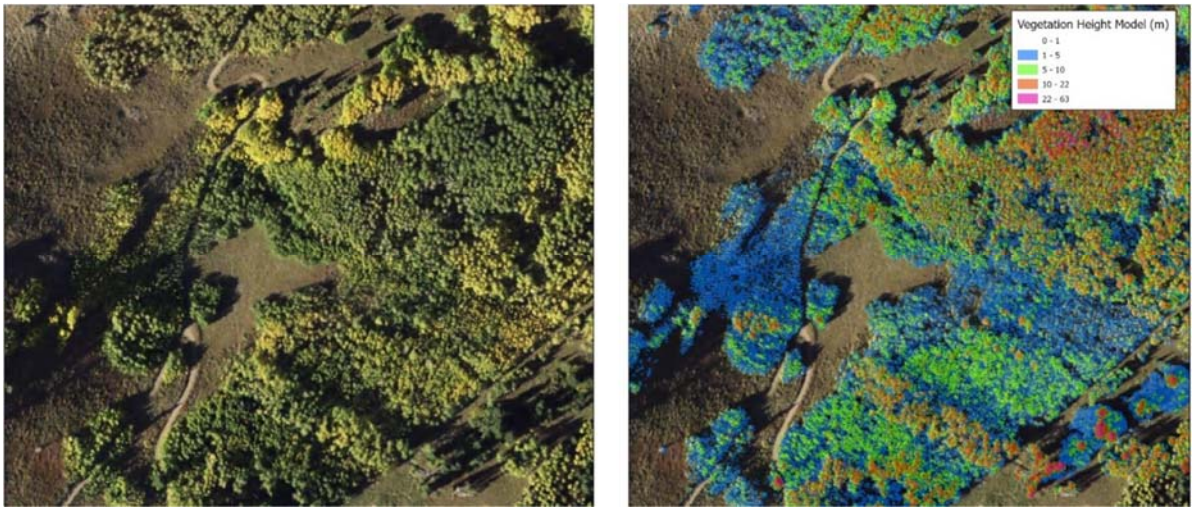


Figure 2-0-10. Vegetation height model (VHM) showing both the absence of ground cover/shrub in the PRA (upper left corner), as well as displaying varying age classes of deciduous forest; indicative of avalanche path trim lines as a product of frequency (Two Goons path – PC65).

In conclusion, a manual assessment was made within auto-generated PRAs comparing existing vegetation height to calculated design release depths (drel). Where average brush height exceeds drel, PRAs were categorized as 'roughness-protected." Within these PRAs, avalanche release is possible, but under atypical snowpack depths, or extreme conditions. Typically found at mid and low elevations within the project area, most of these shrub-dominated PRAs are infrequent avalanche-producers due to limitations and inconsistency in annual snow supply. These PRAs are included in the final PRA dataset as fuel treatments of hardwood shrub/brush could have a significant impact on avalanche frequency, and higher-resolution field analysis of these areas should be performed, accordingly.

Model Process 2: Avalanche Hazard Area Indication

Among PRAs categorized as 'active' through digital PRA-delineation (and visual validation), predicted avalanche hazard areas were identified utilizing both topographic-based runout angle modeling and dynamic numerical 2D-modeling. A simplified workflow for the development of avalanche hazard indication maps is shown in Figure 2-0-11.

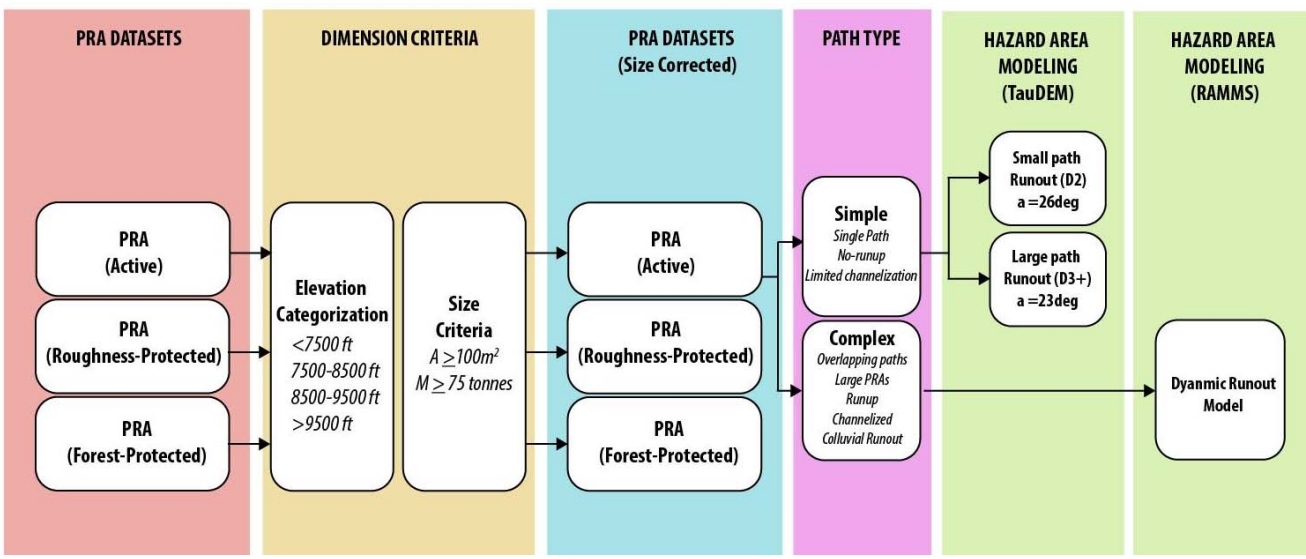


Figure 2-0-11. Simplified workflow for the development of avalanche hazard indication maps.

Hazard Area Runout Modeling (TauDEM): For hazard area runout modeling, the open-sourced GIS software 'TauDEM' was used. TauDEM is a hydrologic terrain-based analysis tool that identifies locations downslope from a PRA given a specified input alpha (runout) angle (Tarboton, 2013). Runout angles of 23 degrees and 26 degrees were used for paths with estimated release mass of ≥750 tonnes and <750 tonnes, respectively. TauDEM "D-Infinity Avalanche Runout" outputs are derived from raster datasets where individual pixels represent elevation, runout direction (angle) and a PRA-source GRID. This process does not account for flow velocity and momentum as debris mass moves over benched or uphill terrain features. Therefore, topographic runout modeling was only utilized for 'simple paths' with single or easily separated

PRAs, minimal terrain complexities or path overlap within the avalanche track and without run-up along lateral flanks or within the runout zone.

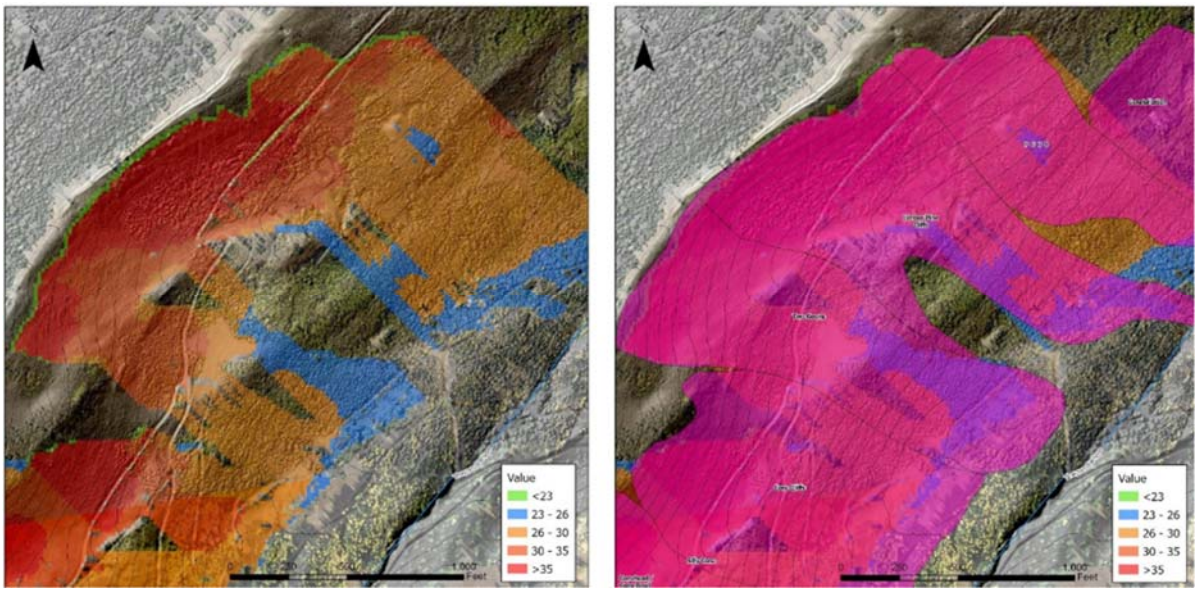


Figure 2-0-12. TauDEM runout angle dataset (left) showing the terminus of 23-degree runouts in blue. Overlayed Avalanche Hazard Areas shown (right).

Numeric Dynamic Modeling: 'Complex' paths include those with large PRAs; confined, gullied or split tracks; run-up and/or colluvial (fanned) runout zones. Where complex paths were mapped, RAMMS (Rapid Mass Movement Simulations) were utilized. RAMMS is a commercial product developed by the WSL Swiss Institute for Snow and Avalanche Research SLF (Christen et al., 2010) and provides modeled mass movement data including depth-averaged velocity, flow heights, impact pressures, momentum and overall extent. RAMMS is most often used in engineering, planning and avalanche hazard analysis; however, it may also be used in scenarios where vegetation and surficial characteristics and oral and written histories are insufficient to determine path extent (CAA, 2016). To achieve the objective of hazard indication mapping, path extent (envelopes) was extracted from RAMMS simulations and integrated into the avalanche hazard area dataset.

Regional calibration for numerical modeling in North America is lacking; however, indirect calibration of input friction parameters (Jamieson et al., 2018) of known avalanche events within the region was utilized for modeling paths within the project area. Two avalanche events lying just outside the project area were used in this exercise; Pointy Peak (2020) and Dutch Draw (2005), both evaluated be 30-year return period avalanches with known release dimensions. Using this indirect calibration method is intended to provide a more representative and useful modeled outcome than either topographical runout modeling or dynamic modeling with global friction parameters calibrated to the continental snow climates of Switzerland, in which calibration has been extensively refined. Modeled avalanche runout extents (shapefiles) were exported from RAMMS into the ArcGIS platform and integrated into the avalanche hazard area dataset, as shown in avalanche hazard indication maps provided with this assessment.

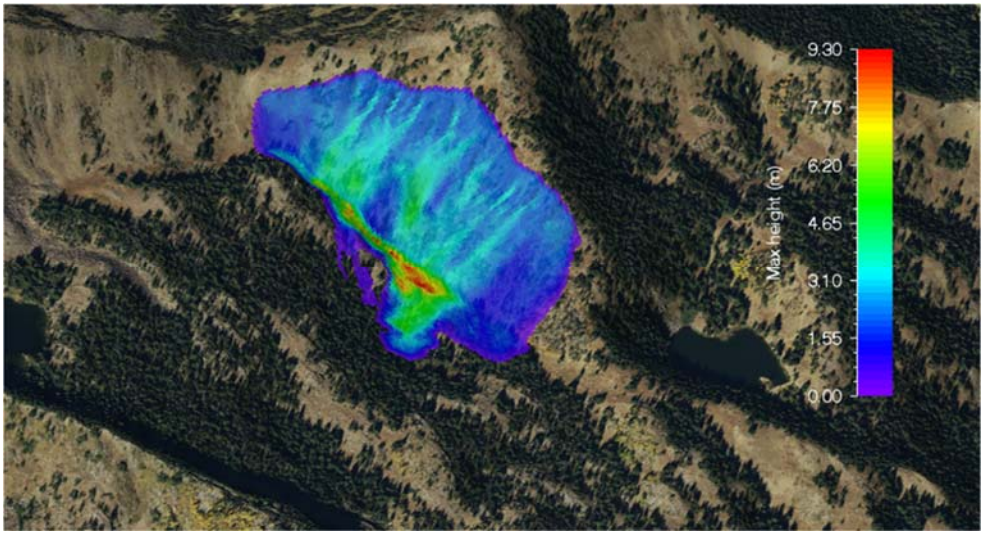
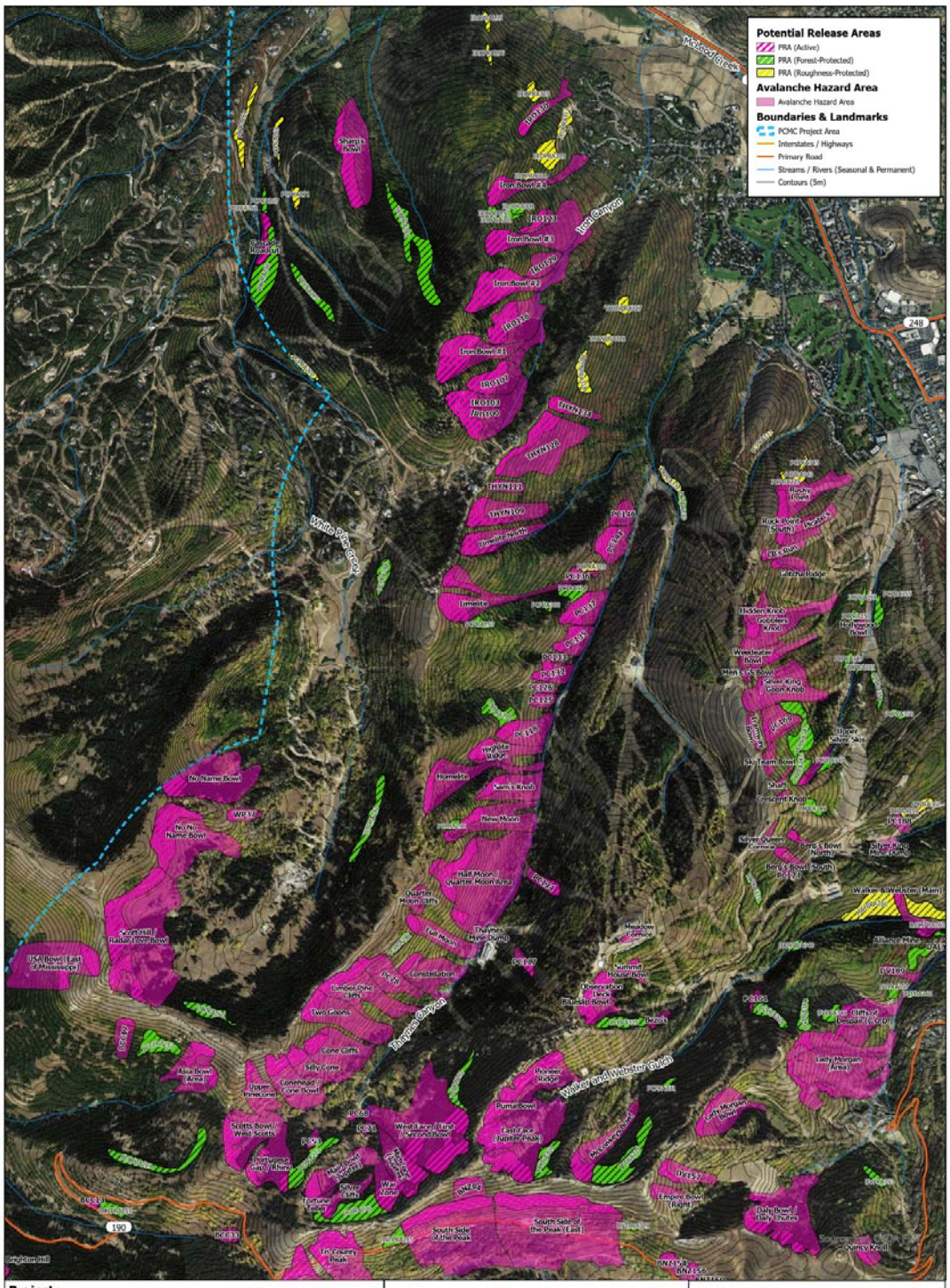


Figure 2-0-13. 10420 (Southeast) dynamic model results, depicting a runout envelope with Max Height of flow (m).

Maps


Potential Release Areas
PRA (Active)
PRA (Forest-Protected)
PRA (Roughness-Protected)
Avalanche Hazard Area
Avalanche Hazard Area
Boundaries & Landmarks
PCMC Project Area
Interstates / Highways
Primary Road
Streams / Rivers (Seasonal & Permanent)
Contours (5m)
Project:
Park City Municipal Corp. Quantitative Wildfire Risk Assessment
Title:
Avalanche Hazard and Release Area Indication Map - Park City Mtn
Map Author:
Alpine Forestry
Section #:
2.2
Projection / Datum:
UTM Zone 12N / NAD83
Map #:
2
Notes:
Sources - ESRI, USDA, FSA
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0
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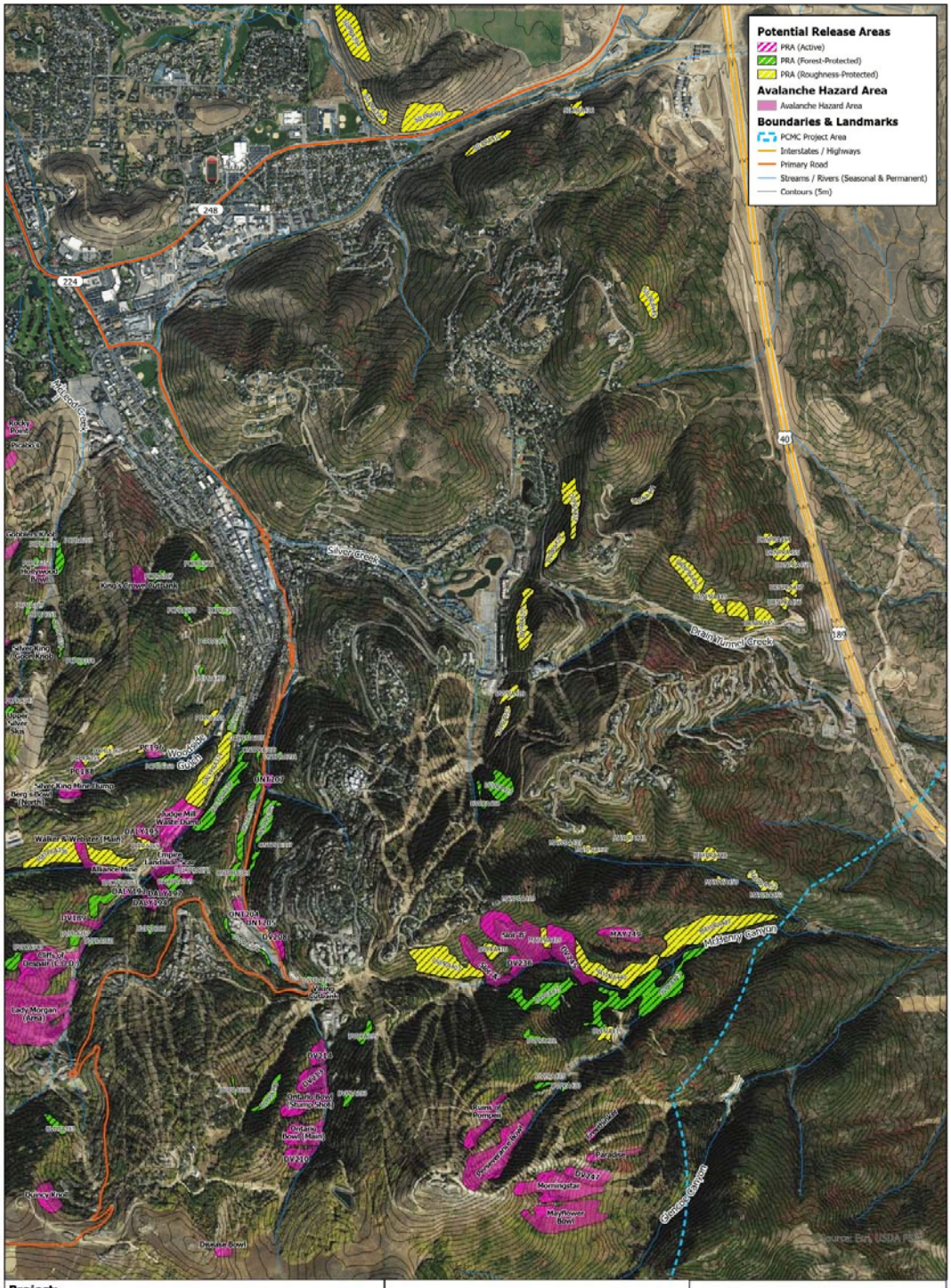
Miles
PARK CITY
1884
THE
Ember
Alliance
ALPINE
FORESTRY



Project:
Park City Municipal Corp. Quantitative Wildfire Risk Assessment

Title:
Avalanche Hazard Indication Map - Deer Valley / Deer Crest Zone

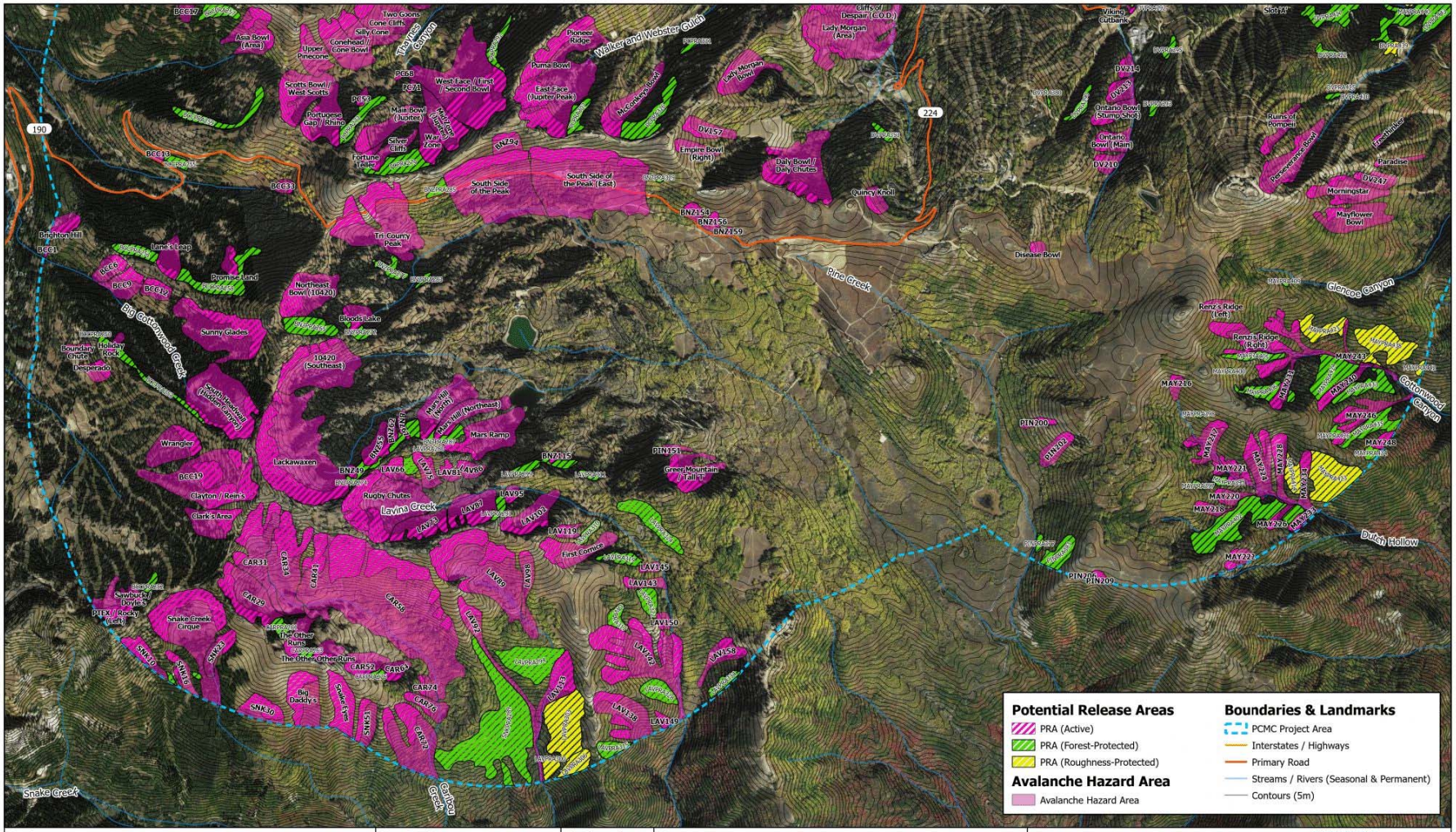
Map Author:	**Section #:**
Alpine Forestry	3.3
Projection / Datum:	**Figure #:**
UTM Zone 12N / NAD83	14

Notes:
Sources - ESRI, USDA, FSA

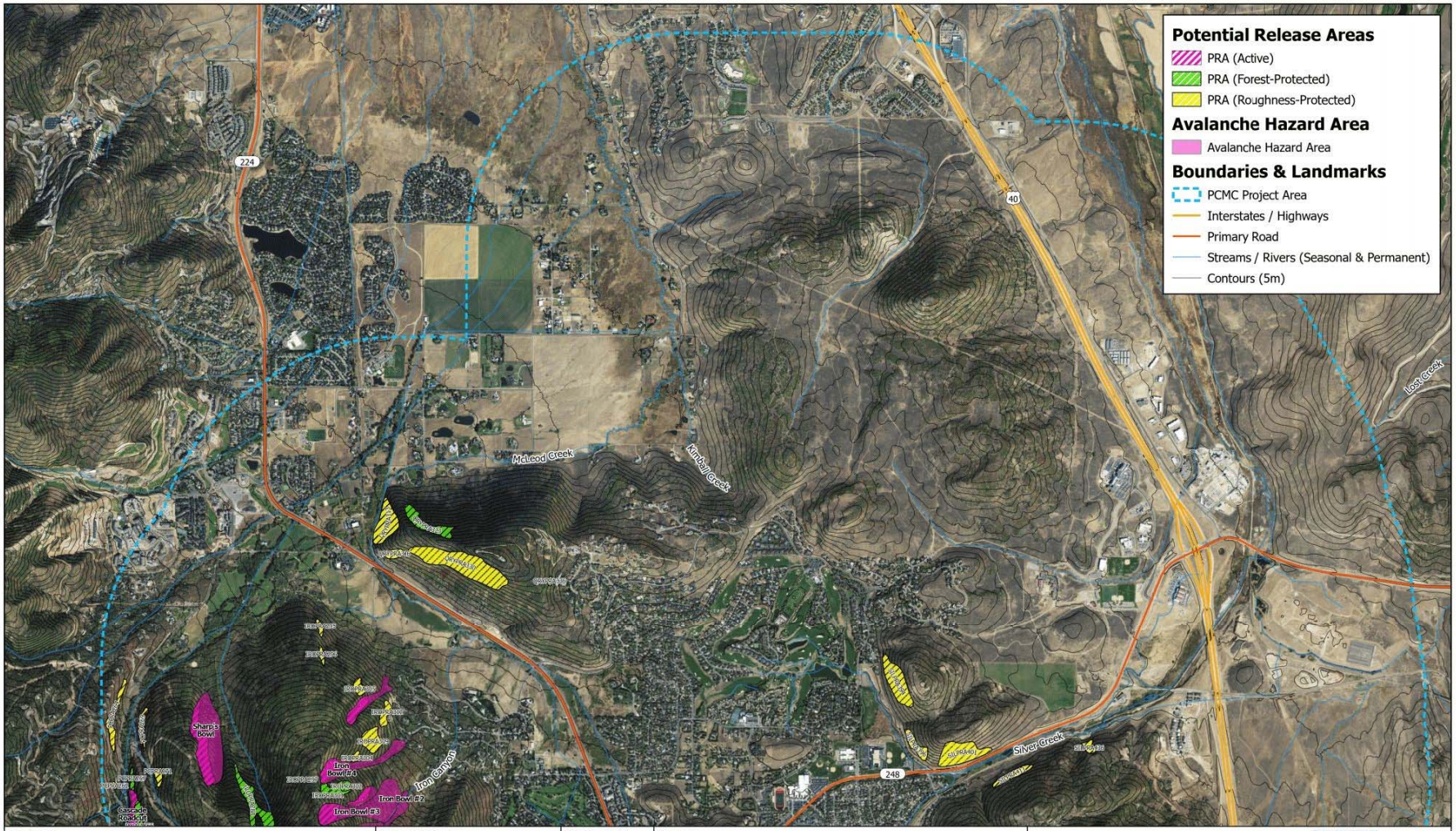
N

0 0.25 0.5 1 Miles

PARK CITY 1881
BLUE MOUNTAIN
THE Ember Alliance
ALPINE FORESTRY
SAGELAND



Project:	Map Author:	Section #:	Notes:
Park City Municipal Corp. Quantitative Wildfire Risk Assessment	Alpine Forestry	2.2	Sources - ESRI, USDA, FSA
Title:	**Projection / Datum:**	**Map #:**	0 0.25 0.5 1 Miles
Avalanche Hazard and Release Area Indication Map - Bonanza Flats	UTM Zone 12N / NAD83	1	N



Project:	Map Author:	Section #:	Notes:
Park City Municipal Corp. Quantitative Wildfire Risk Assessment	Alpine Forestry	2.2	Sources - ESRI, USDA, FSA
Title:	**Projection / Datum:**	**Map #:**	0 0.25 0.5 1 Miles N
Avalanche Hazard and Release Area Indication - Round Valley	UTM Zone 12N / NAD83	4	

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2.2. Post-Fire Sediment Delivery

Executive Summary

This assessment quantified the potential for destructive sediment delivery following a wildfire, identified values at risk to post-fire sediment and suggests proactive measures to mitigate impacts. Results from this assessment fed into recommendations for proactive fuel treatments to mitigate wildfire and post-fire impacts as described in chapter 6.0 Planning and Resources.

Impacts of wildfires do not end once the flames are extinguished. Intense rainfall events can result in flash floods, erosion, sediment delivery and debris flows the first few years following a wildfire (Neary et al., 2005). Erosion and sedimentation are natural processes that shape streams, transport soil and nutrients across a landscape and create diversity in stream and riparian habitats. However, extreme post-fire sediment delivery and debris flows can damage and destroy homes, community assets, infrastructure, fisheries and riparian vegetation. A localized thunderstorm after the 2018 Dollar Ridge Fire east of Park City triggered debris and mud flows that caused significant damage to homes, roads, bridges, reservoirs and fisheries (Hardy, 2018). About 50 people needed to be rescued from the Camelot Resort and Timber Canyon area in Duchesne County when they became trapped from flooding and mudflows (Canham, 2018).

There are numerous homes, community assets and infrastructure in the Park City area, and watersheds in this part of Utah are especially important for the delivery of clean surface drinking water (Mack et al., 2022). Assessing the potential for post-fire sediment delivery to damage these values can help residents, managers and partners in the Park City Municipal Corporation to identify areas most likely to experience damage and to plan for actions to mitigate impacts. We modeled potential sediment delivery using the Water Erosion Prediction Project (WEPP) under current unburned conditions and potential post-fire conditions.

The probability of sediment delivery (the likelihood that any amount of sediment is deposited after rainfall events) could be 3 times greater the first year following wildfire in the Park City area compared to current, unburned conditions, and the magnitude of sediment delivery (the amount of sediment that could be dislodged from hills and transported into streams during intense rainstorms) could be 20 times greater after wildfires. About 1,560 homes and businesses in the area (12% of all addresses) occur in watersheds with a high risk of damage from post-fire sediment delivery. Water infrastructure in the area have a high risk of damage from post-fire sediment, which is particularly concerning given the importance of watersheds in this part of Utah for the delivery of clean drinking water. Numerous springs, water tanks and water points of distribution are in at-risk areas, as well as 40% of the length of pipelines, 15% of canals and ditches and 54% of streams and rivers.

There is also a significant risk of post-fire sediment delivery to recreation infrastructure and heritage resources in the Park City area. Almost all the Brighton Ski Resort in the study area could experience post-fire sediment delivery, as could over 50% of Deer Valley Resort and Park City Mountain Resort and almost 70% of the length of ski lifts. Over 45% of the length of trails in the study area and 11 trailheads have a high risk of post-fire sediment due to their location on steep slopes with high burn probabilities. Historic structures at Thaynes Mine, California-Comstock Mine, Jupiter Mine, Alliance Mine and Silver King Mine are at risk of post-fire sediment delivery.

Proactive planning and activities to mitigate the impacts of wildfires and post-fire sediment are key components of becoming a fire-adapted community. Proactive management actions include stream restoration, which improves the health and resilience of streams so they can dissipate flood waters and store sediment, and fuel treatments, which reduce fire intensity and extent. Fuel treatments recently completed on Treasure Hill could reduce fire severity and potentially reduce the likelihood and magnitude of post-fire sediment delivery into the downtown area of Park City. Watersheds in Iron Canyon, Thaynes Canyon, Walker and Webster Gulch, along Crest Ridge, and around Bald Mountain and Bald Eagle Mountain could especially benefit from fuel treatments given their high potential to deliver sediment to homes and community assets after wildfire. The city, water and utility providers, residents and business owners should also develop plans to protect lives and property in the case of large post-fire flooding and sedimentation events.

Immediate and long-term action to address potential post-fire sediment are important for protecting values at risk across the Park City area. Climate change makes immediate action even more imperative as the future is likely to include more frequent, large, high-intensity wildfires and extreme rainfall events (Sankey et al., 2017; Touma et al., 2022).

Background

Impacts of wildfires do not end once the flames are extinguished. Intense rainfall events can result in flash floods, erosion, sediment delivery and debris flows the first few years following a wildfire (Neary et al., 2005). According to the Utah Geological Survey: “Debris flows are one of the most dangerous post-fire hazards because they can be life threatening, move rapidly and strike with little warning” (Giraud & McDonald, 2013).

Wildfires kill vegetation that anchor soil in place and intercept rainfall, and they consume surface litter and organic matter that serve as a sponge absorbing rainfall and slowing the overland movement of water. Extreme heating from wildfires can break apart clumps of soil, known as aggregates, thereby reducing the stability of the soil and its ability to absorb water and resist erosion. Wildfires occasionally result in hydrophobic soils that repel water and exacerbate post-fire erosion. When hydrophobic conditions develop, they are usually isolated to portions of the burned area that experienced prolonged heating, and the organic compounds that cause water-repelling conditions break down within months to a couple years after a wildfire (Binkley, 2020; Huffman et al., 2001). Research suggests that post-fire sediment delivery is related to the loss of surface cover to a greater degree than to the formation of hydrophobic soils (Larsen et al., 2009).

DEFINITIONS

DEBRIS FLOW

A fast-moving landslide made up of a mixture of water-saturated rock, soil and debris with a consistency similar to wet cement.

EROSION

Detachment and transport of soil and rock due to gravity, water or wind.

SEDIMENT DELIVERY

Movement of soil into streams. Rates of sediment delivery are less than rates of erosion. Variation in topography and other barriers can stop the downhill movement of soil before it enters a stream.

WATERSHED

Area of land where all precipitation falling in that area drains to the same location.

The severity of post-fire sediment delivery is related to the size of the area burned, amount of ground cover consumed, time since wildfire, slope, soil characteristics and rainfall intensity (Neary et al., 2005). Climate change has lengthened the fire season in the western United States and driven larger, more intense wildfires (Parks et al., 2016). The occurrence of high-intensity rainfall events following on the heels of large wildfires is likely to increase across the western United States in the coming decades (Sankey et al., 2017). The percentage of extreme fire weather conditions followed within one year by extreme rainfall events in northern Utah could increase from about 30-40% today to 70-80% in the mid-20th century (Touma et al., 2022).

Erosion and sedimentation are natural processes that shape streams, transport soil and nutrients across a landscape and create diversity in stream and riparian habitats. According to Trout Unlimited, post-fire sediment can severely damage fisheries, but "Riparian areas are incredibly resilient … When viewed in the long term (10 to 20 years post-fire), it is clear that fires can deliver benefits to fisheries by introducing large numbers of logs and tree roots, as well as adding in-stream gravel contributing to habitat diversity" (Prettyman, 2018). However, extreme post-fire sediment delivery and debris flows can damage and destroy homes, community assets, infrastructure, fisheries and riparian vegetation. Numerous post-fire debris flows and sedimentation events have occurred along the Wasatch Range in the past 30 years, causing damage to roads, homes, water infrastructure, power plants and fisheries (Figure 2-0-14, Table 2-6).

The 2018 Dollar Ridge Fire burned over 57,000 acres and damaged or destroyed 438 structures, including primary and secondary residences, camper trailers, vehicles and outbuildings. On July 22, 2018, a localized thunderstorm producing 1-3 inches of rainfall over a 2-hour period triggered debris and mud flows that damaged homes, roads, bridges, Starvation Reservoir and fisheries (Hardy, 2018). About 50 people needed to be rescued from the Camelot Resort and Timber Canyon area in Duchesne County when they became trapped from flooding and mudflows (Canham, 2018). Drinking water quality was impacted and required expensive updates to the Duchesne County Water Treatment Plant to remove contamination from post-fire debris (Central Utah Water Conservancy District, 2021). Sediment and ash from the fire also decimated the brown trout population in the Wild Strawberry River—a designated Blue Ribbon Fishery (Murray, 2019).

Post-fire debris flows triggered by intense rainfall in the years following the 2012 Seeley Fire were also particularly destructive. Debris flows caused damage to and closures of State Route 31. Sediment buried the Huntington/Cleveland Irrigation Company's headgate and clogged sprinkler lines and caused the PacifiCorp-Huntington Power Plant to shut their water intake for several days. Impacts to water quality were observed as far as 50 miles downstream, and fisheries were decimated, including the endangered razorback suckers due to ash-clogged gills (Giraud & McDonald, 2013).

Emergency response, mitigation measures and sediment removal after major flood events carry a hefty price tag—sometimes even exceeding the cost of wildfire suppression. Costs are borne by federal agencies, state agencies, municipalities, water providers, homeowners and other parties. Federal requests for mitigation activities by Burned Areas Emergency Response teams (BAER)[1] ranged from less than $15,000 following smaller and/or lower-severity fires in areas with fewer values at risk to over $1 million following larger wildfires with a greater potential to trigger post-fire damages for wildfires along the Wasatch Range. Utah's Watershed Restoration Initiative has contributed between $42,000 and $1.4 million per project for aerial

[1] BAER teams are interagency teams of specialists, including hydrologists, soil scientists and biologists, formed after wildfires to analyze post-fire conditions and undertake emergency stabilization action to prevent loss of life and damage to property, critical infrastructure, natural resources and other values at risk.

seeding, invasive weed control and erosion mitigation after wildfires in central and northern Utah (**Appendix B, Table B.2.4.1**). Notable expenses for post-fire mitigation include:

- **2018 Dollar Ridge Fire:** Over $30 million in funding from the U.S. Forest Service, Federal Emergency Management Agency (FEMA), Utah's Watershed Restoration Initiative, Utah Drinking Water Board, Utah Permanent Community Impact Fund Board and Central Utah Water Conservancy District to update the Duchesne Valley Water Treatment Plant to remove post-fire sediment and debris, conduct aerial seeding, spray invasive weeds and repair damaged trails (Central Utah Water Conservancy District, 2021; Hardy, 2018; Mathis, 2019). Mitigation costs significantly exceeded the $18.2 million spent on wildfire suppression for the Dollar Ridge Fire (Hardy, 2018).

- **2018 Pole Creek and Bald Mountain Fires:** Over $11.3 million in funding from the U.S. Forest Service, USDA Natural Resources Conservation Service and Utah's Watershed Restoration Initiative for debris removal, stream bank protection, aerial seeding and invasive weed management (Curtis, 2019; Edgel, 2019; Hardy & Waterman, 2018a). Suppression costs for the Pole Creek and Bald Mountain Fires ($40.3 million) were significantly greater than the cost for mitigation measures due to the large size and complexity of these incidents (Hardy & Waterman, 2018a).

- **2012 Dump Fire:** $3.7 million in funding from the USDA Natural Resources Conservation Service and Utah's Watershed Restoration Initiative to restore and strengthen over a mile of open channels, construct erosion control structures and conduct aerial seeding (Bullock, 2013; C. Jones, 2013). Mitigation costs exceeded the $1.5 million spent on wildfire suppression for the Dump Fire (Vaughn, 2012).

- **2012 Quail Fire:** $1.85 million in funding from the USDA Natural Resources Conservation Service, Alpine City and Utah's Watershed Restoration Initiative to alter and expand sediment basins in response to post-fire debris flows and conduct aerial seeding (Allred, 2014). Mitigation costs exceeded the $1.1 million spent on wildfire suppression for the Quail Fire (Condrat, 2012).

Understanding the potential for post-fire sediment is important to plan and undertake proactive measures to protect the community. There are numerous values at risk of damage from post-fire sediment in the Park City area, including homes, schools, medical facilities, utility infrastructure and ski area infrastructure. Watersheds in this part of Utah are especially important for the delivery of clean drinking water (Figure 2-0-15). Debris flows and sedimentation after large, high-severity wildfires could threaten the delivery of clean water to tens of thousands of residents. Watersheds in the Park City area provide drinking water to almost 40,700 residents within the watersheds and 91,000 to 195,000 residents downstream of the watersheds (Mack et al., 2022).

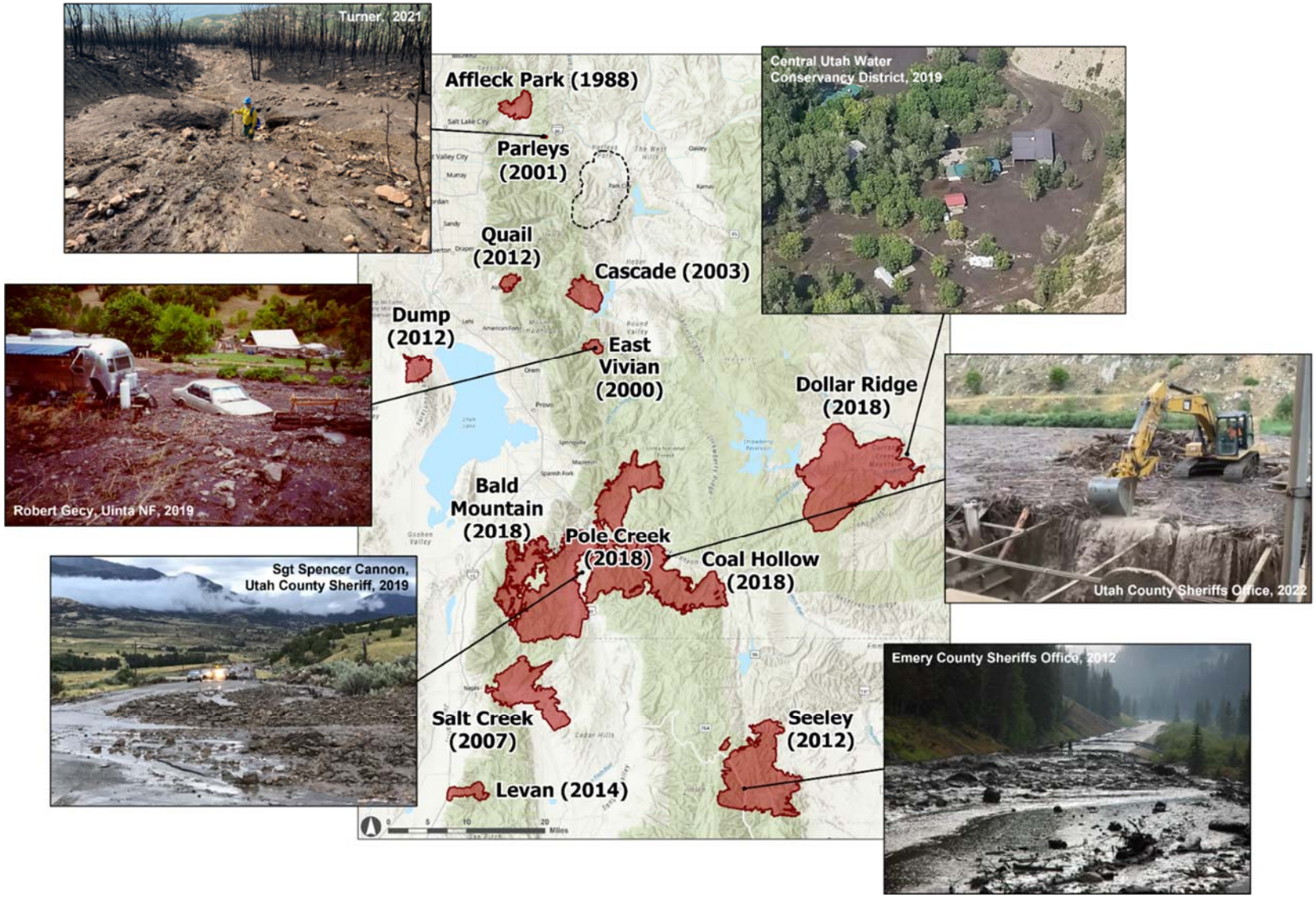

Figure 2-0-14. Numerous wildfires along the Wasatch Range have resulted in major debris flow and sedimentation events. Sources: Fire perimeters from the National Interagency Fire Center. Base maps from Utah County, Utah Geospatial Resource Center, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, BLM, EPA, NPS, and NGA.

Table 2-6. Description of post-fire debris flows and sedimentation events following wildfires along the Wasatch Range (see Figure 2-0-14 for fire perimeters). Soil burn severity and predicted sediment yield are provided for wildfires that triggered the response of Burned Areas Emergency Response teams to analyze post-fire conditions and undertake emergency stabilization action. For comparison, sediment yields are typically 0-2.5 tons/acre/year in undisturbed watersheds across the western United States (Neary et al., 2005).

Fire description	Soil burn severity	Predicted sediment 1-year post fire	Observed post-fire debris flows and sedimentation
Parleys Canyon Fire Aug 14-21, 2021 158 acres	Unburned: 23% Low: 25% Mod: 52% High: <1%	0.23 tons/acre	Thunderstorms on August 18, 2021, caused a flash flood and deposited debris within 75 feet of Interstate 80. Source: (Turner, 2021)
Pole Creek Fire Sept 6-Oct 7, 2018 103,545 acres **Bald Mountain Fire** Aug 24-Oct 3, 2018 21,218 acres	Unburned: 14% Low: 41% Mod: 41% High: 4%	2.5 tons/acre	Flooding on July 26, 2019, crossed US Highway 89. Flooding on August 8, 2019, damaged US Highway 89 and 4 miles of US Highway 6, where about 3-5 feet of debris were deposited. Flooding triggered evacuations of residents in Loafer Canyon and damaged at least a dozen homes. Sediment impacted the quality and quantity of irrigation water provided by Strawberry Water Users Association to farms near Payson, UT. Source: (Hardy, 2018; Harris, 2022; Roberts, 2019)
Coal Hollow Fire Aug 4-Sep 6, 2018 29,912 acres	Unburned: 9% Low: 28% Mod: 52% High: 11%	1.4 tons/acre	Thunderstorms on August 12 and 13, 2022, caused flooding and debris flows at Mill Fork and Dairy Fork in Spanish Fork Canyon and triggered the need for debris removal by UT County Public Works. See videos of flooding at Mill Fork: https://www.youtube.com/watch?v=I-BZXFXVIe8 Source: (Burt, 2022; Natharius & Meccariello, 2018)
Dollar Ridge Fire July 1-30, 2018 57,897 acres	Unburned: 22% Low: 47% Mod: 28% High: 3%	2.7 tons/acre	Thunderstorms on July 22, 2018, triggered debris flows and sedimentation that damaged homes, roads, bridges and fisheries. About 50 people needed to be rescued in Duchesne County after becoming trapped by floodwaters. Drinking water quality was impacted and triggered a $28.5 million project to update the Duchesne County Water Treatment Plant. Sediment and ash also decimated the brown trout population in the Wild Strawberry River—a Blue Ribbon Fishery. Source: (Canham, 2018; Central Utah Water Conservancy District, 2021; Hardy, 2018; Murray, 2019)
Levan Fire July 24-Aug 8, 2014 4,313 acres	Unburned: 16% Low: 22% Mod: 41% High: 20%	10.3 tons/acre	Thunderstorms on July 29, 2014, caused a flashflood and debris flows along a 12-mile stretch of State Route 28, washed out a campground and flooded residents' basements near the town of Levan. Source: (Davidson, 2014; Goodell, 2014; Penrod, 2014)
Quail Fire July 3-July 11, 2012	Unburned: 0% Low: 93%	10.2 tons/acre	Four extreme flooding events occurred after thunderstorms on July 5, July 20, August 22, and

2,091 acres	Mod: 7% High: 0%		September 7, 2013. The mudslide on August 22, 2013, damaged several homes in Alpine, UT, and forced emergency evacuations. See a video of extreme flooding in Alpine, UT: https://www.youtube.com/watch?v=LkJruU92mwo Source: (Allred, 2014; Condrat, 2012; Mecham & Winslow, 2013)
Seeley Fire June 26-July 18, 2012 48,050 acres	Unburned: 34% Low: 20% Mod: 30% High: 15%	6.3 tons/acre	Intense rainfall and flooding occurred on July 7, 16, 30 and 31, 2012, and September 1, 2012, and July 16 and 19, 2013. Flooding and debris flow on July 7, 2012, caused serious damage to State Route 31, powerlines, coal mines, trails and recreation sites. Sediment buried the Huntington/Cleveland Irrigation Company's headgate and clogged sprinkler lines. Debris flows in Huntington Creek caused PacifiCorp-Huntington Power Plant to shut their water intake for several days. Impacts to water quality were observed as far as 50 miles downstream. Fish died in the Price and San Rafael rivers due to ash-clogged gills, including endangered razorback suckers. Source: (Chatel, 2012; Giraud & McDonald, 2013)
Dump Fire June 21-25, 2012 5,507 acres	No BAER report produced	No BAER report produced	Thunderstorms on September 1, 2012, caused flash flooding, mudslides, major damage to 5 homes and moderate damage to 20 homes. Source: (Park, 2012)
Salt Creek Fire July 19-29, 2007 24,659 acres	Unburned: 11% Low: 12% Mod: 57% High: 20%	11.6 tons/acre	Thunderstorms on July 25 and September 5, 2007, resulted in flash floods in the town of Fountain Green. Source: (Hales, 2007; Pope & Higginson, 2007)
Cascade II Fire Sept 23-Oct 6, 2003 7,828 acres	Unburned/low: 36% Mod: 46% High: 18%	7.1 tons/acre	Heavy rainfall on July 14, 2004, resulted in mud and debris flows in Lower Bear Canyon, lower Thomas Canyon and Little Provo Deer Creek. The Central Utah Water Conservancy District Water Treatment Plant was forced to switch water sources and temporarily close Canyon Meadows Water System. Debris damaged a recreation site and road on the Uinta-Wasatch-Cache National Forest. Source: (Pope, 2004)
East Vivian Fire July 26-Aug 11, 2000 1,753 acres	Unburned: 0% Low: 40% Mod: 46% High: 14%	1.6 tons/acre	Intense thunderstorms on August 31, 2000, produced flooding and debris flows down the South Fork Provo River and into properties in Vivian Park. Source: (Gecy, 2000; Pope, 2002)
Affleck Park Fire Sept 2-7, 1988 5,600 acres	Not reported	7.1 tons/acre compared to 1.1 tons/acre pre-fire	Thunderstorms on June 9, 1989, caused flooding and debris flows in Freeze and Brigham Canyons and damaged homes and businesses along Emigration Creek. Source: (DuMont, 1990; Nelson & Rasely, 1988)

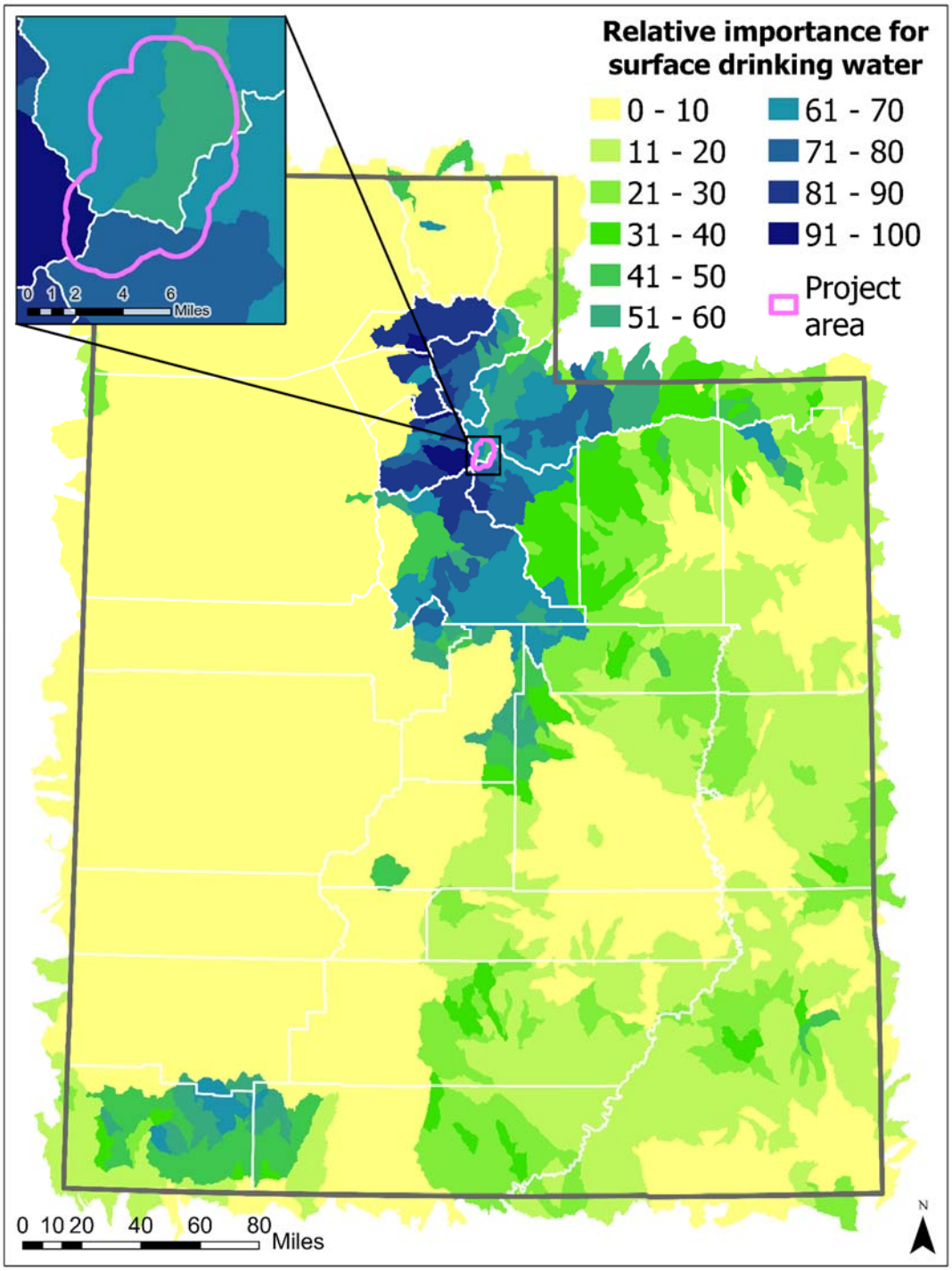

Figure 2-0-15. Relative importance of watersheds for producing clean surface drinking water in the state of Utah according to the Forests-to-Faucets 2.0 assessment by the U.S. Forest Service (Mack et al., 2022). Values indicate the relative importance of watersheds compared to all watersheds in Utah. For example, the Headwaters of Big Cottonwood Creek watershed in the southwest portion of our study area has a relative importance value of 93, meaning it is more important for providing clean surface drinking water than 93% of watersheds in the state.

Methods

Assessing the potential for post-fire sediment delivery can help residents, managers and partners in the Park City Municipal Corporation to identify areas most likely to experience damage and to plan for actions to mitigate impacts. We focused on sediment delivery instead of erosion because movement of soil into streams can cause greater post-fire damage than erosion itself. We modeled potential post-fire erosion and sediment delivery using the Water Erosion Prediction Project (WEPP) version 2.0 (Elliot & Hall, 2010). WEPP models sheet and rill erosion but not landslides, channel erosion or debris flows. Inputs to the model include vegetation type, burn severity, surface cover, soil texture and slope.

We modeled sediment delivery under current unburned conditions and potential post-fire conditions following the approaches of Elliot et al. (2016) and Miller et al. (2011) to classify soil burn severity based on predicted flame lengths. The post-fire scenario assumed that fires burned every portion of a watershed under extreme (97th percentile) fire weather conditions—a reasonable assumption given that the sizes of watersheds delineated for this analysis (5 to 4,620 acres) are within the size range of wildfires along the Wasatch Range that resulted in post-fire sediment (160-103,500 acres) (Table 2-6). See chapter 5.0 Wildfire Risk Assessment for a description of fire behavior modeling for this project.

We modeled sediment delivery under 50 random weather conditions based on historical observations from the two closest National Weather Service cooperative stations available through Rock:Clime (the weather prediction model incorporated into the WEPP modeling framework). These stations were at Silver Lake Brighton, which is 0.3 miles west of the study area, and the Snake Creek Powerhouse, which is 2.5 miles south of the study area (Figure 2-0-23). We present results for average predictions from all 50 weather scenarios and for 1-in-50-year weather conditions (i.e., conditions likely to occur once in every 50 years). See Appendix A for full details of modeling methodology.

Weather scenarios did not incorporate the potential for altered rainfall intensity with climate change. Climate change is likely to make large, high-intensity wildfires and extreme rainfall events more likely and therefore could result in greater sediment delivery than predicted here (Sankey et al., 2017; Touma et al., 2022). However, spatial patterns in relative sediment delivery across the analysis area are likely to stay the same; topography and soil texture will not change for centuries to millennia, and dominant vegetation types are unlikely to change in the coming decades.

The risk of community values and infrastructure being damaged by post-fire erosion is based on intensity, exposure, likelihood and susceptibility. For our analysis, we quantified intensity as 1-in-50-year predictions of post-fire sediment yield, likelihood as the average conditional burn probability and exposure as the occurrence of values at risk within watersheds with high post-fire sediment yield (>315 tons/year) and high relative burn probabilities (≥33%). We did not assess the susceptibility of different community assets and infrastructure to damage from sedimentation. We compiled and validated the locations of community assets from various sources and utilized a similar categorization as that for the Qualitative Wildfire Risk Analysis (QWRA) as part of the broader project for Park City Municipal Corporation (see Table 2-16 for data sources and chapter 5.0 Wildfire Risk Assessment for a description of the QWRA process).

Key Findings

Predicted Sediment Delivery

The probability of sediment delivery—the likelihood that any amount of sediment is deposited after rainfall events—could increase significantly the first year following wildfire in the Park City area. The median probability of sediment delivery from watersheds was 9% under current, unburned conditions and rose to 38% the first year following wildfire (Table 2-7). Under current, unburned conditions, higher probabilities of sediment delivery occurred in steep watersheds including Red Pine Canyon, Dutch Draw and McDonald Draw in the northwestern part of the analysis area; Thaynes Canyon and the lower portion of Walker and Webster Gulch in the central part of the study area; the western side of Clayton Peak in the southeastern part of the analysis area; and on the eastern side of Bald Mountain in Wasatch Gulch, Pine Canyon, Glencoe Canyon and the top of Dutch Hollow in the eastern part of the analysis area (Figure 2-0-16).

The probability of post-fire sediment delivery could be particularly high across mountainous terrain in the southern portion of the analysis area. In addition to the canyons, draws and gulches mentioned above, probability of post-fire sediment delivery was elevated in West Monitor Flat, Iron Canyon and Ontario Canyon. The probability of erosion was slightly lower in the Bonanza Flat area due to shallower slopes.

The probability of post-fire sediment delivery remained low for watersheds in the northeastern portion of the analysis area, despite there being a moderate to high burn probability with moderate flame lengths in grass and grass-shrub vegetation. The likelihood of large rainfall events was lower across the northern portion of the analysis area and where slopes are shallower—both rainfall intensity and slopes are significant factors driving observed and predicted post-fire erosion.

The magnitude of sediment delivery—the amount of sediment that could be dislodged from hills and transported into streams during intense rainstorms—could increase dramatically the first year following wildfire in the Park City area. If average weather conditions occurred the year following wildfire, total post-fire sediment delivery from watersheds averaged 20 times higher than under current, unburned conditions (Table 2-7). If 1-in-50-year storms followed a wildfire, total post-fire sediment delivery averaged 28 times higher and up to 16,050 times higher. Under extreme weather conditions, 25% of watersheds in the study area could produce very high to extreme sediment delivery the first year following wildfire (>815 tons/year). About 60% of these watersheds also had high relative burn probabilities (≥33%), meaning they have a higher likelihood of burning and then delivering high post-fire sediment (Figure 2-0-16).

The highest total sediment yields the first year following wildfire were predicted for Thaynes Canyon (9,910 tons/year; 60% relative burn probability), Pine Canyon (8,870 tons/year; 40% relative burn probability) and the upper part of McHenry Canyon (6,240 tons/year; 45% relative burn probability). The average slope in these watersheds was about 40%. High-severity fire behavior was predicted to predominate in Pine Canyon and McHenry Canyon. Thaynes Canyon is a large watershed unit, so total sediment delivery was high regardless of the preponderance of low-severity fire behavior.

The size and shape of watershed units is driven by topography and the scale of analysis, so total sediment delivery on a watershed-scale cannot be compared between studies in different landscapes. We calculated per-acre sediment delivery to compare sediment predictions from our analysis to other findings in the western U.S. Under current, unburned conditions and 1-in-50-year storm conditions, per-acre sediment delivery rates were all less than 1.7 tons/acre/year in the Park City area. These values fall within observed

erosion rates for undisturbed watersheds in the western United States (0 to 2.5 tons/acre/year) (Neary et al., 2005). Post-fire, per-acre sediment delivery exceeded 2.5 tons/acre/year for almost 50% of watersheds in the analysis area. The highest per-acre sediment delivery rate at the watershed-scale was 29 tons/acre/year. Erosion rates tend to be <8.0 tons/acre/year for 80% after wildfires (Binkley, 2020; Robichaud et al., 2000), but erosion rates can reach 165 tons/acre/year when extreme rainfall events follow high-severity wildfires on steep slopes (Neary et al., 2005).

Table 2-7. Watershed-scale predictions for the likelihood of sediment delivery across 50 years of random weather simulations and the magnitude of sediment delivery under unburned conditions and the first year following wildfire for average and 1-in-50-year weather conditions. For comparison, sediment yields are typically 0-2.5 tons/acre/year in undisturbed watersheds across the western United States (Neary et al., 2005).

	Probability of sediment delivery (%) Median (minimum-maximum)			Total sediment (tons/year) Median (minimum-maximum)			Per-acre sediment (tons/acre/year) Median (minimum-maximum		
Weather conditions	Unburned	1-yr post-fire	Ratio (post-fire: unburned)	Unburned	1-yr post-fire	Ratio (post-fire: unburned)	Unburned	1-yr post-fire	Ratio (post-fire: unburned)
Average	9 (0-76)	38 (0-84)	3 (1-65)	0.3 (0.138)	15.2 (0-769)	20 (1-429)	0 (0-0.4)	0.1 (0-1.5)	20 (1-433)
1-in-50 year	N/A	N/A	N/A	11.1 (0-720)	316.5 (0-9,907)	28 (0.1-16,047)	0.1 (0.0-1.7)	2.3 (0.0-29.4)	29 (0.1-30,261)

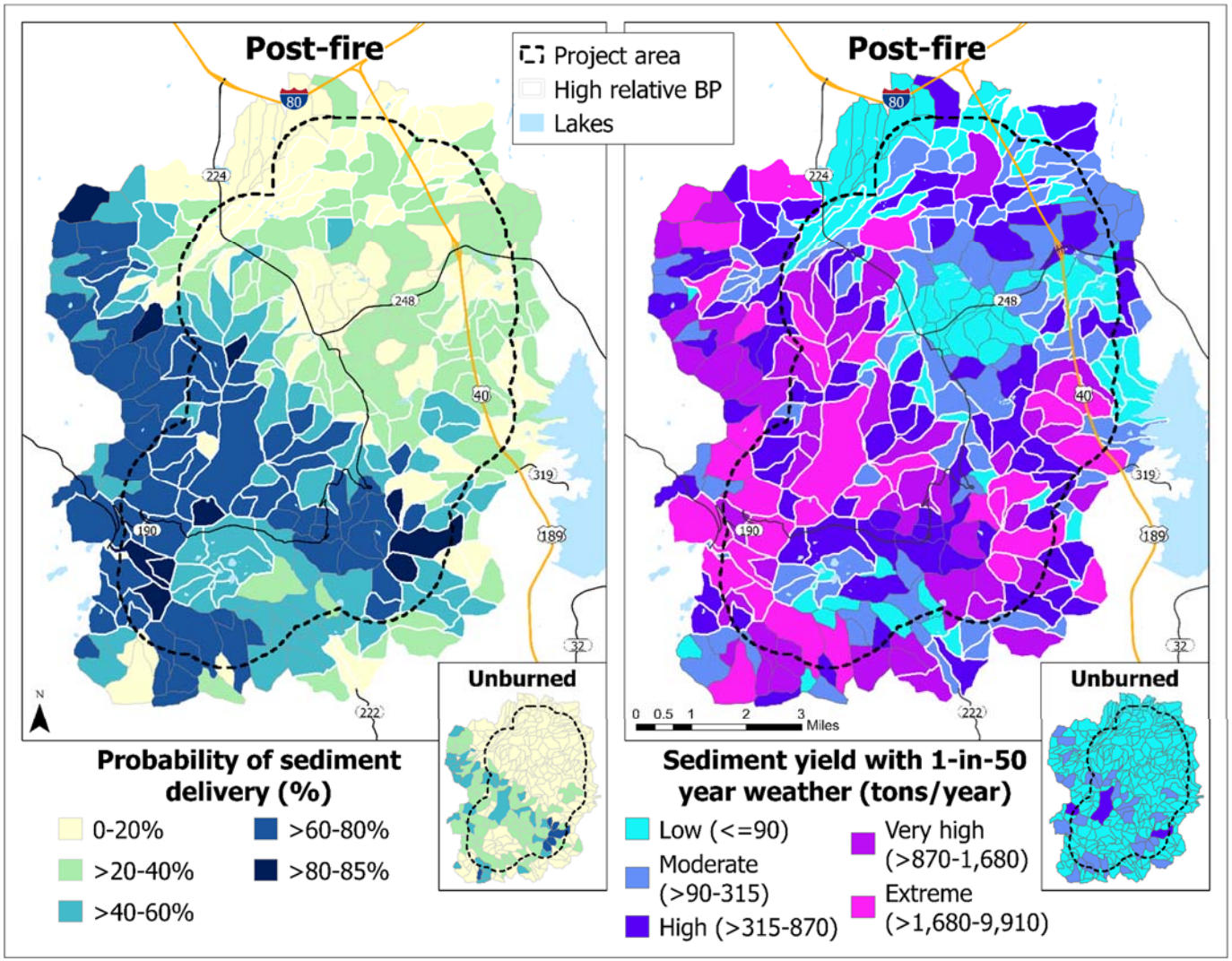

Figure 2-0-16. Figure 2.4.3. Watershed-scale predictions of the probability of sediment delivery (the percentage of 50 simulated weather scenarios that resulted in sediment delivery >0 tons/acre) and the magnitude of sediment delivery (tons/year) for unburned conditions and the first year following wildfire. Total sediment yield is presented for 1-in-50-year weather conditions. Watersheds outlined in white have relative burn probabilities (BP) ≥33%.

Values at Risk to Post-Fire Sediment Delivery

Post-fire sediment delivery triggered by severe rainstorms the first year following wildfires could cause significant damage to some homes, businesses, community values and infrastructure in the Park City area. We considered values with a high risk of post-fire sediment delivery to be those located in watersheds with a high relative burn probability (≥33%) and high magnitude of post-fire sediment delivery (>315 tons/year). Segments of streams/rivers and lakes downstream of watersheds with high potential post-fire sediment delivery were also identified as high risk because they could receive sediment from upper reaches.

Figure 2-0-17 and Figure 2-0-18 show the location of values at risk across the analysis area. Figure 2-0-19 shows the percentage of length of linear values at risk. Figure 2-0-20 shows the percentage of area of the Richardson Superfund Site and ski resorts at risk. Figure 2-0-25 shows the names and lengths of linear features exposed to post-fire sediment. Figure 2-0-29 shows the burn probabilities and potential sediment delivery for all values at risk included in this analysis. See Figure 2-0-24 for a reference map with the locations of topographic features (e.g., ravines, gulches, hills, and mountains) mentioned below, and Figures 2-0-25 – 2-0-28 for zoomed-in maps of values at risk in each project zone.

Homes and businesses - About 1,560 homes and businesses in the area (12% of all addresses) are in watersheds with a high risk of damage from post-fire sediment delivery. Homes and businesses with high risk of post-fire sediment delivery are located in or around Quarry Mountain, White Pine Canyon, Iron Canyon, Thaynes Canyon, McLeod Creek at the base of Crescent Ridge, Walker and Webster Gulch, Empire Canyon, Rossi Hill, Bald Eagle Mountain and north of Deer Valley Meadow.

Public safety - All fire stations, law enforcement buildings and courthouses have low risk of post-fire sediment delivery due to their locations in areas with low relative burn probabilities and shallow slopes. Communication towers on Quarry Mountain and Bald Mountain and a handful of sites with petroleum storage tanks or tier 2 chemical inventory facilities could be exposed to damaging post-fire sediment delivery. These sites with hazardous material are primarily maintenance shops with a small number of storage tanks. Less than 10% of the Richardson Superfund site is in watersheds with high risk of post-fire sediment delivery.

Critical infrastructure - Water infrastructure in the area has a high risk of damaging post-fire sediment. The high risk of streams and other water infrastructure to post-fire sediment delivery is particularly concerning given the importance of watersheds in this part of Utah for the delivery of clean drinking water (Figure 2.4.2). Numerous springs, water tanks and water points of distribution are in at-risk areas in and around Round Valley, Iron Canyon, Bald Eagle Mountain, Bald Mountain, Pocatello Gulch and south of Richardson Flat. About 40% of the length of pipelines, 15% of canals and ditches and 54% of streams and rivers are in at-risk areas, including 6.2 miles of McLeod Creek, 3.0 miles of the perennial stream in Thaynes Canyon, 2.7 miles of Kimball Creek, 2.0 miles of the ephemeral stream in Bloods Lake Drainage and 1.9 miles of the ephemeral stream in Walker and Webster Gulch. These at-risk streams were analyzed as part of the rapid stream assessment for this broader project (see chapter 2.3 Stream Condition).

One ephemeral stream and two perennial streams with high-risk flow out of the analysis area and into Jordanelle Reservoir, which is an important water supply for Jordan Valley Water Conservancy District. Several smaller lakes are also directly at risk of post-fire sediment or of receiving post-fire sediment from at-risk streams, including Silver Lake, Lake Mary, Dog Lake, Bloods Lake in the

southwestern part of the analysis area and White Pine Lake in the central-western part. Although not included in this analysis, Rockport Reservoir, an important source of culinary water for Park City, could also be exposed to sediment delivery due to topography and potential fire behavior in the surrounding watersheds.

About 15% of overhead distribution lines and 28% of overhead transmission lines are in areas with high risk of post-fire sediment. At-risk transmission lines occur in and around White Pine Canyon, Iron Canyon, Walker and Webster Gulch, Guardsman Pass and south of Jupiter Hill. All electrical substations are predicted for low risk of post-fire sediment.

Transportation infrastructure - About 30% of the length of roads in the study area have a high risk of post-fire sediment, including over 4 miles of Highway 40 and 1 mile of Highway 224. The bridge on State Route 224 over Deer Valley ski run and on Deer Valley Drive over Silver Creek could be exposed to post-fire sediment. Sedimentation and debris flows over major roads and bridges can cause significant damage and road closures, such as occurred following the 2018 Pole Creek and Bald Mountain Fires, 2014 Levan Fire and 2012 Seeley Fire (Table 2-6). The bus stop at Snow Parks Lodge could also experience damage from post-fire sedimentation.

Recreation infrastructure - There is a significant risk of post-fire sediment delivery to recreation infrastructure in the Park City area. Almost all the Brighton Ski Resort in the study area could experience post-fire sediment delivery, as could over 50% of Deer Valley Resort and Park City Mountain Resort and almost 70% of the length of ski lifts. Over 45% of the length of trails in the study area and 11 trailheads have a high risk of post-fire sediment due to their location on steep slopes with high burn probabilities. This includes almost 10 miles of Mid Mountain Trail and 4 miles of Rambler and Pinecone Trails.

Heritage resources - Most historic buildings and homes in downtown Park City have low risk of post-fire sediment delivery. Glenwood Cemetery has a high risk of post-fire sediment delivery from McLeod Creek at the base of Crescent Ridge, and McPolin Farmstead could receive high sediment delivery from Iron Canyon. Historic structures at Thaynes Mine, California-Comstock Mine, Jupiter Mine, Alliance Mine and Silver King Mine are at risk of post-fire sediment delivery from watersheds around Jupiter Hill, Treasure Hill, Crescent Ridge, Thaynes Canyon and Webster and Walker Gulch.

Medical care, education, and other community services and resources - A majority of health and medical facilities, schools, churches, grocery stores and other community services and resources have low risk of post-fire sediment delivery. Most of these community assets are in watersheds with low relative burn probabilities and shallow slopes in downtown Park City and Snyderville. Exceptions include Park City Mountain Medical Clinic near McLeod Creek at the base of Crescent Ridge, St. Mary's Catholic Church and Holy Cross Ministries Preschool near the mouth of White Pine Canyon and Westgate Marketplace near the mouth of Willow Draw and Red Pine Canyon.

We did not model landslides, channel erosion or debris flows, so an even greater number of community assets might be at risk of damaging sediment and flooding than those described here. Much of downtown Park City could potentially be exposed to flooding and debris flow from Thaynes Canyon, McLeod Creek, Walker and Webster Gulch and Ontario Canyon, as could much of Snyderville due to flooding and debris flow from Willow Draw and Red Pine Canyon.

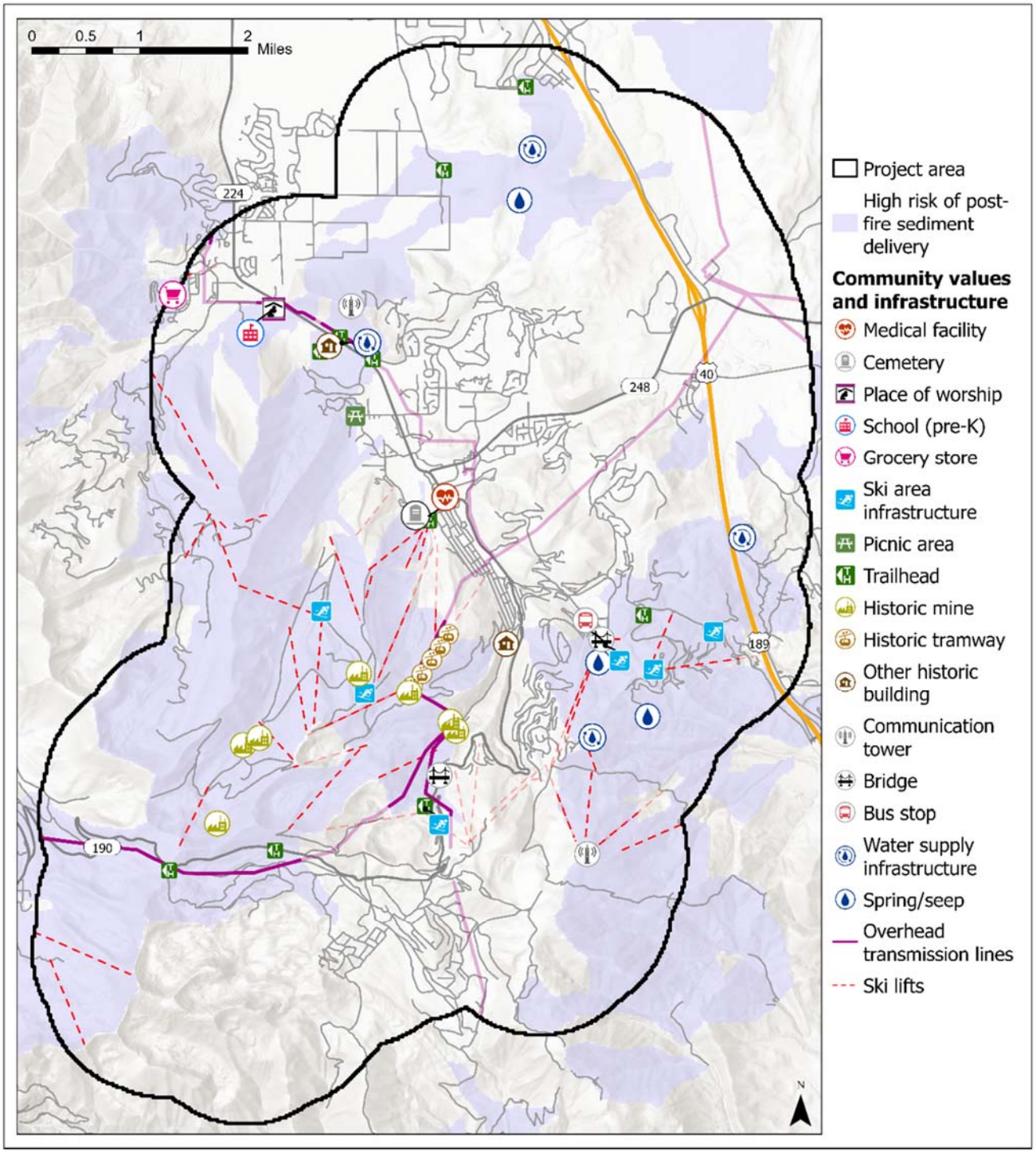

Figure 2-0-17. Community values and infrastructure in watersheds with high risk of post-fire sediment delivery. Ski lifts and overhead transmission lines in lighter shades are segments not at high risk. Zoomed-in maps of values at risk in each project zone are available in Figures 2-25 – 2-28.

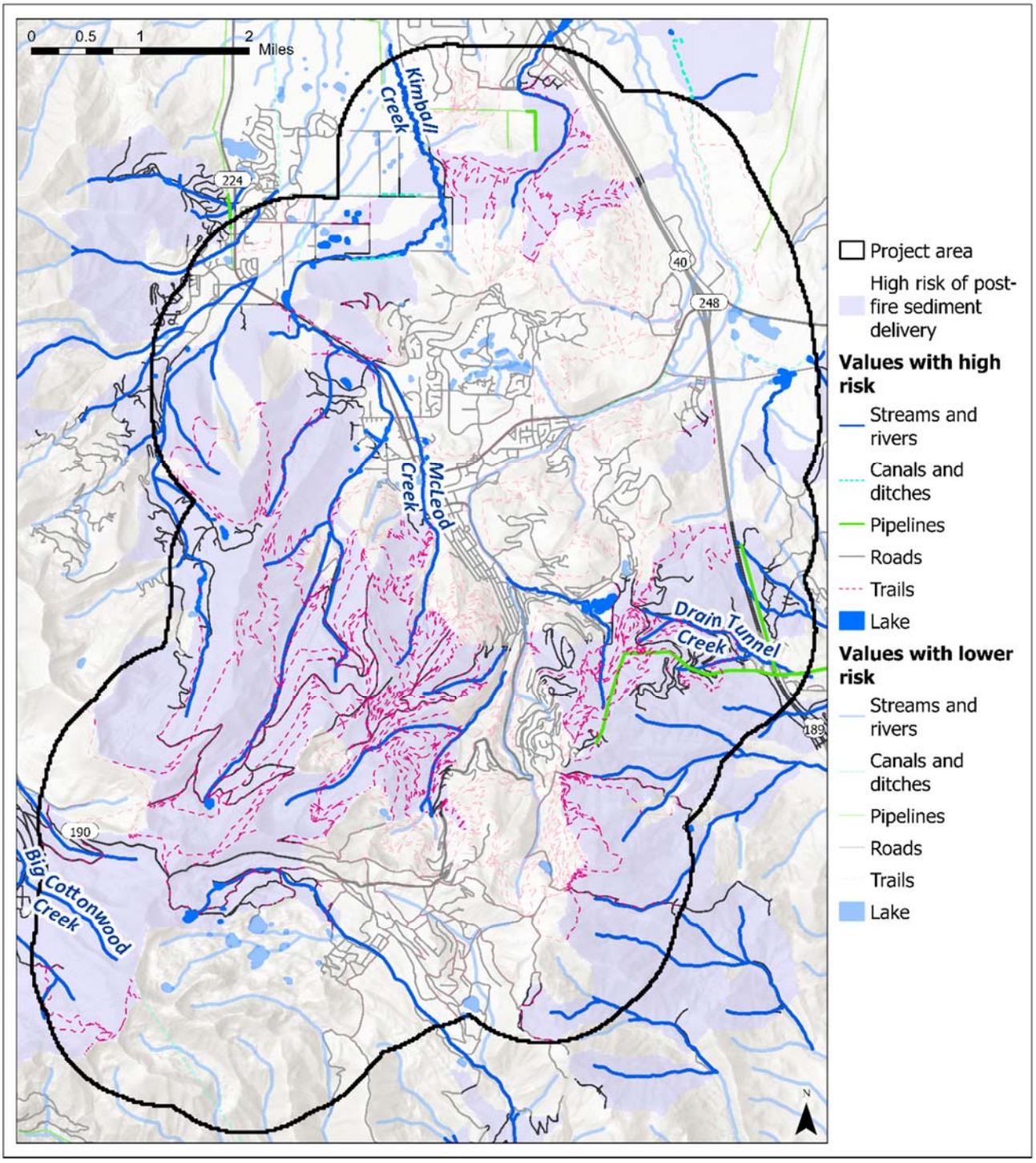

Figure 2-0-18. Roads, trails, streams, canals, ditches, pipelines and lakes in watersheds with high risk of post-fire sediment delivery. Segments of streams/rivers and lakes downstream of watersheds with high potential post-fire sediment delivery were also identified as high risk because they could receive sediment from upper reaches. Features in lighter shades are those not at high risk. Zoomed-in maps of values at risk in each project zone are available in Figures 2-25 – 2-28.

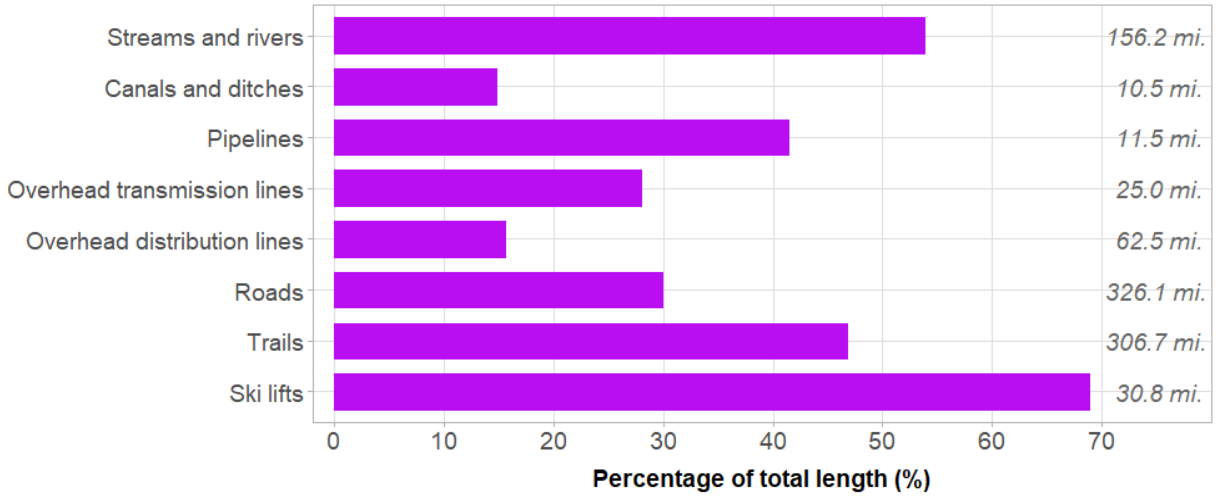

Figure 2-0-20. Percentage of the length of community assets and infrastructure in the watershed analysis area with high risk of post-fire sediment delivery. Annotations to the right indicate the total length of each feature in the analysis area in miles.

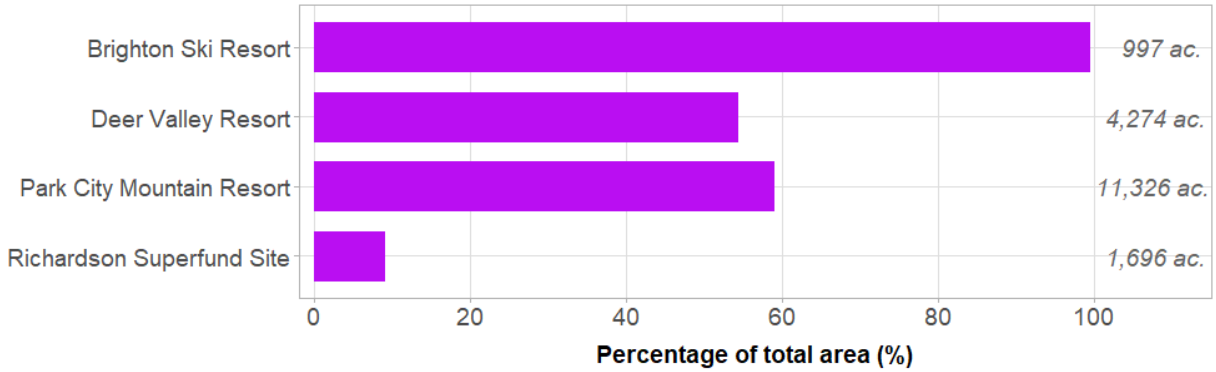

Figure 2-0-19. Percentage of the area of ski resorts and the Richardson Superfund Site in the watershed analysis area with high risk of post-fire sediment delivery. Annotations to the right indicate the total area of each feature in the analysis area in acres.

Recommendations and Conclusion

Pre-Fire Mitigation Measures

The potential for post-fire sediment delivery and damage to values at risk can be mitigated through activities to improve stream health and resilience, strategic fuel treatments to reduce fire hazards and pre-planning for emergency response. This assessment of post-fire sediment delivery fed into recommendations for priority actions to improve the resilience of streams to wildfires (see chapter 2.3. Post-Fire Sediment

Delivery) and the location of proactive fuel treatments to mitigate wildfire and post-fire impacts (see chapter 5.0 Wildfire Risk Assessment).

Rivers and stream channels that can dissipate flood waters and store sediment are those that have high floodplain connectivity, contain features that can slow the velocity of water and sediment (e.g., boulders, beaver dams, and large pieces of wood) and are lined with abundant riparian vegetation (Fairfax and Whittle, 2020; Wheaton et al., 2019a). See chapter 2.3 Stream Condition for a description of the current condition of streams in the Park City area and recommended management actions to improve stream health and resilience. These activities are particularly important for streams in areas with a high potential for sediment delivery, including Kimball Creek, East Canyon Creek, McLeod Creek, Silver Creek, the perennial stream in Thaynes Canyon and ephemeral streams in Bloods Lake Drainage and Webster and Walker Canyon.

Fuels treatments can help avoid costly post-fire damage to infrastructure by reducing fire intensity and extent, and therefore reducing the likelihood of post-fire debris flows and sedimentation (Gannon et al., 2019; K. W. Jones et al., 2017). Several projects to mitigate wildfire risk and reduce the likelihood of post-fire sediment have already been completed in the vicinity of Park City, including a $1.24 million project funded by the Utah Division of Wildlife Resources/Utah Watershed Restoration Initiative to mitigate fire risk and restore ecosystem conditions in Parleys Canyon. Fuel treatments recently completed on Treasure Hill could reduce fire severity and potentially reduce the likelihood and magnitude of post-fire sediment delivery into the downtown area of Park City. Watersheds in Iron Canyon, Thaynes Canyon, Walker and Webster Gulch, along Crest Ridge, and around Bald Mountain and Bald Eagle Mountain could especially benefit from fuel treatments given their high potential to deliver sediment to homes and community assets after wildfire.

We recommend that emergency managers in the Park City area continually revise and strengthen plans for developing and maintaining water drainage infrastructure, conducting proactive fuel treatments and coordinating post-fire emergency response in coordination with federal and state agencies, utility companies, ski resorts and other affected parties. It is vital to educate residents and business owners about potential risks of post-fire sediment and encourage them to develop plans to protect their families, homes and businesses prior to an emergency ever arising. Table 2-8 describes valuable resources to assist with city-level and individual-level planning around post-fire flooding.

Post-Fire Mitigation Measures

After a wildfire, a variety of mitigation options can stabilize hillslopes, reduce post-fire erosion and protect lives and property. Robichaud & Ashmun (2013) review the relative effectiveness of different post-fire mitigation measures, and Robichaud et al. (2000) provide cost estimates for different measures. The Summit County Sediment and Erosion Control BMP Manual outlines the intended uses, benefits and ideal design for different mitigation measures (Summit County Engineering Department, 2004).

Common stabilization treatments include the application of straw mulch or a seed mix (usually annual grasses) to burned hillsides. Water barriers, such as contour-felled logs or straw wattles, can slow the movement of water and sediment downslope. Particularly effective measures are straw or wood mulches and log or rock check dams. Contour-felling can reduce sediment delivery under low-intensity rainfall, but this approach is less effective under high-intensity rainfall conditions (Robichaud & Ashmun 2013).

Creative, low-cost and effective approaches to post-fire mitigation can include building artificial beaver dams to decrease the velocity of downstream flows and trap sediment. This type of project was undertaken by the

Utah Division of Wildlife Resources, U.S. Fish & Wildlife Service, Trout Unlimited, Sageland Collaborative and private landowners in 2016 in Miller Creek following the 2012 Seeley Fire (Utah Division of Wildlife Resources, 2021).

Actions undertaken by Burned Area Emergency Response teams and Utah's Watershed Restoration Initiative following past wildfires along the Wasatch Range have included the following (Table 2-17):

- Aerial seeding and mulching to increase ground cover and decrease the potential for erosion.
- Assessment, treatment and monitoring of invasive species.
- Maintenance, repair and installation of drainage features such as check dams, water bars and sediment basins.
- Streambank stabilization and reshaping to decrease the potential for future flooding events.
- Closures and warning signs to protect public safety.
- Storm patrols to assess damages after large rainfall events.

The appropriateness and effectiveness of different post-fire mitigation methods depend on burn severity, soil texture, topography, years-since-fire, storm conditions, accessibility of the site, values at risk, and tradeoffs between mitigation actions and natural resource conditions. BAER teams can help assess potential sediment delivery for a specific event, values at risk and effective mitigation methods after a wildfire occurs on federal lands. They do not conduct assessments on local-, state- or privately owned land, but findings from BAER reports can be useful for informing mitigation on surrounding lands, and federal agencies have coordinated with Utah's Watershed Restoration Initiative to support post-fire mitigation on non-federal land.

There are important planning steps that municipalities, land managers, emergency managers, water providers and utilities can undertake to prepare for post-fire mitigation before an event even happens. The Colorado Post-Fire Recovery Playbook is an excellent example of developing a process with checklists, contact information and potential funding sources for mitigation actions (see link in Table 2-8). A Post-Fire Recovery Playbook for this part of Utah could include information about providers of weed-free seeds and information about funding sources such as Utah's Watershed Restoration Initiative.

Proactive planning and activities to mitigate impacts of wildfires and post-fire sediment are key components of becoming a fire-adapted community. Immediate and long-term action to address potential post-fire sediment are important for protecting values at risk across the Park City area. Climate change makes immediate action even more imperative as the future is likely to include more frequent large, high-intensity wildfires and extreme rainfall events (Sankey et al., 2017; Touma et al., 2022).

Table 2-8. Resources for homeowners, business owners, water providers, utility companies, municipalities and counties to mitigate impacts of post-fire flooding, sediment delivery and debris flows. Website links were active as of January 2023.

TITLE AND SOURCE	TARGET AUDIENCE	EXAMPLE OF ACTIONS TO MITIGATE AND/OR RESPOND TO POST-FIRE SEDIMENT DELIVERY
Flood and landslide sections in Part 3 and 5 of the 2022 Pre-Disaster Mitigation Plan for Summit, Utah, and Wasatch Counties (Mountainland Association of Governments, 2022)	Local governments	Require hazardous materials to be located outside flood areas. Retain thick vegetation on public lands flanking rivers.
Colorado Post-Fire Recovery Playbook (Dunlap et al., 2021)	Counties, tribes, municipalities and water providers. The document is specific to Colorado but provides a good framework for local governments in other states.	Obtain geospatial data on critical infrastructure and drinking water supplies. Coordinate with local entities to establish a local recovery group.
Wildfire incident action checklist for water utilities (U.S. Environmental Protection Agency, 2022)	Water utility companies and municipalities	Identify potential failure points within service areas. Install a rain gauge upstream of raw water intakes for early warning of heavy precipitation.
Flood hazard information for property owners (Utah Division of Emergency Management, 2023; includes links to ready.gov, FEMA, and the National Flood Insurance Program)	Homeowners and business owners	Purchase flood insurance. Elevate and anchor critical utilities, including electrical panels, propane tanks, sockets, wiring, appliances and heating systems.
Post-wildfire hazards (Utah State University Extension, 2023)	Homeowners and business owners	Secure important documents in a waterproof deposit box. Ensure sump pumps are working and have a battery-operated backup power source.
Homeowner's Guide for Flood, Debris, and Erosion Control (Los Angeles County Public Works, 2018). Homeowners and business owners.	Although not specific to Utah, this resource has incredible infographics and clear action steps that apply to all post-fire emergencies.	Install more permanent measures to protect your home, such as terraces and slope drains. Avoid altering drainage patterns that could worsen conditions for your neighbor.

Methods Details

We modeled erosion using the Water Erosion Prediction Project (WEPP) version 2.0 following the approaches of Elliot et al. (2016) and Miller et al. (2011). WEPP is a process-based model that predicts runoff and sediment yields from hillslopes and small, unchannelized watersheds (Elliot & Hall, 2010). WEPP models sheet and rill erosion and hydrological processes such as snow accumulation and melt, deep percolation of soil water and subsurface lateral flow under different land uses, climate and hydrologic conditions. WEPP

does not model landslides, channel erosion or debris flows. The WEPP model was developed by the U.S. Department of Agriculture Forest Service, Agricultural Research Service and numerous universities.

We delineated hillslopes through ArcPro version 3.0.3 using a modified version of the WEPP Hillslope Toolbox, which is based on TOPAZ (Topographic Parameterization Software) from the USDA Agricultural Research Service. Small watersheds can be subdivided into at least three hillslopes—one on each side of a stream or river and one above the headwaters of the watershed (Figure 2-0-21). We modified the original toolbox to be compatible with ArcPro 3.0.3 and to improve model performance. We used a 30-meter resolution digital elevation model from the U.S. Geological Service.

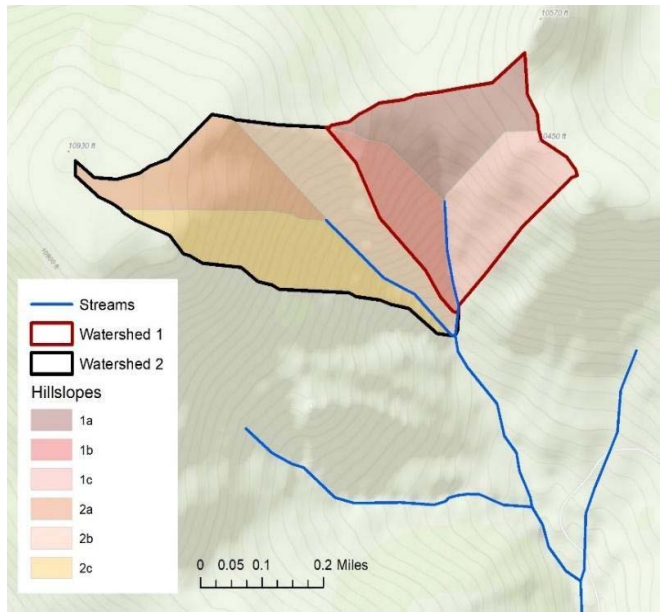

Figure 2-0-21. Example of small watersheds and hillslopes.

Hillslopes were delineated with a critical source area (CSA) of 25 acres and a minimum source channel length (MSCL) of 330 feet. Watersheds were delineated with a CSA of 75 acres and a MSCL of 330 feet. We delineated 1,729 hillslopes within the analysis area with an average size of 68 acres (range of 3 to 3,000 acres), and we aggregated results within 320 larger watersheds with an average size of 370 acres (range of 5 to 4,620 acres). Watersheds contained an average of 5 hillslopes (range of 1 to 29 hillslopes). Watershed predictions of sediment delivery in tons/acre/year were weighted averages based on hillslope size, and total sediment delivery was a sum of hillslope predictions in tons/year.

We used the WEPP batch processing spreadsheet available from the U.S. Forest Service to predict erosion from hillslopes within the analysis area. WEPP requires the following inputs: hillslope area, slope profiles for upper and lower portions of hillslopes, soil texture, percentage of soil as rock, vegetation type and/or burn severity, and surface cover (Figure 2-0-22).

Hillslopes were assigned the most prevalent soil texture, burn severity and vegetation types present on flow paths within the upper and lower portion of the hillslopes. Soil textures came from the Soil Survey Geographic Database (SSURGO) produced by the USDA Natural Resources Conservation Service and available from the Utah Geospatial Resource Center's State Geographic Information Database (SGID). We associated soil textures from SSURGO with WEPP soil texture categories and assigned each soil type a percent rock value based on the NRCS Field Book for Describing and Sampling Soils (Schoeneberger et al., 2013) (Table 2-9).

Vegetation data came from associating 2016 LANDFIRE existing vegetation type (EVT) physiognomic subclasses with WEPP vegetation categories. Percent ground cover estimates for WEPP vegetation categories were based on default values from the online WEPPcloud Post-Fire Erosion Prediction tool (Table 2-10).

We associated predicted flame length from IFTDSS under extreme (97th percentile) fire weather conditions with burn severity classes and percent cover values following Elliot et al. (2016) and default values from the online WEPPcloud Post-Fire Erosion Prediction tool (Table 2-11). The post-fire scenario assumed that fires burned every portion of a watershed—a reasonable assumption given that the sizes of watersheds delineated for this analysis (5 to 4,620 acres) are within the size range of wildfires along the Wasatch Range that resulted in post-fire sediment (160-103,500 acres) (Table 2-6). See chapter 5.0 Wildfire Risk Assessment for a description of fire behavior methodology and output.

We ran the WEPP model under 50 years of different weather conditions generated by the Rocky Mountain Research Station Climate Generator (Rock:Clime) (Elliot et al., 1999). Weather scenarios were based on historical observations from 45 years at the Silver Lake Brighton Station (NWS cooperative station 427846), which is 0.3 miles west of the study area, and from 65 years at the Snake Creek Powerhouse Station (NWS cooperative station 427909), which is 2.5 miles south of the study area (Figure 2-0-23). The two weather stations within the study area—Park City Fire Station 31 (NWS cooperative station 426644) and Snyderville (NWS cooperative station 427942) were not incorporated into the Rock:Clime program because they have less than 30 years of historical observations (Table 2-12).

We ran the WEPP model under 50 years of different weather conditions generated by the Rocky Mountain Research Station Climate Generator (Rock:Clime) (Elliot et al., 1999). Weather scenarios were based on historical observations from 45 years at the Silver Lake Brighton Station (NWS cooperative station 427846), which is 0.3 miles west of the study area, and from 65 years at the Snake Creek Powerhouse Station (NWS cooperative station 427909), which is 2.5 miles south of the study area (Figure 2-0-23). The two weather stations within the study area—Park City Fire Station 31 (NWS cooperative station 426644) and Snyderville (NWS cooperative station 427942) were not incorporated into the Rock:Clime program because they have less than 30 years of historical observations (Table 2-12).

Historical weather conditions were substantially cooler and wetter at the Silver Lake Brighton Station (elevation of 8,740 feet) and the Snake Creek Powerhouse Station (elevation of 6,010 feet) (Table 2-13). Historical observations from the weather stations at Park City Fire Station 31 and Snyderville were comparable to those from the Snake Creek Powerhouse Station (Table 2-14). We used conditions from the Silver Lake Brighton Station to model potential erosion for areas ≥8,000 feet and those from the Snake Creek Powerhouse Station for areas <8,000 feet.

We classified post-fire sediment delivery into five categories (low, moderate, high, very high and extreme) based on the distribution of predictions (Table 2-15). For our values at risk analysis, we compiled and validated the locations of community assets from various sources and utilized a similar categorization as that for the Qualitative Wildfire Risk Analysis as part of the broader project for Park City Municipal Corporation (Table 2-16). We considered all community assets within a watershed to share the same risk regardless of their specific topographic position within a watershed. Due to the scale of analysis, we could not model different exposure levels for infrastructure located at the top of a watershed versus at the bottom of a watershed, but it is likely that infrastructure near the bottom of watersheds have a greater exposure to cumulative sedimentation.

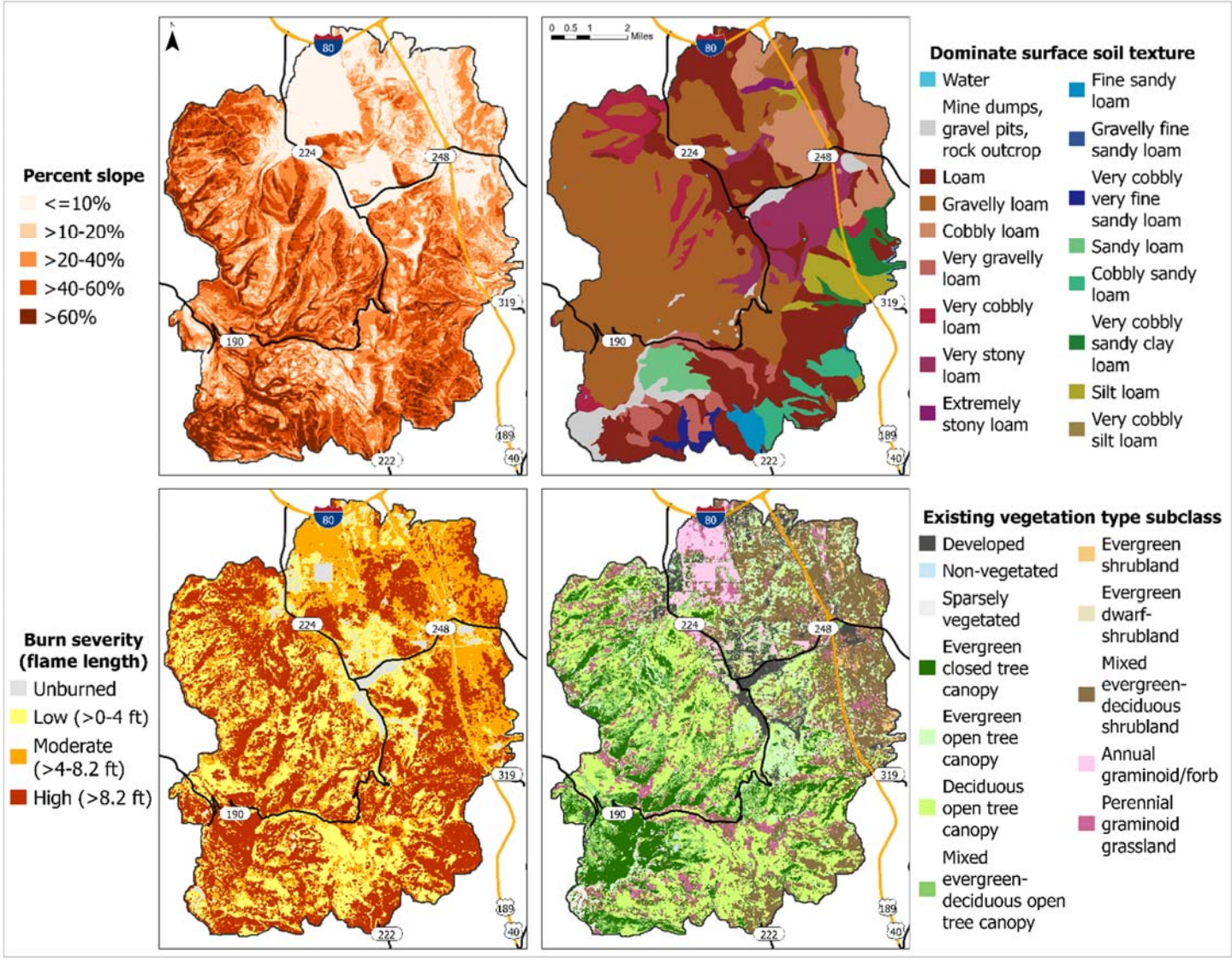

Figure 2-0-22. Inputs used for predicting sediment delivery with WEPP. Sources: Slope from LANDFIRE 2016, soil texture from the Soil Survey Geographic Database, burn severity derived from flame length predictions from IFTDSS (see chapter 5.0 for fire behavior methodology), existing vegetation type subclass from LANDFIRE 2016.

Table 2-9. Relationships between soil textures from SSURGO and WEPP soil textures and percent rock content, and the percent of the study area represented by each SSURGO soil texture.

SSURGO SOIL TEXTURE	WEPP SOIL TEXTURE	PERCENT ROCK (%)[1]	PERCENT OF EROSION ANALYSIS AREA
Loam	Loam	7	22
Cobbly loam Gravelly loam	Loam	25	50
Very cobbly loam Very gravelly loam Very stony loam	Loam	48	13
Extremely stony loam	Loam	75	<1
Sandy loam Fine sandy loam	Sandy loam	7	3
Cobbly sandy loam Gravelly fine sandy loam	Sandy loam	25	2
Very cobbly very fine sandy loam Very cobbly sandy clay loam	Sandy loam	48	3
Silt loam	Silt loam	7	3
Very cobbly silt loam	Silt loam	48	<1
Gravel pit Mine dump Rock outcrop	Sandy loam	75	3
Water	N/A	N/A	<1

[1] Percent rock values are the midpoint of the percent rock associated with soil texture modifiers "gravelly" and "very gravelly" according to (Schoeneberger et al., 2013).

Table 2-10. Relationship between LANDFIRE existing vegetation type (EVT) physiognomic subclasses and associated WEPP vegetation categories and percent cover values.

LANDFIRE EVT PHYSIOGNOMIC SUBCLASSES	WEPP VEGETATION TYPE	PERCENT GROUND COVER (%)	PERCENT OF EROSION ANALYSIS AREA (%)
Evergreen closed tree canopy	20-year-old forest	90	14
Deciduous open tree canopy Evergreen open tree canopy Mixed evergreen-deciduous open tree canopy	Shrub-dominated[1]	90	44
Evergreen dwarf-shrubland Evergreen shrubland Mixed evergreen-deciduous shrubland	Shrub-dominated	85	24
Perennial graminoid grassland	Tall grass	80	4
Annual graminoid/forb (croplands)	Tall grass	90	6
Sparsely vegetated	Short grass	50	1
Developed and non-vegetated	Short grass[2]	50	7

[1] Shrub-dominated was used for open tree canopy types because, according to WEPP, this vegetation can produce reasonable estimates for harvested forests 3 years after harvest, which might more closely represent overstory and understory conditions than the 20-year-old forest conditions.
[2] WEPP does not have a category for barren, so short grass was used instead.

Table 2-11. Relationship between predicted flame length, burn severity and percent cover following Elliot and others (2016) and default values from the online WEPPcloud Post-Fire Erosion Prediction tool.

Burn severity category	Predicted flame length (ft)	Percent ground cover (%)	Percent of erosion analysis area (%)
Unburned	0	See Table A.2.4.2	4
Low	>0 to 4	60	27
Moderate[1]	>4 to 8.2	45	28
High	>8.2	15	41
[1] WEPP does not have a cover category for moderate severity fire, so low-severity fire was used with the ground cover value indicated above.			

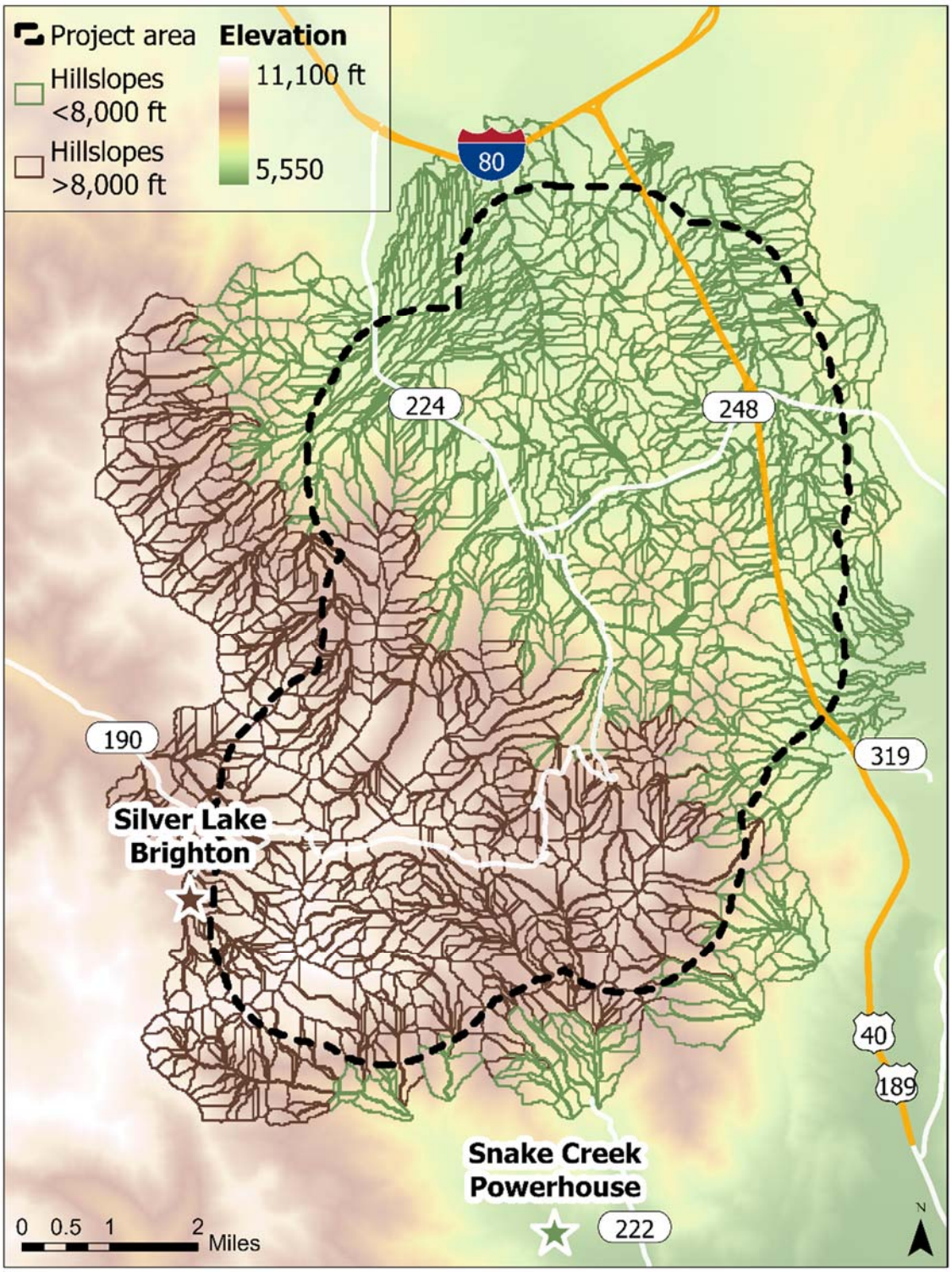

Figure 2-0-23. Location of the Silver Lake Brighton Station (NWS cooperative station 427846), which was used to model weather conditions for areas ≥8,000 feet in elevation, and the Snake Creek Powerhouse Station (NWS cooperative station 427909), which was used for areas <8,000 feet.

Table 2-12. Location and characteristics of National Weather Service (NWS) cooperative stations in the Park City area. Data from the Western Regional Climate Center (2023).

Station name (NWS COOP ID)	Years of records	Latitude	Longitude	Elevation (ft)
Silver Lake Brighton (427846)	1948-2016 (45 years of record used by Rock:Clime)	40°N 36' 00"	111°W 35' 00"	8,740
Snake Creek Powerhouse (427909)	1928-2016 (65 years of record used by Rock:Clime)	40°N 32' 43"	111°W 30' 15"	6,010
Park City Fire Station 31 (426644)	1992-2016 (not included in Rock:Clime)	40°N 40' 00"	111°W 30' 00"	6,910
Snyderville (427942)	1991-2016 (not included in Rock:Clime)	40°N 42' 00"	111°W 32' 00"	6,460

Table 2-13. Annual climate conditions under average and 50-year conditions (i.e., those likely to occur only once in 50 years) based on simulated climate scenarios from the Rock:Clime model (Elliot et al., 1999) and historical observations at the Snake Creek and Silver Lake Brighton weather stations.

	Snake Creek Powerhouse Station (watersheds < 8,000 ft)		Silver Lake Brighton Station (watersheds >= 8,000 ft)	
Weather characteristic	Average conditions	1-in-50-year conditions	Average conditions	1-in-50-year conditions
Precipitation (rain + snow; inch/year)	23.1	34.6	42.9	58.0
Precipitation events/year	95	105	119	129
Maximum monthly average temperature (F)	84.5	84.3	72.1	73.9
Minimum monthly average temperature (F)	13.0	13.8	11.7	10.0

Table 2-14. Average weather conditions for NWS cooperative stations in the Park City area. Data for Silver Lake Brighton and Snake Creek Powerhouse from Rock:Clime (Elliot et al., 1999) and Park City Fire Station 31 and Snyderville from the Western Regional Climate Center (2023).

Weather characteristic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average maximum temperature													
Silver Lake Brighton	30.8	33.4	36.7	44.5	53.2	63.8	72.1	70.3	62.3	51.4	38.1	32.0	49.1
Snake Creek Powerhouse	33.5	38.1	45.7	57.0	67.0	76.5	84.5	82.3	73.8	62.4	45.7	36.2	58.6
Park City Fire Station 31	34.6	37.0	45.8	54.2	65.6	74.9	83.3	81.0	70.9	59.1	43.6	35.0	57.1
Snyderville	33.4	34.9	44.6	50.9	62.4	71.7	78.6	79.8	72.1	57.0	42.8	35.2	55.3
Average minimum temperature													
Silver Lake Brighton	11.7	11.8	14.1	20.3	28.5	36.4	43.9	42.4	35.1	26.4	16.3	11.7	24.9
Snake Creek Powerhouse	13.0	15.0	20.5	27.7	34.2	39.9	46.3	45.2	37.5	29.3	20.1	14.4	28.6
Park City Fire Station 31	12.8	13.9	21.6	28.1	34.9	41.0	48.3	47.4	38.8	29.6	19.8	14.1	29.2
Snyderville	9.4	8.6	19.0	25.7	33.5	37.9	41.6	43.2	35.2	25.3	16.3	10.9	25.6
Average precipitation (inches)													
Silver Lake Brighton	5.0	4.5	5.3	3.9	3.0	1.6	1.5	1.8	2.1	3.2	4.7	4.9	41.6
Snake Creek Powerhouse	2.9	2.7	2.3	1.8	1.5	1.0	0.9	1.2	1.2	1.8	2.2	2.7	22.1
Park City Fire Station 31	2.0	1.9	1.9	1.8	2.1	1.4	1.0	1.3	1.4	2.2	2.0	1.7	20.6
Snyderville	2.8	2.1	2.2	2.3	1.9	1.6	1.0	1.3	1.2	2.0	1.9	2.3	22.6

Table 2-15. Categories for potential sediment delivery the first year following wildfire and under 1-in-50-year storm conditions.

Sediment category	Total sediment (tons/year)	Per-acre sediment (tons/acre/year)	Reason for upper cutoff value
Low	0 - 90	0 - 0.5	90th percentile value for unburned conditions at the watershed scale.
Moderate	>90 - 315	>0.5 - 2.0	Median value for post-fire conditions at the watershed scale.
High	>315 - 870	>2.0 - 5.0	75th percentile value for post-fire conditions at the watershed scale.
Very high	>870 - 1,680	>5.0 - 9.5	90th percentile value for post-fire conditions at the watershed scale.
Extreme	>1,680 - 9,955	>9.5 - 30	Maximum value for post-fire conditions at the watershed scale.

Table 2-16. Categorization scheme for community values and infrastructure and data sources used for this analysis. Acronym descriptions appear as a footnote below the table. A subset of these values were included in the QWRA process, described in chapter 5.0 Wildfire Risk Assessment. The QWRA process limits the number of values at risk and categories that can be used, but the suite of values at risk was not limited for our post-fire sediment assessment.

Category	Source(s)	Included in QWRA?
Critical infrastructure		
Overhead transmission lines	Rocky Mountain Power	Yes
Overhead distribution lines	Rocky Mountain Power	Yes
Electrical substations	Rocky Mountain Power	Yes
Water point of distribution	Bureau of Reclamation	Yes
Water treatment plants	Bureau of Reclamation	Yes
Water tanks	Bureau of Reclamation	Yes
Water pump stations	Bureau of Reclamation	Yes
Springs/seeps	UGRC and USGS NHD	Yes
Tunnels, culverts, and pipelines	UGRC and USGS NHD	Yes
Resort infrastructure		
Snow-making infrastructure	Deer Creek Resort	Yes
Resort day lodges	Digitized by Alpine Forestry from resort websites and aerial imagery	Yes
Ski lifts	Digitized by Alpine Forestry from resort websites and aerial imagery	Yes
Other recreation infrastructure		
Sports center	UGRC, OpenSourcePlaces, Google Maps	No
Recreation area	UGRC, OpenSourcePlaces, Google Maps	No
Campground	UGRC, OpenSourcePlaces, Google Maps	No
Picnic area	UGRC, OpenSourcePlaces, Google Maps	No
Trailhead	UGRC, OpenSourcePlaces, Google Maps	Yes
Trails	UGRC plus additions from Alpine Forestry	Yes
Heritage resources		
Museum	UGRC and OpenSourcePlaces	No
Historic mines	Park City Historic Site Inventory	Yes
Other historic buildings	Park City Historic Site Inventory	Yes
Human habitation		
Residential and commercial structures	UGRC, Microsoft Building Footprints, Google aerial imagery	Yes
Education and childcare (included under human habitation for QWRA)		
Public library	UCRC, USBE, WFRC	No
Childcare center	UGRC, HIFLD, OpenSourcePlaces, Google Maps	Yes
Schools (pre-K to 12)	UCRC, USBE, WFRC, HIFLD	Yes
Other community services and resources		
Cemeteries	UGRC, OpenSourcePlaces	No
Place of worship	UGRC, Google Maps	No
Senior center	Google Maps	Yes
Grocery store	UGRC, WFRC, UDAF, Google Maps	No
Post office	UGRC, U.S. Postal Service	No

City government	UGRC, HIFLD, OpenSourcePlaces	No
PUBLIC SAFETY		
Fire station	UGRC	Yes
Law enforcement	UGRC	No
Court houses	HIFLD	No
FM radio towers	HIFLD	Yes
Cell towers	HIFLD	Yes
Land mobile commercial towers	HIFLD	Yes
Superfund site	EPA	Yes
Contaminated sites	EPA	Yes
Solid waste facility	UGRC, UWMRC	No
Toxic release inventory	UGRC, UDEQ	No
Petroleum fuel tanks	UGRC, UDEQ	No
Tier 2 Chemical Inventory Facility	UGRC, UDEQ	No
HEALTH AND MEDICAL (INCLUDED UNDER PUBLIC SAFETY FOR QWRA)		
Hospitals	UGRC, Utah DHHS, Utah DEM, Google Maps	Yes
Clinics	UGRC, Utah DHHS, Utah DEM, Google Maps	Yes
Mental health facilities	UGRC, Utah DHHS, Utah DEM, Google Maps	Yes
Urgent care	UGRC, Utah DHHS, Utah DEM, Google Maps	Yes
Surgery center	UGRC, Utah DHHS, Utah DEM, Google Maps	Yes
Health departments	HIFLD	No
Nursing homes	None in analysis area	N/A
TRANSPORTATION		
Bus stop	UGRC, UTA, OpenSourcePlaces, Google Maps	No
Gas station	UGRC, Utah DEQ	No
Bridge	FTA NTD	No

EPA = U.S. Environmental Protection Agency
FTA NTD = Federal Transit Authority, The National Transit Database
HIFLD = Homeland Infrastructure Foundation-Level Data
UDAT = Utah Department of Agriculture and Food
UDDHS = Utah Department of Health and Human Services
UDEM = Utah Division of Emergency Management
UDEQ = Utah Department of Environmental Quality
UGRC = Utah Geospatial Resource Center
USBE = Utah State Board of Education
USGS NHD = U.S. Geological Survey National Hydrography Dataset
UTA = Utah Transit Authority
UWMRC = Utah Division of Waste Management and Radiation Control
WFRC = Wasatch Front Regional Council

Additional Tables and Figures

Table 2-17. Suppression costs, potential losses from post-fire debris flows and sedimentation, funding for post-fire mitigation and specific mitigation actions. Funding sources are federal funding from Burned Area Emergency Response teams (BAER), state funding from the Utah's Watershed Restoration Initiative (UWRI) and other funding sources (specified in footnotes). Costs are not adjusted for inflation.

		Funding for mitigation			
Fire	Suppression cost	BAER	UWRI	Other	Mitigation actions
Parleys Canyon Fire (2021)	$2.6 million	$0	$68,537	Aerial seeding.	Aerial seeding. Source: (Edgel, 2022; Waterman, 2021)
Pole Creek & Bald Mountain Fires (2018)	$40.3 million	$372,605	$1.4 million	$9.6 million[1]	Aerial seeding. Weed inventory, control and monitoring. Debris and hazard tree removal. Drainage feature repair and installation. Road and streambank stabilization. Warning signs, closures and storm patrol. Source: (Edgel, 2019; Hardy, 2018; Hardy & Waterman, 2018b)
Coal Hollow Fire (2018)	Not reported	$477,297	None		Aerial seeding. Weed inventory, control and monitoring. Drainage feature repair and installation. Warning signs, closures and storm patrol. Source: (Natharius & Meccariello, 2018)
Dollar Ridge Fire (2018)	$18.2 million	$13,430	$1.4 million	$28.5 million[2]	Water treatment plant improvements. Aerial seeding. Weed inventory, control and monitoring. Trail stabilization and repair. Warning signs. Source: (Central Utah Water Conservancy District, 2021; Hardy, 2018; Mathis, 2019)
Levan Fire (2014)	$3.5 million	$508,475	$178,561		Aerial mulching and seeding. Drainage feature repair. Debris basin construction. Warning signs and storm patrol. Source: (Davidson, 2014; Whittaker, 2015)

		Funding for mitigation			
Fire	Suppression cost	BAER	UWRI	Other	Mitigation actions
Quail Fire (2012)	$1.1 million	$12,690	$41,570	$1.8 million[3]	Aerial seeding. Debris basin construction. Weed inventory, control and monitoring. Source: (Allred, 2014; Condrat, 2012; Sorenson, 2013)
Seeley Fire (2012)	$8.5 million	$1.87 million	None		Aerial mulching. Weed inventory, control and monitoring. Hazard tree removal. Drainage feature repair and installation. Streambank stabilization. Warning signs, closures and storm patrol. Source: (Chatel, 2012)
Dump Fire (2012)	$1.5 million	None	$225,232	$3.5 million[4]	Aerial seeding. Streambank stabilization. Drainage feature installation. Source: (Bullock, 2013; C. Jones, 2013)
Salt Creek Fire (2007	$4.2 million	$988,346	$89,900		Aerial seeding and mulching. Weed inventory, control and monitoring. Hazard tree removal. Drainage feature repair and installation. Warning signs and storm patrol. Source: (Pope & Higginson, 2007)
Cascade II Fire (2003)	$2.5 million	$1.08 million	N/A[5]		Aerial and ground mulching and seeding. Drainage feature repair and installation. Road reshaping and stabilization. Source: (Pope, 2004)
East Vivian Fire (2000)	$5 million[6]	$125,006	N/A[5]		Seeding (method not specified). Drainage feature installation. Road reshaping. Source: (Pope, 2002)
Affleck Park Fire (1988)	Not reported	Not reported	N/A[5]		Seeding (method not specified). Drainage feature installation. Canyon mouth reshaping. Source: (DuMont, 1990; Nelson & Rasely, 1988)

[1] Pole Creek & Bald Mountain Fires (2018): The Supplemental Appropriations for Disaster Relief Act of 2019 provided over $9.6 million through the USDA Natural Resources Conservation Service's Emergency Watershed Protection Program to help Utah County with post-fire mitigation, including debris removal and stream bank protection (Curtis, 2019).

[2] Dollar Ridge Fire (2018): The Federal Emergency Management Agency (FEMA), Utah Drinking Water Board, Utah Permanent Community Impact Fund Board and Central Utah Water Conservancy District spent $28.5 million to update the Duchesne Valley Water Treatment Plant to remove post-fire sediment and debris (Central Utah Water Conservancy District, 2021).

[3] Quail Fire (2012): Alpine City and the USDA Natural Resources Conservation Service spent $1.8 million to alter and expand sediment basins in response to post-fire debris flows in 2013 (Allred, 2014).

[4] Dump Fire (2012): The City of Saratoga Springs and CRS Engineers obtained a $3.5 million grant from the USDA Natural Resources Conservation Service to restore and strengthen over a mile of open channels to reduce future flooding and debris flows.

[5] UWRI was incepted in 2005.

[6] Suppression cost for the entire Wasatch Complex.

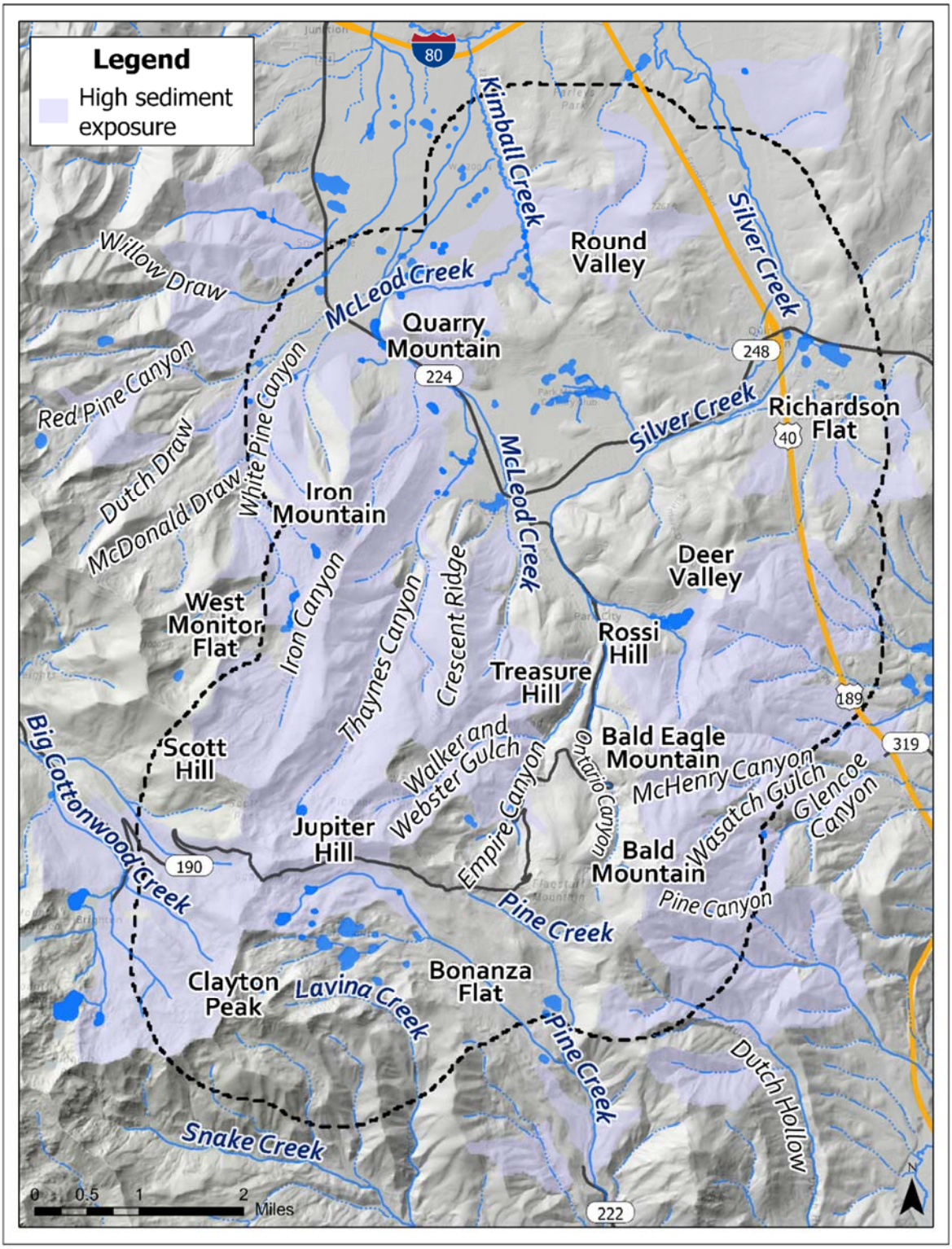

Figure 0-24. Topographic landmarks referenced throughout the summary of the sediment analysis.

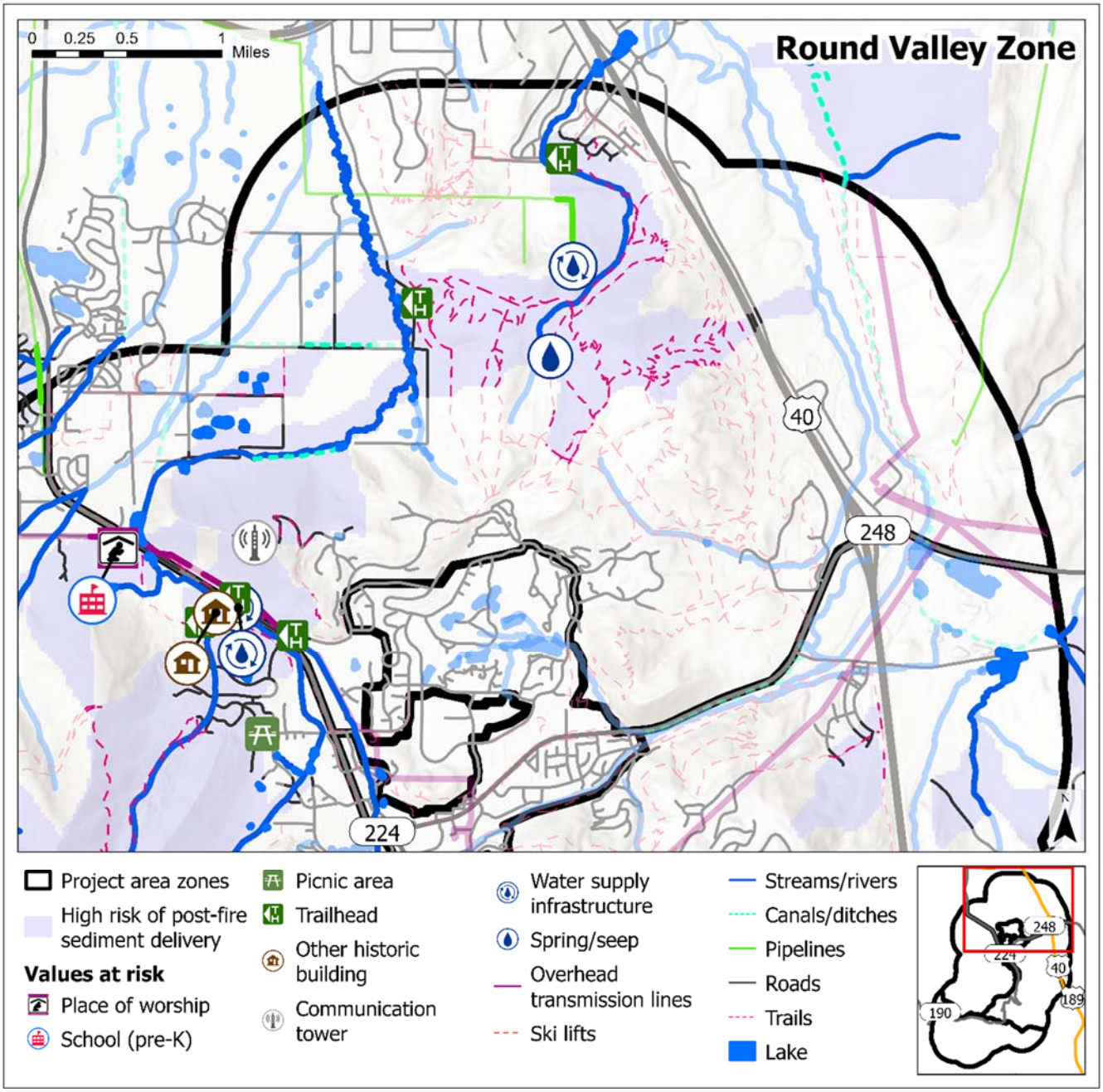

Figure 2-0-25. Values at risk to high sediment delivery in the Round Valley Zone of the project area. Labels included for streams, roads, trails and ski lifts with >1.0 miles at high risk of sediment delivery

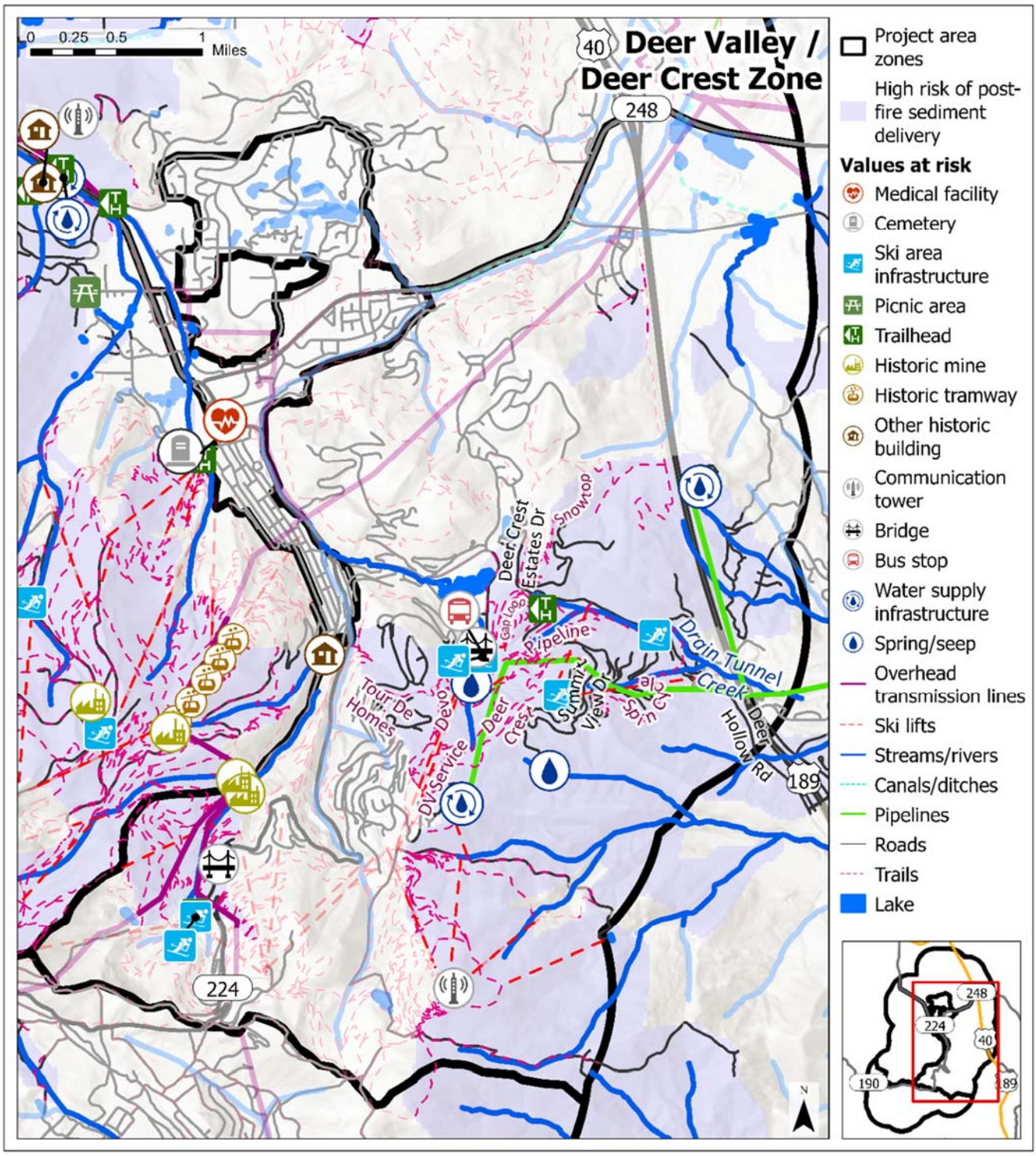

Figure 2-0-26. Values at risk to high sediment delivery in the Deer Valley/Deer Crest Zone of the project area. Labels included for streams, roads, trails and ski lifts with >1.0 miles at high risk of sediment delivery.

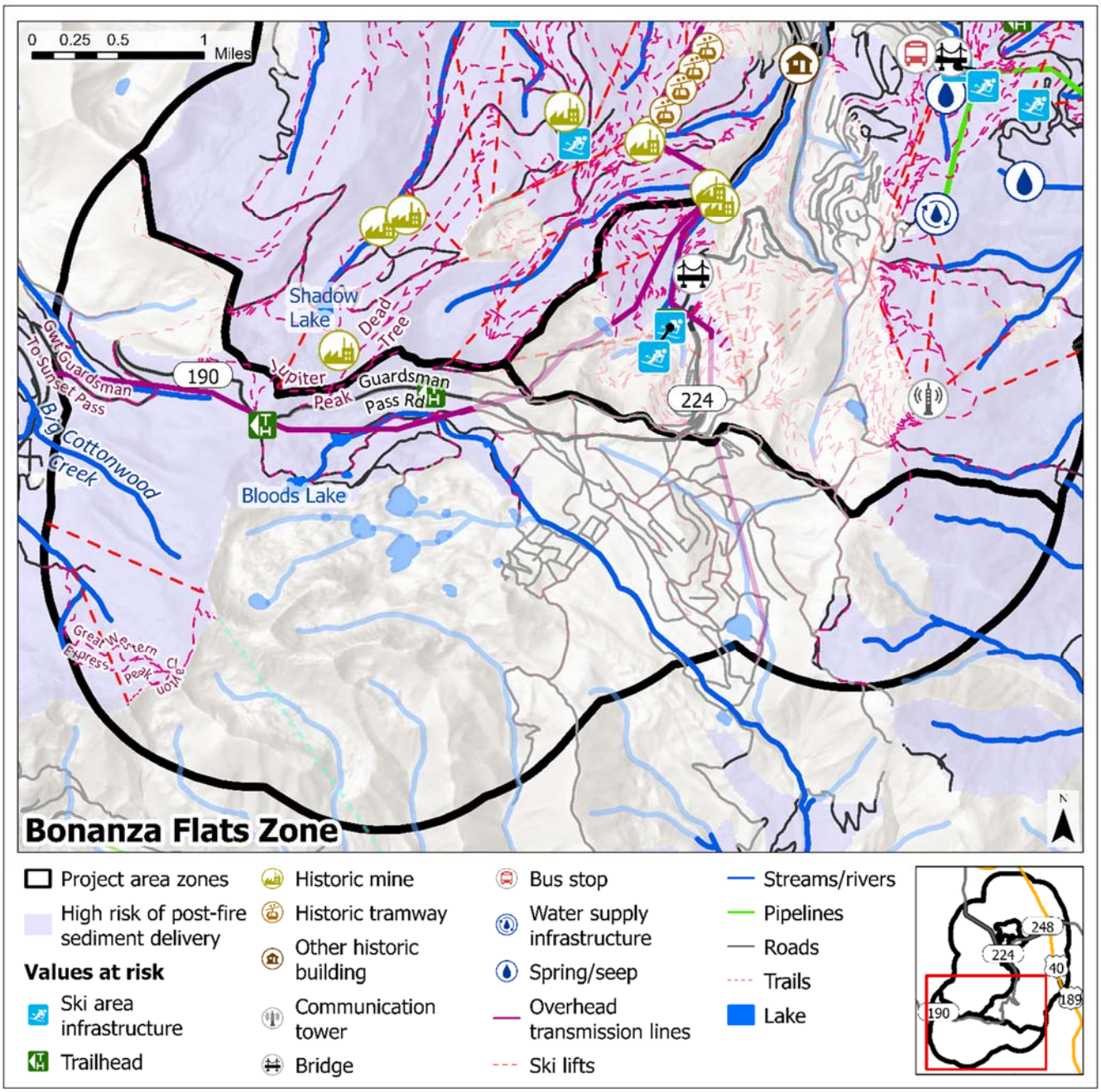

Figure 2-0-27. Values at risk to high sediment delivery in the Bonanza Flats Zone of the project area. Labels included for streams, roads, trails and ski lifts with >1.0 miles at high risk of sediment delivery.

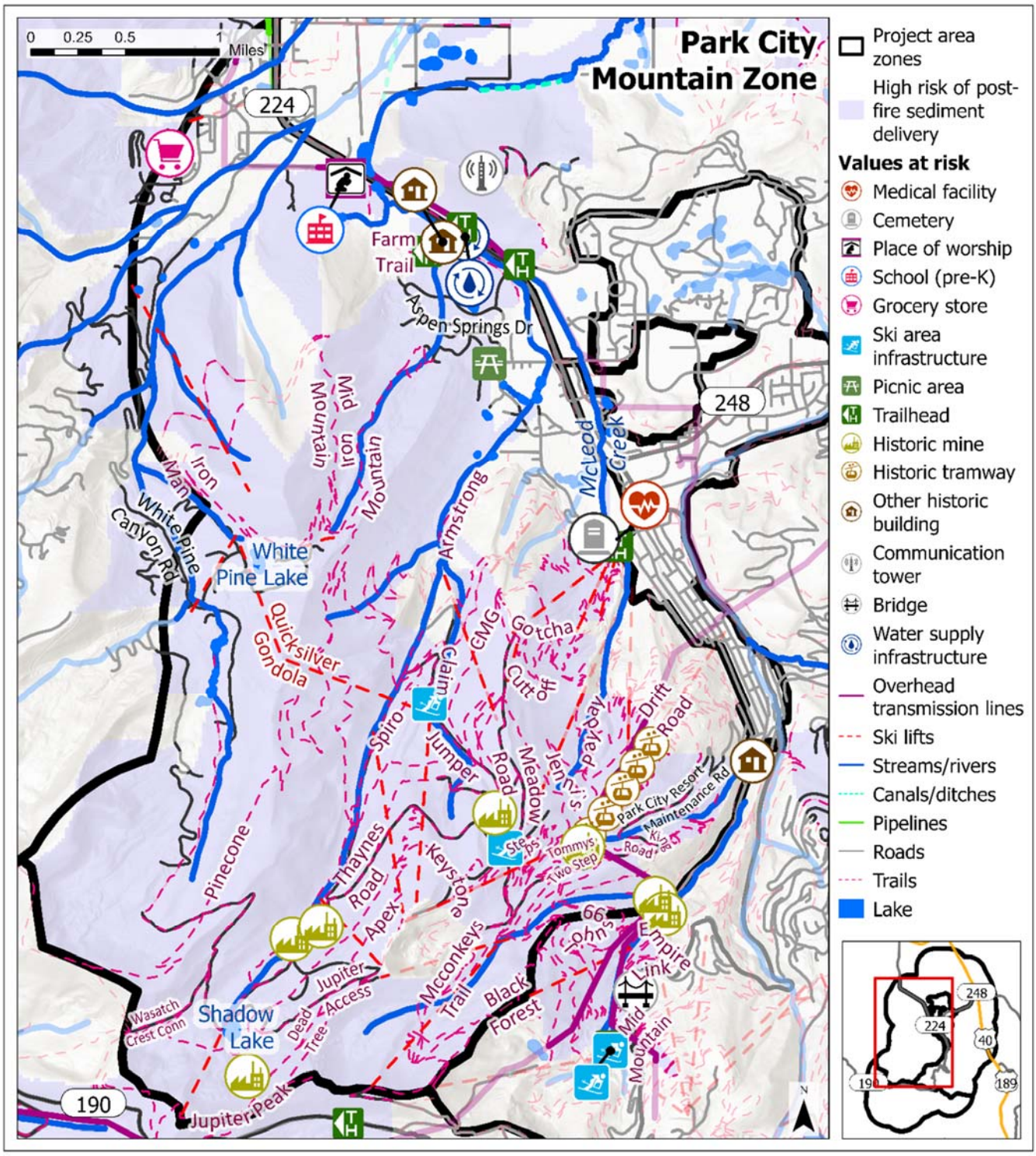

Figure 2-0-28. Values at risk to high sediment delivery in the Park City Mountain Zone of the project area. Labels included for streams, roads, trails and ski lifts with >1.0 miles at high risk of sediment delivery.

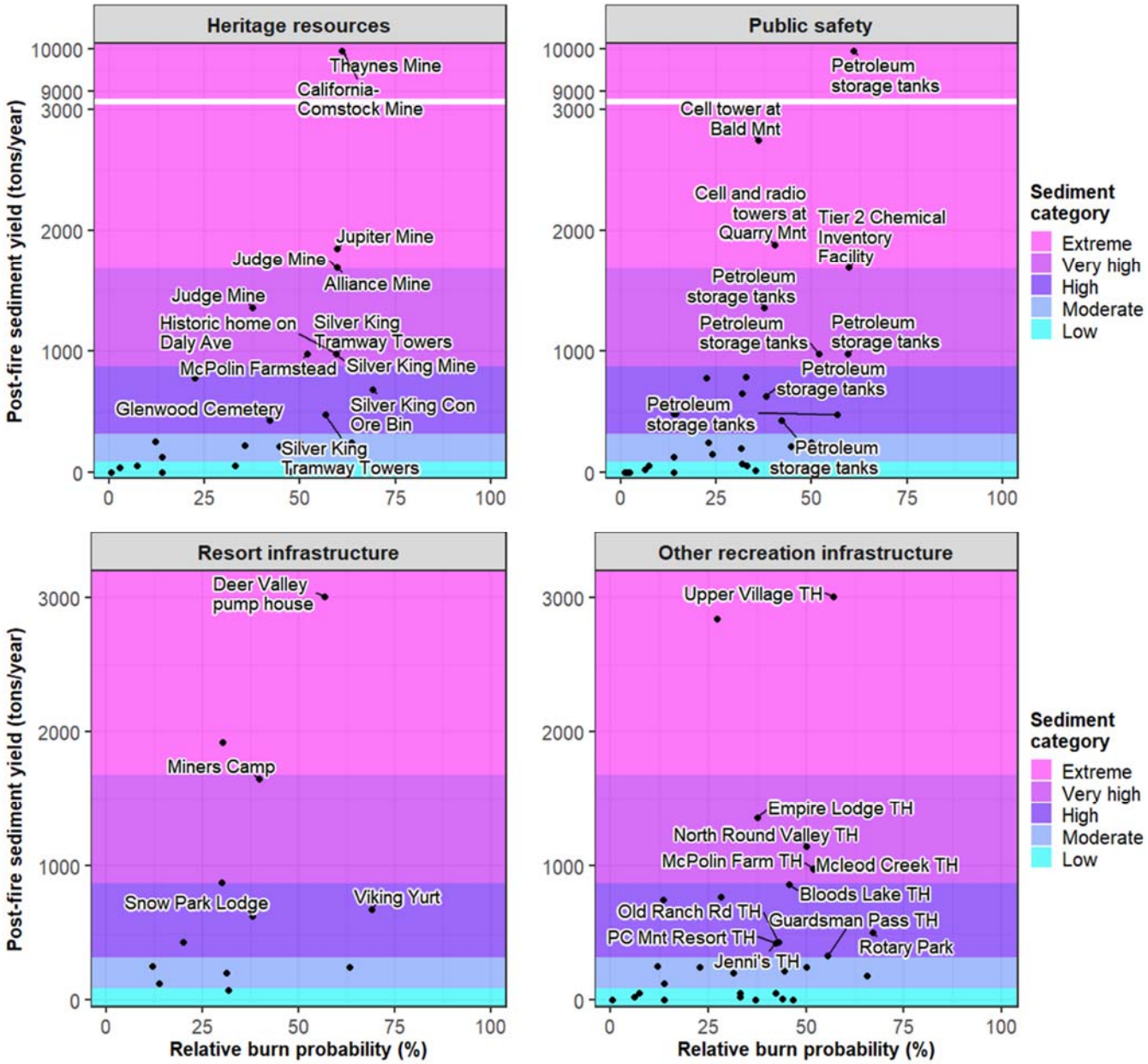

Figure 2-0-29. Risk of post-fire sediment to community values and infrastructure based on predicted watershed-scale sediment yield and relative burn probability. Labels are displayed for values occurring in watersheds with high to extreme post-fire sediment yield (>315 tons/year) and high relative burn probability (≥33%). See Table A.2.4.8. for a list of values included in each category.

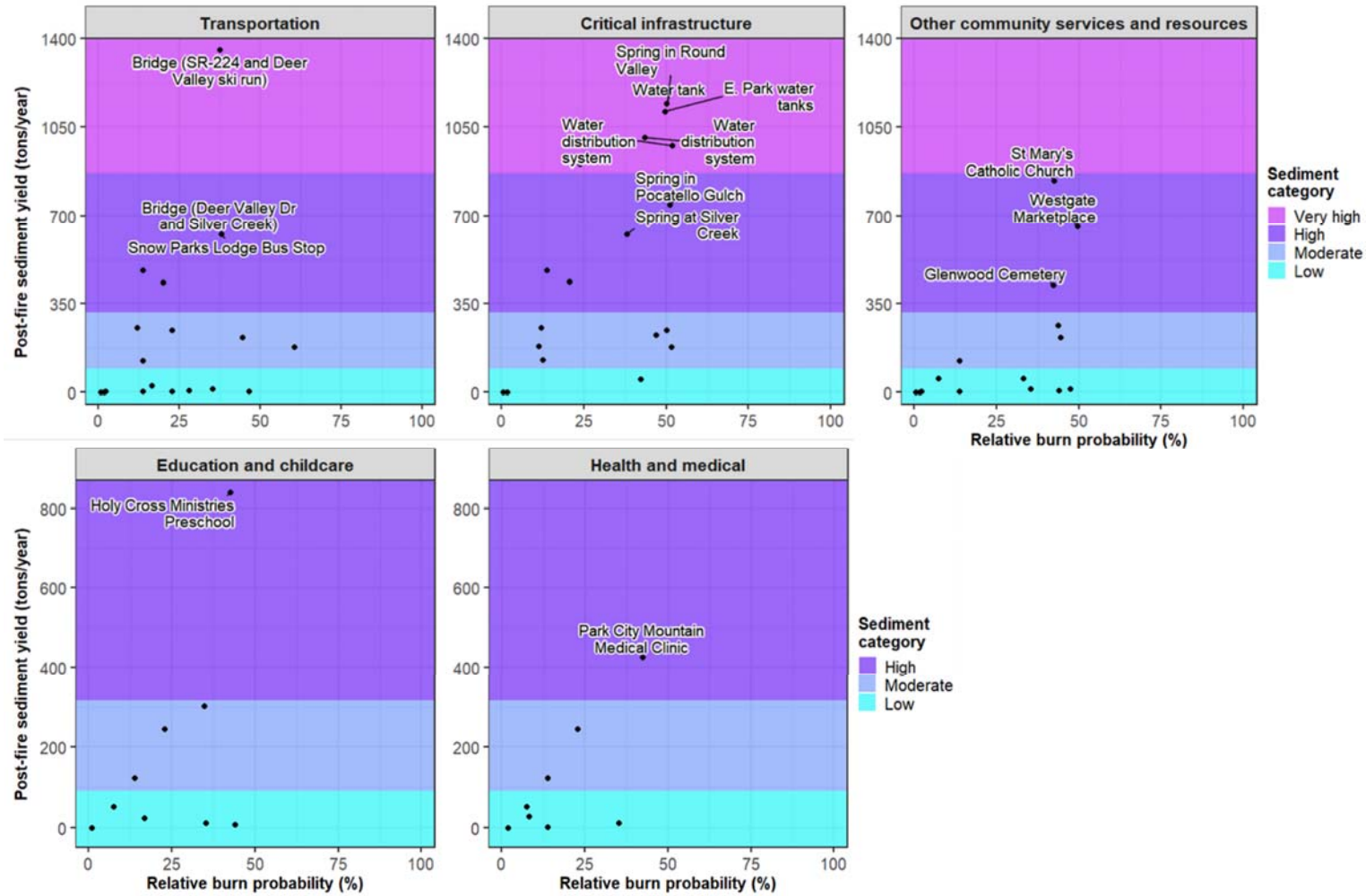

Figure 2-0-30. (continued) Risk of post-fire sediment to community values and infrastructure based on predicted watershed-scale sediment yield and relative burn probability. Labels are displayed for values occurring in watersheds with high to extreme post-fire sediment yield (>315 tons/year) and high relative burn probability (≥33%). See Table 2-16 for a list of values included in each category.

Table 2-18. River, roads, trails and ski lifts with over 1.0 miles in watersheds with high risk of post-fire sediment delivery. Features are sorted by type and descending miles at risk.

Type	Name	Length with high risk (miles)
River	McLeod Creek	6.2
River	Perennial stream in Thaynes Canyon	3.0
River	Kimball Creek	2.7
River	Big Cottonwood Creek	2.3
River	Ephemeral stream in Bloods Lake Drainage	2.0
River	Ephemeral stream in Walker and Webster Gulch	1.9
River	Drain Tunnel Creek	1.8
River	Pine Creek	1.5
River	White Pine Canyon Road	10.9
River	Guardsman Pass Rd	4.3
River	Highway 40	4.3
River	Deer Crest Estates Dr	2.4
River	Deer Hollow Rd	2.1
River	Bear Hollow Dr	1.9
River	Summit View Dr	1.7
River	Highway 224	1.2
River	Park City Resort Maintenance Rd	1.2
River	Aspen Springs Dr	1.1
River	Big Cottonwood Canyon Rd	1.1
River	Quarry Mountain Rd	>1.0
Trail	Mid Mountain	10.0
Trail	Rambler	4.3
Trail	Pinecone	3.9
Trail	Jenni's	3.7
Trail	DV Service	3.2
Trail	CMG	2.7
Trail	Spiro	2.4
Trail	Iron Man	2.4
Trail	Armstrong	2.1
Trail	Thaynes Road	2.1
Trail	Spin Cycle	2.0
Trail	Keystone	2.0
Trail	Gap Loop	1.9
Trail	Mcconkeys Trail	1.8
Trail	Deer Crest	1.8
Trail	McLeod Creek	1.7
Trail	Pipeline	1.7
Trail	Apex	1.7
Trail	Johns 99	1.6
Trail	Great Western Express	1.6
Trail	Empire Link	1.6

Type	Name	Length with high risk (miles)
Trail	Rusty Shovel	1.6
Trail	Snowtop	1.5
Trail	Tommys Two Step	1.5
Trail	Claim Jumper	1.4
Trail	Gotcha Cuttoff	1.3
Trail	Iron Mountain	1.3
Trail	Black Forest	1.2
Trail	Jupiter Peak	1.2
Trail	Round Valley Express	1.2
Trail	Gwt Guardsman To Sunset Pass	1.1
Trail	Devo	1.1
Trail	King Road	1.1
Trail	Payday	1.1
Trail	Dead Tree	1.1
Trail	Drift Road	1.1
Trail	Jupiter Acc	>1.0
Trail	Tour De Homes	>1.0
Trail	Farm Trail	>1.0
Trail	Wasatch Crest Conn	>1.0
Trail	Meadow Road	>1.0
Trail	Steps	>1.0
Trail	Clayton Peak	>1.0
Ski lift	Quicksilver Gondola	1.4

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2.3 Stream Condition

Executive Summary

The area of the Park City Municipal Corporation Community Wildfire Risk Assessment Project is part of several watersheds that feed into the Provo, Jordan, and Weber rivers. The streams and rivers in our watersheds are some of the highest value natural assets because they supply water for drinking, recreation, wildlife, and ecosystem services like floodwater retention. High intensity and large wildfires can negatively impact these resources. The purpose of this report is to use the Rapid Stream Riparian Assessment to assess the condition or health of eight streams in and near the Project area and how resilient they may be to wildfires. The health of the streams surveyed generally scored average or higher than average. This means these streams have characteristics that make them more resilient to the negative impacts of a wildfire, should one occur. Measures to maintain or improve stream health are recommended.

Background

The purpose of the Park City Municipal Corporation Community Wildfire Risk Assessment (the Project) is to assess and mitigate wildfire risk to the community and its resources. This information can inform decision makers, stakeholders, and the community when deciding how to protect resources.

Watersheds are areas of land that channel rain and snow into streams and rivers that feed into reservoirs, oceans, or basins. The Park City region is part of four major watersheds that feed into the Provo River, the Jordan River, the Lower Weber River, and the Upper Weber River. All of Park City's watersheds feed into the Great Salt Lake, a terminal basin. The condition of Park City's watersheds are related to the quality of water resources that humans and wildlife rely on. Rivers, streams, and their associated wetlands are High Value Resources and Assets to the Park City community (see Quantitative Wildfire Risk Assessment Report for detail). These features provide clean water for drinking, places for wildlife and fish to live, recreation, and ecosystem services like floodwater retention.

Rivers and streams are shaped by erosion and sedimentation processes, but extreme post-fire sediment and debris flows can be damaging. Burned land is prone to increased soil erosion and debris flows (see Post-Fire Sediment Delivery Report for full detail). Sediments laden with carbon and nutrients are then transported into streams, rivers, and wetlands which reduces water quality and degrades wildlife habitat (Leonard et al. 2017, Ball et al. 2021). Healthy streams and watersheds can be more resilient to the negative impacts of wildfires (Wohl et al. 2022, Fairfax and Whittle 2020). Healthy rivers and streams share a number of physical characteristics that relate to ecological processes. For example, healthy river and stream channels are "connected" with their floodplain so that during floods, water and sediment can be dissipated and absorbed, instead of intensified. Healthy rivers and streams naturally contain boulders, beaver dams, and large pieces of wood that help slow the velocity of water and sediment during floods (Wheaton et al. 2019a). Healthy rivers and streams are bordered by wetlands with lush shrubs and trees. These plants keep soils from eroding away in floods, but also serve as fire breaks and stop or slow wildfires (Fairfax and Whittle 2020).

Unfortunately, many rivers and streams in the west no longer have these characteristics and are not healthy. Therefore, when floods or debris flows from wildfires occur, rivers and streams become further degraded and resources like water quality are impaired. The purpose of this report is to investigate the condition of streams within and immediately downstream of the Project area in order to understand how they may respond to sediment and debris flows after a wildfire.

Methods

The condition of eight representative streams was assessed within the Park City Municipal Corporation Community Wildfire Risk Assessment Project area (Figure 2-0-24). Stream were selected if they were 1) downstream of potential high intensity wildfires as mapped by the Fire Behavior Analysis, 2) predicted to have high post-fire sediment delivery, and 3) if Project staff had permission to enter the sites from landowners. Sageland Collaborative has an existing stream restoration program in the region with partners like the Swaner Preserve and EcoCenter. Former stream surveys that were outside of the Project area, but within an area of impact should a wildfire occur, were also included.

The condition of streams was determined using the Rapid Stream Riparian Assessment ([RSRA], Stacey et al. 2006, Figure 2-0-24, Table 2-19). The RSRA protocol was developed to efficiently assess the overall condition of a stream. RSRA utilizes qualitative and quantitative data to generate a score for five categories that relate to stream health:

1. Water Quality. The potential for pollutants or solar exposure to degrade water quality.
2. Hydrogeomorphology. The ability of the system to limit erosion and withstand flooding without damage.
3. Fish and Aquatic Habitat. The presence of habitat for native fish and other aquatic species.
4. Riparian Vegetation. The structure and composition or vegetation near the stream, including the occurrence of non-native species.
5. Terrestrial Habitat. The suitability of habitat for terrestrial wildlife.

Data is then converted to a score that ranges from 1 to 5. Mean scores of 1 to 2 indicates a stream is in poor condition and not providing ecosystem services such as water purification, sediment retention, habitat for fish and wildlife, and flood control. Scores of 2 to 4 indicate some stream components may be healthy while others are not. A stream scoring 4 to 5 equates to a healthy stream providing ecosystem services.

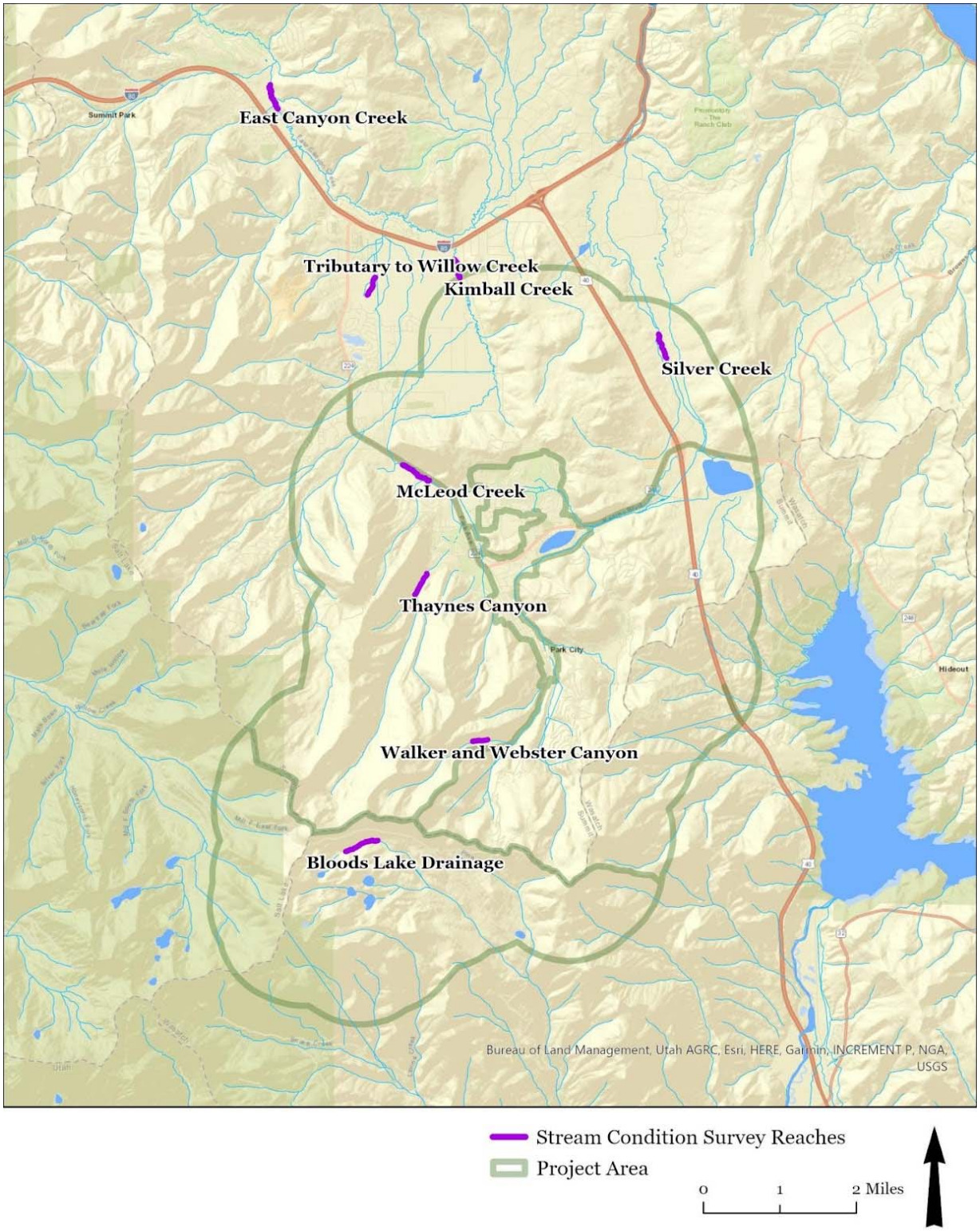

Figure 2-0-31. Locations of stream condition surveys in and around the Park City Wildfire Risk Assessment Project Area.

While these scores are relative and general, the RSRA method provides a useful snapshot for managers and planners to understand stream conditions, prioritize restoration or management activities, or pinpoint areas for further study. The RSRA protocol can be used on streams that flow year round or intermittently (i.e., seasonal flow). However, if flowing water is not present in a stream during the time of data collection, some metrics cannot be collected (e.g., diversity of aquatic insects). For those metrics, they are denoted as "NA" for Not Applicable and not included in the average scores. Some streams did not historically support an upper tree canopy like cottonwoods and instead only contained willows and other shrubby vegetation. In these streams, the metrics regarding the presence of tree species may be denoted as "NA" and are not included in the average scores.

Key Findings

The condition of the streams surveyed for the Project varied (Table 2-19). Streams generally had average or higher than average scores in each of five categories that relate to stream health. Higher scores, especially the indicators for floodplain connection (#3), hydraulic habitat diversity (#5), beaver activity (#7), large woody debris (#12), and riparian density (indicators #21 – 23) are highly correlated to streams that are more resilient to wildfire. Results of each stream are detailed in Table 1 and in sections 3.1 through 3.8.

Of the streams surveyed, those in the poorest condition were Silver Creek, East Canyon Creek, and Bloods Lake Drainage, which scored 2.5, 2.6, and 2.8, respectively. Factors contributing to low scores in these creeks included poor floodplain connection, water quality issues, and lack of riparian vegetation. Thaynes Canyon and McLeod Creek were in better condition, each scoring 3.6.

Table 2-19. Stream condition scores.

Stream Reach	Bloods Lake Drainage	East Canyon Creek	Kimball Creek	McLeod Creek	Silver Creek	Thaynes Canyon	Tributary to Willow Creek	Walker & Webster Canyon
Stream condition indicators and scores								
1 – Algal growth[a]	NA	2	5	5	NA	5	1	NA
2 – Channel shading	3	1	2	3	2	5	3	5
Water quality score	**3.0**	**1.5**	**3.5**	**4.0**	**2.0**	**5.0**	**2.0**	**5.0**
3 – Floodplain connection	1	3	5	1	5	1	2	1
4 – Vertical bank stability	5	4	5	5	4	4	5	4
5 – Hydraulic habitat diversity[a]	NA	3	5	5	NA	3	5	NA
6 – Riparian area soil integrity	5	4	5	3	4	5	5	1
7 – Beaver activity	1	3	3	4	1	1	2	1
Hydrogeomorphology score	**3.0**	**3.4**	**4.6**	**3.6**	**3.5**	**2.8**	**3.8**	**1.8**
8 – Riffle-pool distribution[a]	NA	2	2	3	NA	2	3	NA
9 – Underbank cover	1	3	4	4	2	3	5	1
10 – Cobble embeddedness[a]	NA	3	3	3	NA	2	1	NA
11 – Diversity aquatic invertebrates[a]	NA	5	5	5	NA	5	5	NA
12 – Large woody debris	4	1	2	1	1	5	5	5
13 – Overbank cover	5	2	3	4	5	5	5	5
Fish/Aquatic Habitat Score	**3.3**	**2.7**	**3.2**	**3.3**	**2.6**	**3.7**	**4.0**	**3.7**
14 – Plant cover diversity	3	2	3	3	2	4	3	4
15 – Dominant shrub demography	3	3	3	3	3	2	3	3
16 – Dominant tree demography[b]	3	1	NA	1	NA	4	NA	4
17 – Non-native herb. plant cover	3	2	1	5	2	3	1	5
18 – Non-native woody plant cover	5	5	5	5	5	5	5	5
19 – Mammalian herbivory	1	5	5	5	4	5	4	5
20 – Mammalian browsing	1	4	5	5	1	1	1	2
Riparian Vegetation Score	**2.7**	**3.1**	**3.7**	**3.9**	**2.8**	**3.4**	**2.8**	**4.0**
21 – Riparian shrub density	2	2	2	3	2	3	2	3
22 – Riparian mid-canopy density	2	2	1	3	1	3	2	4
23 – Riparian upper canopy density[b]	2	1	NA	2	NA	4	NA	4
24 – Fluvial habitat diversity	1	4	3	5	2	2	3	1
Terrestrial Habitat Score	**1.8**	**2.3**	**2.0**	**3.3**	**1.6**	**3.0**	**2.3**	**3.0**
Average score	**2.8**	**2.6**	**3.4**	**3.6**	**2.5**	**3.6**	**3.0**	**3.5**

[a] NA if stream was dry at time of survey and variable could not be collected.
[b] NA if upper tree canopy would not naturally occur on stream (e.g., shrub or willow dominated community).

Bloods Lake Drainage

The Bloods Lake Drainage is a relatively small ephemeral stream located at 9,100 feet in elevation. The drainage is within the Provo River watershed and flows into Pine Creek and Snake Creek. The stream reach is owned by Park City Municipal Corporation and managed as the Bonanza Flat Conservation Area. The area is highly valued by the community for open space, recreation, wildlife habitat, and watershed protection.

Figure 2-0-32. Bloods Lake Drainage.

Bloods Lake Drainage's overall mean RSRA score was 2.8 as a result of average scores across each category. The drainage scored low for floodplain connectivity meaning this stream channel is incised. Several variables could not be measured because of lack of water in the stream during the time of the survey. Riparian vegetation showed signs of extensive browsing and grazing in the riparian area from moose and deer; cattle and sheep are not currently grazed in this site. However, the riparian area was heavily vegetated and had high soil integrity, which improved scores.

Table 2-20. Overall mean Rapid Stream Riparian Assessment score for Bloods Lake Drainage.

VARIABLE	SCORE
Water quality	3.0
Hydrogeomorphology	3.0
Fish & aquatic habitat	3.3
Riparian habitat	2.7
Terrestrial wildlife habitat	1.8
Mean Score	**2.8**

Bloods Lake Drainage is in the headwaters of the Provo River watershed and could convey sediment from a wildfire downstream to the Provo River. The stream reach that was surveyed is also mapped as an area at high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). In the event of a wildfire, this drainage would likely be severely degraded and impact downstream infrastructure and streams. To improve the resiliency of Blood's Lake Drainage, efforts to improve connection with the floodplain by adding structure may help trap sediment and re-charge wetlands (Table 2). In turn, this may help improve the density of riparian plants and reduce the intensity of sediment delivery through the stream channel.

East Canyon Creek

East Canyon Creek is a perennial stream located at 6,320 feet in elevation and the main tributary in the Weber River watershed. It is managed by Snyderville Basin Special Recreation District and Summit County as open space. East Canyon and its adjacent floodplain wetlands were historically used to graze cattle and sheep but are now surrounded by residential and commercial development in many areas.

East Canyon Creek provides designated beneficial uses for domestic water, primary and secondary contact recreation, agricultural water supply, and cold-water game fish (SWCA Environmental Consultants 2010). It is impaired for cold water species of game fish, cold water aquatic life and aquatic organisms in their food chain. This stream was once a high-quality trout fishery. Degraded water quality (i.e., low dissolved oxygen) from polluted stormwater, increased erosion, and higher water temperature has limited fish habitat. Bonneville cutthroat trout, a Utah Species of Conservation Concern, historically occurred in East Canyon Creek but is now limited to isolated locations and low numbers (Marshall Wolf, Utah State University, personal communication). East Canyon Creek is impaired due to low dissolved oxygen and excess phosphorus level.

Figure 2-0-33. East Canyon Creek.

Table 2-21. Overall mean Rapid Stream Riparian Assessment score for East Canyon Creek.

VARIABLE	SCORE
Water quality	1.5
Hydrogeomorphology	3.4
Fish & aquatic habitat	2.7
Riparian habitat	3.1
Terrestrial wildlife habitat	2.3
Mean Score	**2.6**

The overall mean RSRA score was 2.6 due to poor water quality (abundant filamentous algae) and lack of vegetation to shade the stream channel. More tree cover would be expected, but these species have not recovered from historic grazing activity and wetland loss. Numerous tributaries (including McLeod Creek and Thaynes Canyon) are mapped as high risk for post-fire sediment delivery according to the Post-Fire Sediment Delivery Report. Consequently, East Canyon Creek could receive significant quantities of sediment from upstream sources should a wildfire occur. Prized by the community and stakeholders, the East Canyon Creek Watershed Committee has initiatives underway to improve the stream condition and wildfire resilience. These include promoting riparian vegetation, managing beaver, adding structure to streams, and restoring floodplains (Table 2). Education and policy programs are also underway. See https://www.eastcanyoncreek.org/ for more information.

Kimball Creek

Kimball Creek is a perennial stream located at 6,400 feet in elevation. Kimball Creek is a major tributary to East Canyon Creek in the Weber River watershed. The stream reach is managed by Utah State University's Swaner Preserve and EcoCenter as open space. The stream and its adjacent floodplain wetlands have a history of use as agricultural land.

Figure 2-0-34. Kimball Creek.

Kimball Creek has high phosphorus levels and low dissolved oxygen, creating degraded conditions for aquatic life (SWCA Environmental Consultants 2010). Much of the water supply is diverted for irrigation purposes which creates low flow conditions that also degrade the stream. Kimball Creek's overall mean RSRA score was 3.4. This reach scored high for hydrogeomorphology due to stable banks and connection with the floodplain. This reach scores low for terrestrial wildlife habitat as willow canopy is still regenerating after a century of former land practices.

Table 2-22. Overall mean Rapid Stream Riparian Assessment score for Kimball Creek.

VARIABLE	SCORE
Water quality	3.5
Hydrogeomorphology	4.6
Fish & aquatic habitat	3.2
Riparian habitat	3.7
Terrestrial wildlife habitat	2.0
Mean Score	**3.4**

While the area of Kimball Creek that was surveyed is outside of the Project area, it is downstream of drainages that are in the Project area. McLeod Creek and upper portions of Kimball Creek are mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). Kimball Creek has been the focus of restoration efforts at the Swaner Preserve and EcoCenter. These efforts include promoting riparian vegetation, adding structure, and restoring the floodplain (Table 2, Wheaton et al. 2019a). These tools are collecting sediment and allowing the floodwaters to dissipate over the adjacent floodplain wetlands, which are on lands protected as open space. To the extent that Kimball Creek is able to dissipate debris flows and sediment, it will buffer East Canyon Creek from negative impacts. With these improvements, Kimball Creek will continue to improve its wildfire resiliency.

McLeod Creek

McLeod Creek is a perennial stream located at 6,640 feet in elevation. McLeod Creek is a major tributary to Kimball Creek and East Canyon Creek. The stream reach is managed by the Utah Division of Wildlife Resources as wildlife habitat. The adjacent floodplain has a history of use as agricultural land and the nearby uplands are still used for cattle grazing.

Figure 2-0-35. McLeod Creek.

Like Kimball Creek, much of McLeod Creek's water supply is diverted for irrigation purposes which creates low flow conditions (SWCA Environmental Consultants 2010). McLeod Creek's overall mean RSRA score was 3.6. This reach scored high for water quality due to the lack of filamentous algae and a shaded stream channel. Compared to other stream reaches in the region, McLeod Creek has higher canopy cover of high-value riparian species like willow. Bonneville cutthroat trout are known to occur near this stream reach (Marshall Wolf, Utah State University, personal communication).

Table 2-23. Overall mean Rapid Stream Riparian Assessment score for McLeod Creek.

VARIABLE	SCORE
Water quality	4.0
Hydrogeomorphology	3.6
Fish & aquatic habitat	3.3
Riparian habitat	3.9
Terrestrial wildlife habitat	3.3
Mean Score	**3.6**

McLeod Creek and nearly all of its tributaries are in areas mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). Of all the streams in the Project area, McLeod Creek has some of the highest potential to be negatively impacted by post-fire sediment and debris flows.

Beaver occur in sections of McLeod Creek, and their activity creates ponding and sediment capture that can help mitigate these impacts (Fairfax and Whittle 2020). McLeod Creek's largely vegetated riparian corridor could serve as a fire break for active wildfires.

This reach has been the focus of restoration efforts (i.e., adding structure, restoring floodplains, managing beaver) by stakeholders in the region (Table 2). Efforts to promote riparian vegetation by managing cattle grazing along McLeod Creek will continue to improve stream health. With continued implementation of measures, McLeod Creek may be more resilient to the impacts of a wildfire, which can also protect downstream resources in Kimball and East Canyon Creek.

Silver Creek

Silver Creek is an intermittent stream located within a freshwater emergent wetland at 6,560 feet in elevation. Located within the Weber River watershed, it flows north and connects with the Weber River between Rockport and Echo reservoirs. This reach is owned and managed by Snyderville Basin Special Recreation District and is currently used for grazing, open space, and recreation. Private landowners use property above and below the reach for grazing. Historically, this site was altered for mining, agriculture, and grazing. An irrigation canal runs to the east of the stream and de-waters Silver Creek. Silver Creek is listed by the Utah Department of Environmental Quality as an Impaired Water for protected cold-water species of game fish and other cold-water aquatic life due to dissolved cadmium and zinc (Baker and Psomas 2004). It is downstream from the Richardson Flat Tailings site which contains contaminated mine tailings from operations between 1953 and 1981. It is understood the tailings site is the major contributor of pollutants into Silver Creek.

Figure 2-0-36. Silver Creek.

Table 2-24. Overall mean Rapid Stream Riparian Assessment score for Silver Creek.

VARIABLE	SCORE
Water quality	2.0
Hydrogeomorphology	3.5
Fish & aquatic habitat	2.6
Riparian habitat	2.8
Terrestrial wildlife habitat	1.6
Mean Score	**2.5**

Silver Creek's overall mean RSRA score was 2.5 as a result of a lack of aquatic and riparian habitat features like willows. Silver Creek scored highest for hydrogeomorphology and the stream is largely connected with its floodplain. This means if there are high flows, the adjacent wetlands can dissipate floodwaters. Despite Silver Creek's impairment, the site contains important wetland habitat for wildlife. A northern leopard frog was observed and this reach is potential habitat for Ute ladies'-tresses orchid, a federally threatened species.

This reach of Silver Creek is in an area mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). While the Richardson Flat Tailings site was not mapped as high risk for post-fire sediment delivery, this may still be a concern because of the potential to spread any amount of cadmium and zinc into Silver Creek and the Weber River (Baker and Psomas 2004). Preserving and restoring floodplains, adding structure to the stream, and promoting riparian vegetation (i.e., grazing management) will help moderate erosion and movement of contaminated sediment (Table 2). Silver Creek can also be improved by establishing native willows and actions to ensure the stream and its adjacent wetlands have water supply year-round.

Thaynes Canyon

Thaynes Canyon is a shallow, perennial stream located within a relatively narrow drainage at 7,250 feet in elevation. Thaynes Canyon is within the Weber River watershed and, together with McLeod Creek, is the headwaters of East Canyon Creek. The stream reach is owned and managed by Park City Municipal Corporation and is currently used for open space and recreation. Historically, this site was used for mining activities and grazing but currently shows little signs of disturbance (SWCA Environmental Consultants 2010).

Thaynes Canyon overall mean RSRA score was 3.6 as a result of a well-vegetated riparian area and diversity of aquatic and in-stream habitat. Thaynes Canyon scored highest for water quality because of the shaded stream and absence of filamentous algae.

The entire length of Thaynes Canyon is in an area mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). Based on Thaynes Canyon's scores, this stream

may be relatively more resilient to the impacts of a wildfire because it is has structure from vegetation and woody structure (e.g., fallen logs). However, Thaynes Canyon is steep which can equate to higher intensity post-fire sediment delivery. There are residences below this steep canyon which may be impacted.

Figure 2-0-37. Thaynes Canyon

Table 2-25. Overall mean Rapid Stream Riparian Assessment score for Thaynes Canyon.

VARIABLE	SCORE
Water quality	5.0
Hydrogeomorphology	2.8
Fish & aquatic habitat	3.7
Riparian habitat	3.4
Terrestrial wildlife habitat	3.0
Mean Score	**3.6**

This stream may benefit from measures that help restore the floodplain, such as beaver dam analogues (Table 2). Maintenance of the existing riparian vegetation is also a priority. This area may also be a candidate for prioritizing upland wildfire treatments to reduce the risk of intensive post-fire sediment delivery.

Tributary to Willow Creek

The Tributary to Willow Creek is a perennial stream located within a freshwater emergent wetland at 6,640 feet in elevation. This tributary flows into Willow Creek, Kimball Creek, and East Canyon Creek. The stream reach is managed by Utah State University's Swaner Preserve and EcoCenter as open space. Similar to Kimball Creek, this tributary stream and its adjacent floodplain wetlands have a history of use as agricultural land. This stream was likely modified from its natural form to convey irrigation water. The source of the Tributary to Willow Creek is likely from groundwater and has been highly altered by upstream residential development.

Figure 2-0-38. Tributary to Willow Creek.

The Tributary to Willow Creek and its adjacent wetlands are part of one of the largest wetland complexes in the Project area that is protected by the Swaner Preserve and EcoCenter. These wetlands sequester carbon and function to provide clean water. This reach's overall mean RSRA score was 3.0. This reach scored low for water quality and terrestrial habitat because of the presence of algae and lack of vegetation cover. This reach is part of Swaner Preserve and EcoCenter's restoration efforts that include promoting riparian vegetation through plantings and adding structure (e.g., beaver dam analogues) to restore the floodplain and wetlands (Table 2). These tools are collecting sediment and allowing the floodwaters to dissipate over the adjacent floodplain wetlands.

Table 2-26. Overall mean Rapid Stream Riparian Assessment score for Tributary to Willow Creek.

VARIABLE	SCORE
Water quality	2.0
Hydrogeomorphology	3.8
Fish & aquatic habitat	4.0
Riparian habitat	2.8
Terrestrial wildlife habitat	2.3
Mean Score	**3.0**

The Tributary to Willow Creek is not mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). In terms of implementing wildfire resiliency measures, streams like Willow Creek may be less of a priority for the community

Walker and Webster Canyon

Walker and Webster Canyon is an ephemeral stream located at 7,750 feet in elevation. Walker and Webster Canyon is within the Weber River watershed and flows north into Silver Creek. The stream reach is owned and managed by Park City Municipal Corporation and is currently used for open space and recreation. Historically, this site was used for mining activities with infrastructure still in place nearby. The stream in Walker and Webster Canyon was dewatered in the late 1880s from a drain tunnel used for mining activities. Currently, the stream flows seasonally (i.e., intermittently) with snow melt.

Figure 2-0-39. Walker and Webster Canyon.

Walker and Webster Canyon's overall mean RSRA score was 3.5 as a result of a well-vegetated riparian area and diversity of riparian habitat. While Walker and Webster Canyon scored highest for water quality, this was based all on the extensively shaded stream area and that the presence of filamentous algae could not be measured because of lack of water.

Table 2-27. Overall mean Rapid Stream Riparian Assessment score for Walker and Webster Canyon.

VARIABLE	SCORE
Water quality	5.0
Hydrogeomorphology	1.8
Fish & aquatic habitat	3.7
Riparian habitat	4.0
Terrestrial wildlife habitat	3.0
Mean Score	**3.5**

The entire length of Walker and Webster Canyon is in an area mapped as high risk for post-fire sediment delivery, should a wildfire occur (see Post-Fire Sediment Delivery Report). Based on Walker and Webster

scores, this stream could be relatively more resilient to the impacts of a wildfire because it contains structure from existing vegetation and woody debris that can mitigate sediment and debris flows.

However, Walker and Webster Canyon has a relatively narrow and steep gradient. This naturally steep gradient means there is not a large floodplain for post-wildfire debris flows to dissipate on to. This drainage could convey significant sediment into downstream waters, should a high-intensity wildfire occur in the uplands. Walker and Webster feeds into urban portions of Park City via Silver Creek and there is increased risk of human infrastructure (e.g., culverts, roads) being negatively impacted.

In steep and heavily forested streams like Walker and Webster Canyon, adding structure to the stream could support debris capture should a post-fire debris flow occur (Table 2). Similar to Thaynes Canyon, the maintenance of the riparian vegetation is a priority on Walker and Webster Canyon. This area may also be a candidate for prioritizing upland wildfire treatments to reduce the risk of intensive post-fire sediment delivery.

Recommendations and Conclusion

Streams are some of the highest value natural assets in the Project area as they supply water for drinking, wildlife habitat, recreation, and ecosystem services like floodwater retention. This report provides an overview of representative streams and their conditions within the Project area. This report is not an exhaustive analysis of all streams in the Project area; rather a sample of representative streams that were in areas downstream of potential high intensity wildfires, predicted to have high post-fire sediment delivery, and were accessible to the Project surveyors.

The streams surveyed show many characteristics of functioning, healthy systems that make them more resilient to the negative impacts of wildfire and subsequent sediment and debris flows. Opportunities where streams can be managed to maintain and improve their health and make them more resilient to the negative impacts of wildfires are recommended for each stream with additional details summarized in Table 2-28. Management activities in streams can be prioritized by further evaluating the outputs of the Quantitative Wildfire Risk Assessment Report and Post-Fire Sediment Delivery Report.

Funding measures to improve stream condition and health are priorities for both the local community and the region. As such, there are a variety of funding sources that can be utilized (Clavet et al. 2021, see also Shared Stewardship, Utah's Watershed Restoration Initiative, and Clean Water Act Section 319(h) funds). Community partnerships are also key to funding and implementing measures to create wildfire resilient streams. There are many stakeholders and groups in the Project area that are active in stream and watershed restoration and accepting new projects. These include Utah Forestry, Fire, and State Lands; Utah Division of Wildlife Resources; U.S. Forest Service, Summit County; Snyderville Basin Special Recreation District; Trout Unlimited, Swaner Preserve and EcoCenter; Sageland Collaborative; the East Canyon Creek Watershed Committee; and many others.

Table 2-28. Potential measures that can be used to maintain and create streams that are more resilient to wildfires.

STREAM RESILIENCY MEASURES	EXAMPLES	RATIONALE	SOURCE
1. Stream, wetland and floodplain protection policies	Enforcing existing or new policies that protect ecological integrity of streams, wetlands, and floodplains.	Preservation of floodplains and wetlands in the watershed can mitigate negative impacts of floods and debris flows.	Endeter-Wada et al. 2020
2. Prioritize land conservation	Easements, land purchases	Preserving open space in and adjacent to floodplains can mitigate negative impacts to infrastructure.	
3. Promote and protect stream-side (riparian) vegetation	Livestock grazing management (strategic fencing, rotation). Restoration plantings.	Conservation and restoration of riparian vegetation like willows and cottonwoods reduces soil erosion, moderates floods, and can create firebreaks.	Kauffman et al. 2022, Fitch et al. 2003, Hoag 2007
4. Beaver management	Managing existing beaver populations. Beaver re-introduction where appropriate.	Beaver create features in streams that make them wildfire resilient. Additional measures need to be taken to properly manage their activity and any potential nuisance.	Whipple 2019, Wohl et al. 2022, Pollock et al. 2015 (see Chapter 9)
5. Adding structure to rivers and stream	Low-tech process-based restoration tools such as beaver dam analogues, log structures, log jams.	Woody structure provides sediment capture, flow moderation, promotes connection with the floodplain, and conditions for riparian vegetation to thrive.	Wohl et al. 2022, Livers and Wohl 2021, Wheaton et al. 2019ab, Rathburn et al. 2017
6. Preserve and restore floodplains	Low-tech process-based restoration tools such as beaver dam analogues, log structures, log jams. Also see beaver management.	Maintain or re-connect streams to their natural floodplains to for flow moderation and support wetlands.	Rathburn et al. 2017, Wheaton et al. 2019ab
7. Prioritize upland wildfire reduction treatments	Forest thinning, prescribed burning.	In zones with potential for high sediment delivery and overlap with High Value Resources and Assets, prioritize upland wildfire mitigation treatments to protect stream resources.	Robichaud et al. 2019

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3.0 Fire-Adapted Communities

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3.1. Community Survey

Executive Summary

The Park City Community Wildfire Preparedness Survey was conducted using multiple choice questions and opportunities for comment. The project team's goal was to gather perspectives from individual community members regarding their values, needs and concerns related to wildfire risk and community preparedness. The survey provided feedback to assist the Park City Municipal Corporation (PCMC) in understanding residents' point of view on a variety of wildfire issues. Engagement will be a key result of the Community Wildfire Risk Assessment (CWRA). Only by understanding the many points of view of residents, business owners and stakeholders will significant engagement and actions be possible. The survey assessed knowledge and awareness of residents and business owners on a variety of wildfire-related topics. These included: About Us, Wildfire Knowledge, Reducing Wildfire Hazards, Evacuation Preparedness, and Resources and Education. A total of 409 responses were received over 40 days. An additional 300 comments were collected during the survey and provided insights into some of the most pressing concerns among respondents. Overall, results highlight opportunities for engagement with residents, as well as obstacles to effective wildfire mitigation. Lack of information showed up as a predominant theme throughout the survey.

Background

The landscape around Park City has been influenced by both anthropogenic and natural disturbances. Park City is within the traditional and ancestral homelands of the Shoshone, Paiute, and Ute Tribes, who were the original stewards of the land. Fire was a part of this stewardship and was used for a variety of purposes that included, among other things, vegetation clearing and forage enhancement. These same forested areas around Park City were intensely logged by European settlers while heavy grazing also reduced grasses and woody vegetation. This combination of disturbances substantially changed the historic forest regime around Park City.

The forests around Park City have suffered recent and significant forest health decline since 2016 when landscape-scale geo-spatial maps were created (updates to these maps are described in the Park City Municipal Corporation – Community Wildfire Risk Assessment Fuels and Fire Behavior Report (Washa, Young, Tobler). Both the non-native fir engraver beetle and non-native balsam woolly adeligid have impacted and caused mortality or tree damage in the stands of mixed conifer forest. Short- and long-term aspen decline is also occurring. The resulting increase in standing dead and down fuels in mixed conifer and aspen vegetation has changed the fuel profile in forests around Park City. Invasive and noxious weeds, such as cheatgrass, are also creating a highly flammable fuel bed of light flashy fuels which contributes to greater rates of fire spread when there is an ignition.

Parallel to declines in forest health, Park City has experienced changes as well. Park City is built on a rugged landscape where roads can be narrow and difficult to navigate, a problem which is made worse during the increasingly busy tourist seasons. Its population has also grown, with residential and commercial building increasingly encroaching on forested areas surrounding Park City. This combination of greater density and declining forest health has raised concerns about wildfire preparedness and evacuations.

To better understand these concerns, we sought responses to a survey about wildfire awareness, wildfire mitigation, and evacuation preparedness. Specifically, we wanted to understand what residents in Park City knew about wildfire, about its prevention, what support there is for different types of mitigation actions, and what wildfire mitigation steps homeowners have undertaken on their own property. Lastly, we sought to understand whether and how residents have developed evacuation plans.

Methods

Both quantitative and qualitative responses were collected using a 20-question online survey that assessed knowledge about wildfire, emergency preparedness, hazard reduction activities and available resources related to wildfire in and around Park City, Utah. Rating scales were used to collect the extent to which a respondent agreed or disagreed while open-ended questions allowed respondents to provide their thoughts on particular topics. Respondents were also asked to endorse answers that described what mitigation or preparedness actions they have undertaken. Subject matter experts reviewed each question for viability and relevance. Initial testing indicated that the survey could be completed within seven minutes. Outreach was conducted via email marketing, advertising on social media and local media channels.

The survey area encompassed Park City, Utah, zip code 84060 and included Home Owner Association (HOA) Board Members, residents, workers, water utility users identified through the Park City WaterSmart program, business owners and other stakeholders. Respondents accessed the survey by following a link either emailed directly to them or posted on Park City's Facebook page. Local advertising also directed interested respondents to a website where they could access the survey. Outreach was conducted between mid-September and late October 2022.

Key Findings

We collected 409 responses using an online survey. Of these 409, 73 percent (n = 299) were full-time residents, 22 percent (n = 99) were seasonal or part-time residents and 5 percent (n = 45) were either business, residential property or land owners.

Perception of Wildfire Risk & Impacts

Our survey was designed to first assess whether, among this sample of residents, there was a perceived risk from wildfire, what the impacts would be if there was a wildfire, how much they knew about how to reduce wildfire impacts on their property and what are acceptable wildfire mitigation actions. Overall, residents expressed high levels of agreement that wildfires posed a risk to their communities and that there would be a multitude of social, economic and ecological impacts on the community should there be a wildfire. Specifically, 96 percent (n = 393) of our sample believed their community was at risk from wildfire and that the impacts would be economically significant on the region as a whole (Figure 3-0-1). However, when viewed personally, just over half (51 percent, n = 209) of residents expressed slight to no concern about the economic impacts on themselves.

There was broad awareness in our sample about the environmental and social impacts of wildfire. For example, 89 percent (n = 364) of our sample expressed a high level of concern about the impacts of wildfire smoke on air quality (Figure 3-0-2 and Figure 3-0-3). Residents also expressed moderate to high levels of concern about the impacts of a wildfire on wildlife (87 percent, n = 355), water quality (85 percent, n = 347)

and post-wildfire erosion and flooding (84 percent, n = 344). Impacts on recreation opportunities as well as on historic aspects in their communities were also of concern to many (>70 percent) in our sample.

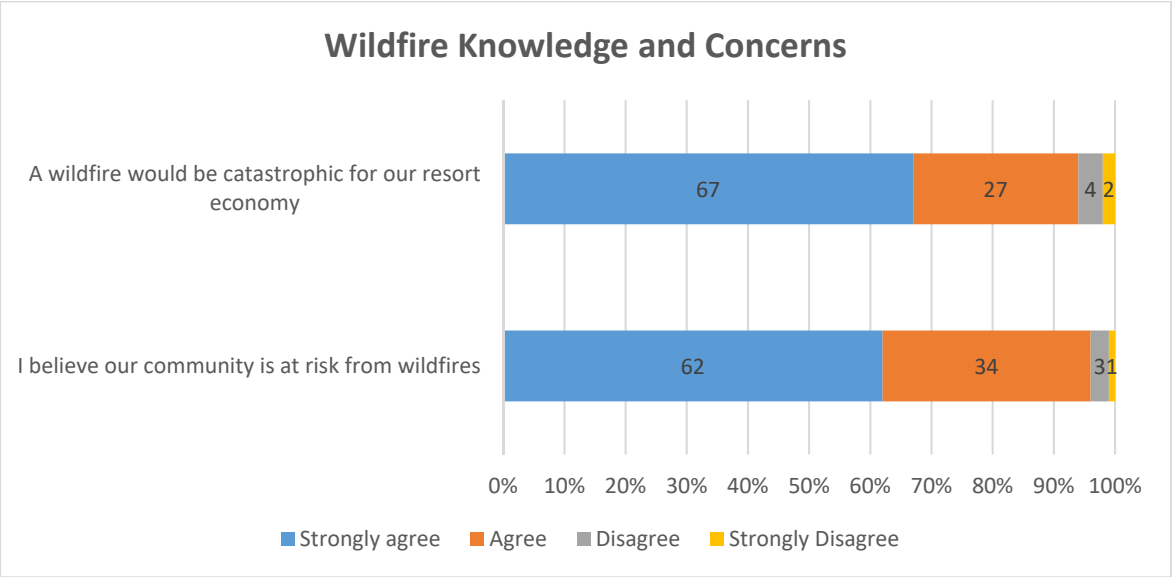

Figure 3-0-1. Residents' expressed levels of agreement regarding risk to their communities and social, economic, and ecological impacts from wildfire.

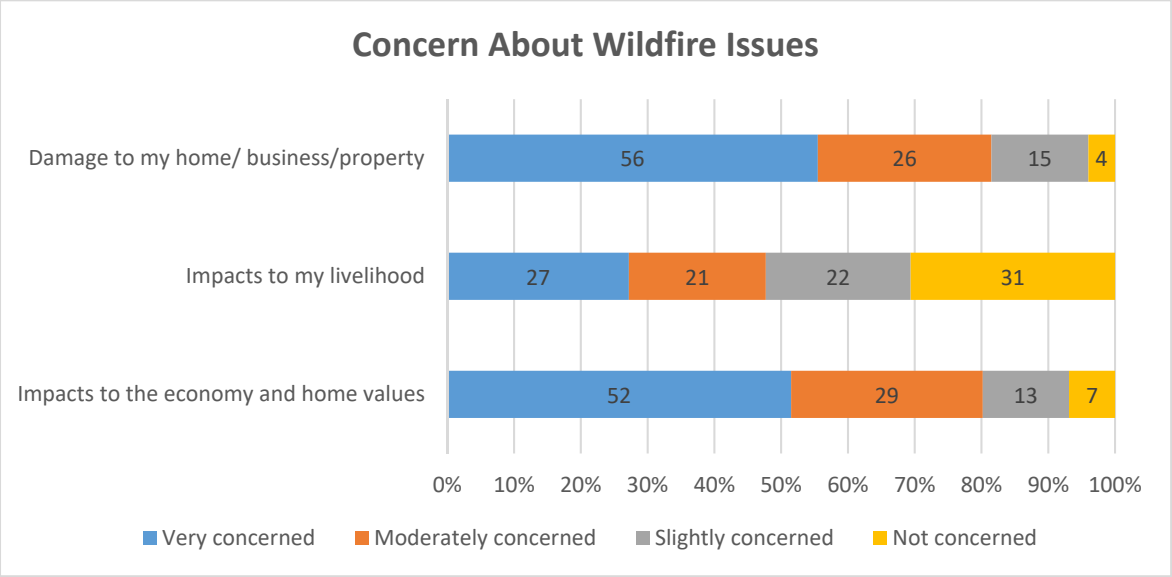

Figure 3-0-2. Resident views regarding economic impacts on themselves and risks to their communities from wildfire.

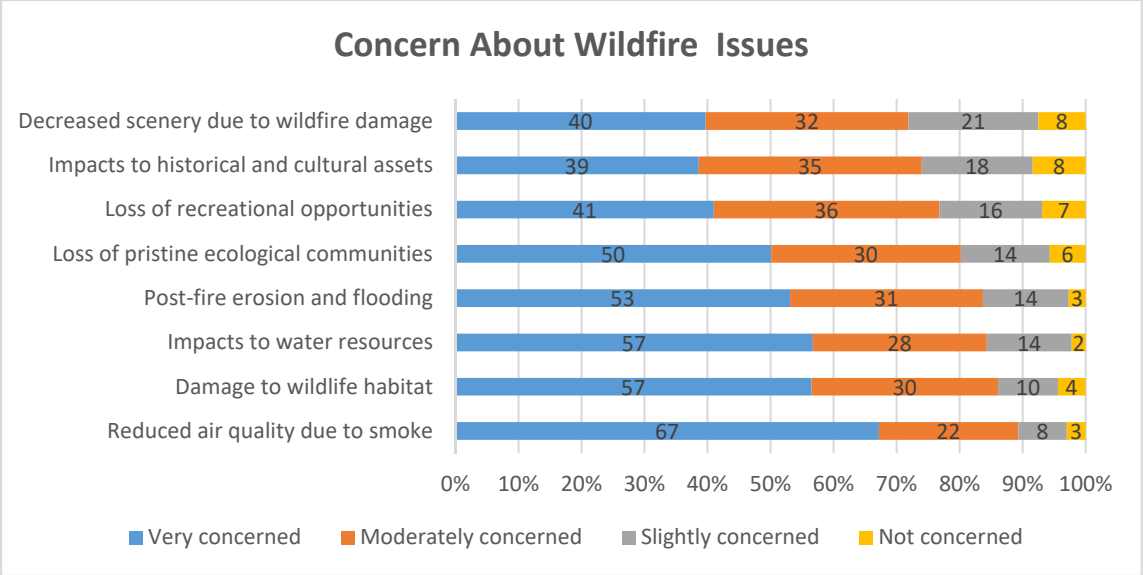

Figure 3-0-3. Resident awareness of the environmental and social impacts of wildfire.

How to Address Wildfire Risk

Addressing the risks from wildfire entails multifaceted actions by both homeowners and those in the wider community. This perspective was reflected in the pattern of responses we obtained (Figure 3-0-4). First, residents strongly supported the idea that each landowner was responsible for mitigation efforts and that local government was in a position to enforce (>90 percent) and support (84 percent, n = 346) mitigation efforts. Second, burning slash piles and the use of prescribed fire in forested areas (> 84 percent) were also widely supported mitigation actions. Finally, cutting trees in general wasn't as strongly endorsed by residents in our sample.

Figure 3-0-5 and Figure 3-0-6 present resident mitigation actions completed on their own property. As shown, basic actions such as removing lower limbs from trees and removing flashy fuels such as pine needles were the most commonly undertaken mitigation actions by residents in our sample. Fewer residents reported moving firewood or modifying combustible vegetation within five feet of their home. Home hardening actions, such as installing screens or an ignition-resistant roof which are often effective in resisting the impacts on a house during ember storms, were not endorsed by 60 percent or more of our sample. Over 80 percent (n = 327), though, endorsed that they knew how to reduce wildfire hazards on their property. Additionally, almost 60 percent of residents indicated that they would only spend $1,000 - $2,000 on mitigation annually, while 26 percent would spend $2,000 - $10,000.

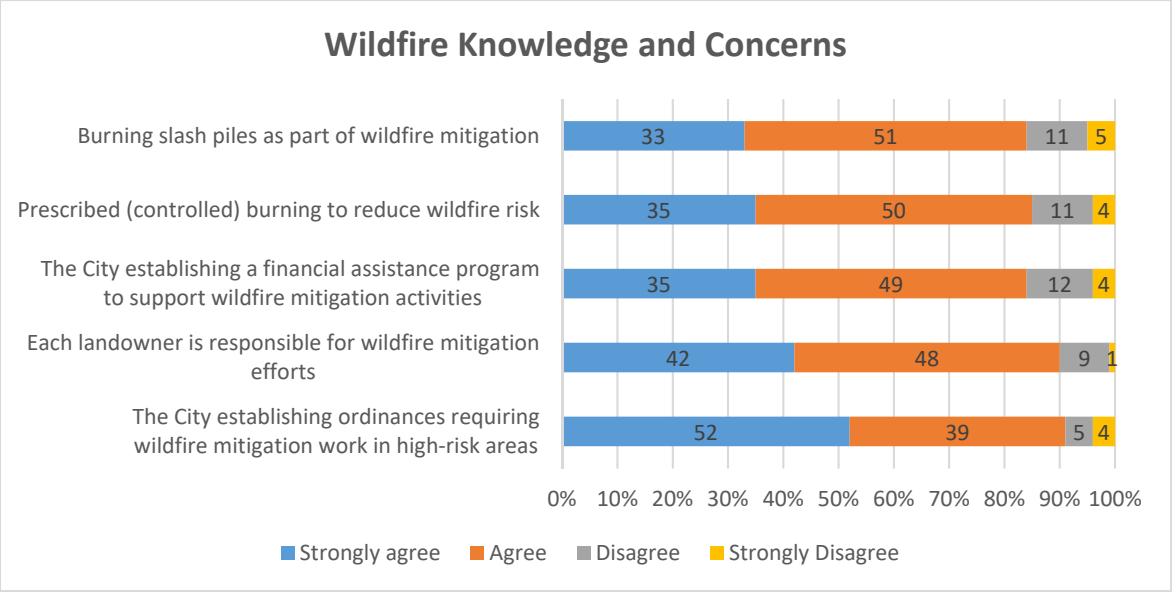

Figure 3-0-4. Resident views on addressing the risks from wildfire.

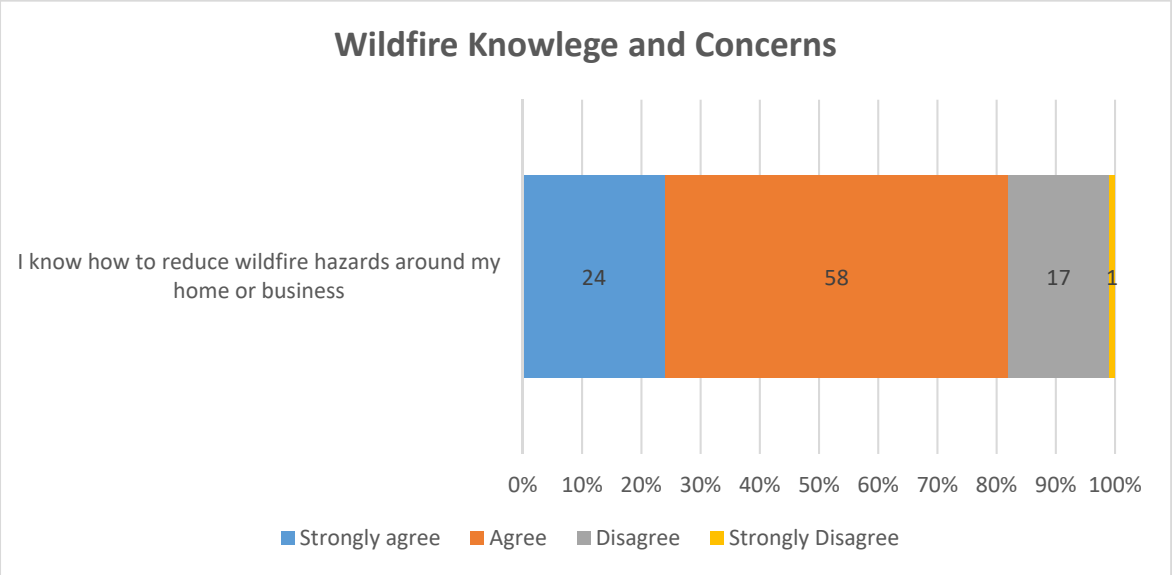

Figure 3-0-5. Residents' expressed views on whether they knew how to reduce wildfire hazards on their property.

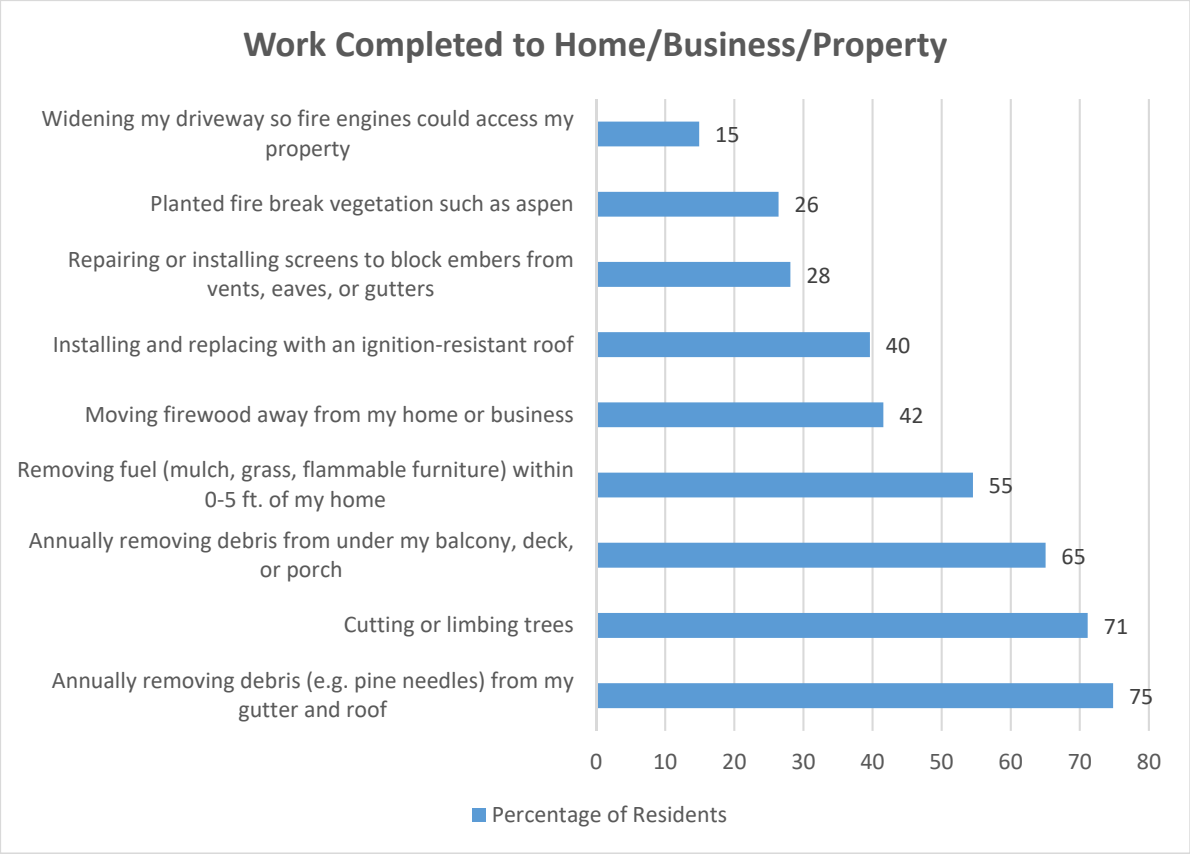

Figure 3-0-6. Resident mitigation actions completed on their own property. Each respondent was allowed to choose multiple answers

Education about Addressing Wildfire Risk

Outreach and education are important to increase community awareness, engage residents to take action and increase planning regarding wildfires (Figure 3-0-7). Responses to multiple questions indicated a strong preference for an in-person review of their own wildfire risks and what to do about them (62 percent, n = 254). Other education opportunities that were of interest included neighborhood programs about wildfire risk (58 percent, n = 229), availability of electronic resources concerning wildfire preparedness (48 percent, n = 196), and further information about local programs such as PCFD's Ready, Set, Go program (47 percent, n = 193). Residents also indicated that their preferred methods for receiving information are email (86 percent), text messages (51 percent) and local media outlets such as KPCW (35 percent).

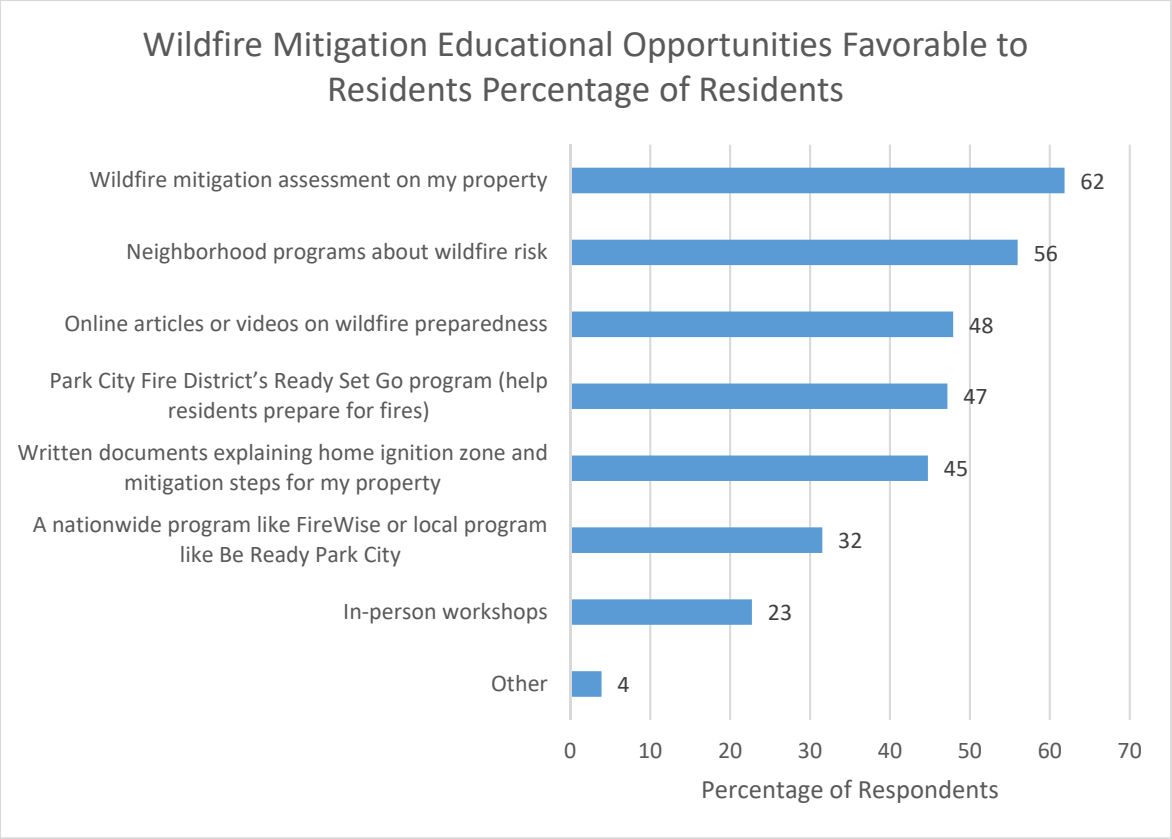

Figure 3-0-7. Wildfire mitigation educational opportunities favorable to residents.

Evacuations

Evacuation planning is an essential part of wildfire preparedness. Among our sample, 56 percent (n = 229) of residents reported having a plan either at their house or business (Figure 3-0-8), but the vast majority of them had not practiced evacuating within 15 minutes of being notified (Figure 3-0-9). Top concerns in the event of an evacuation (Figure 3-0-10) included an inability of the roads to handle evacuation traffic (60 percent) and not receiving timely information about an evacuation (59 percent).

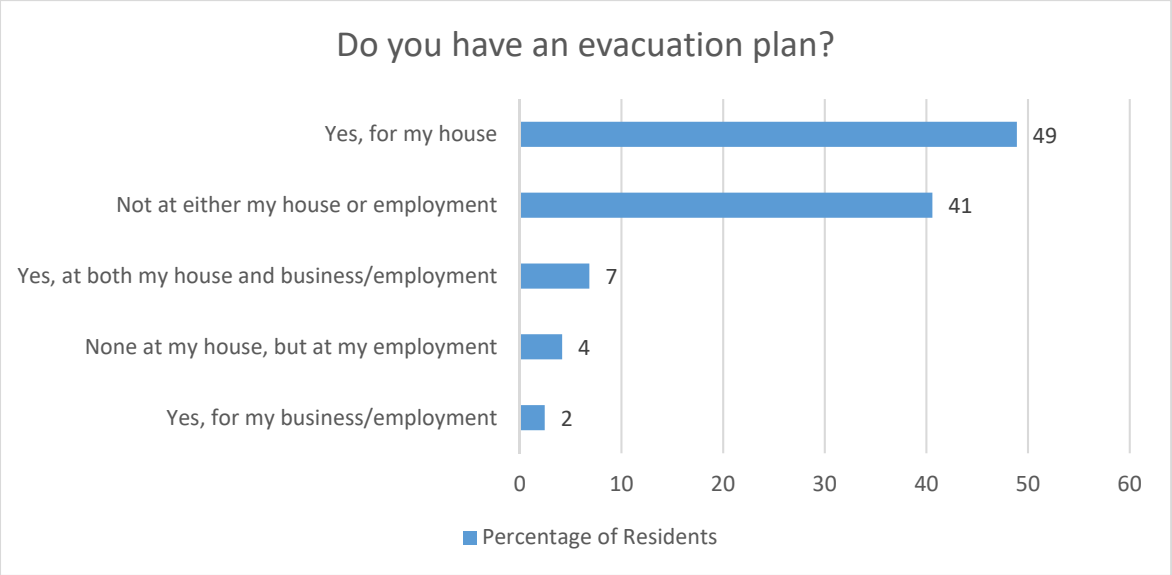

Figure 3-0-8. Resident reports on whether or not they have an evacuation plan for their home or business.

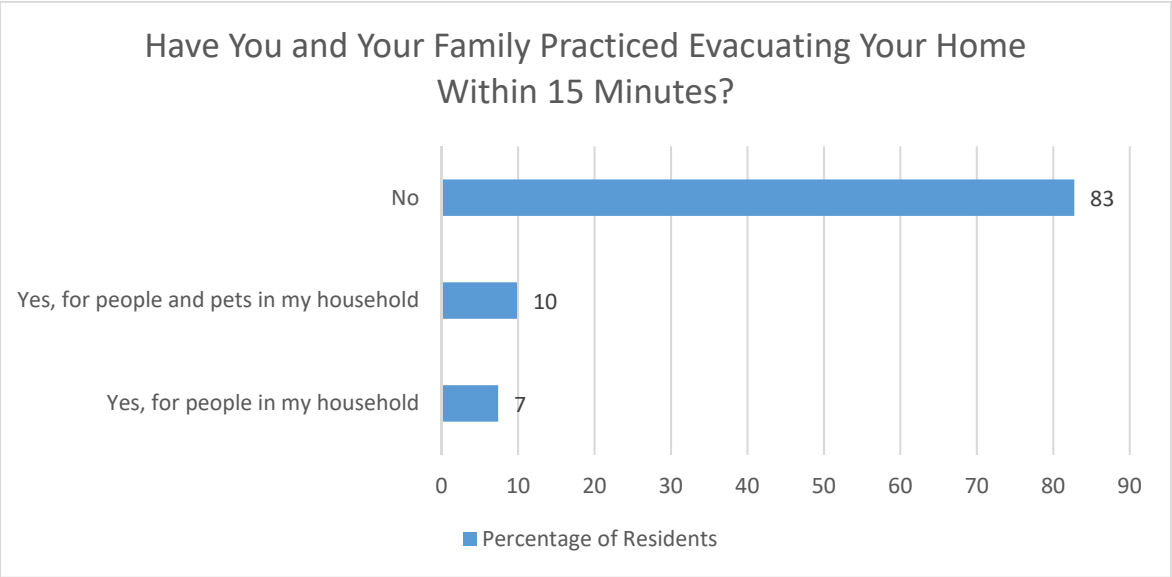

Figure 3-0-9. Most residents have not practiced evacuating their home.

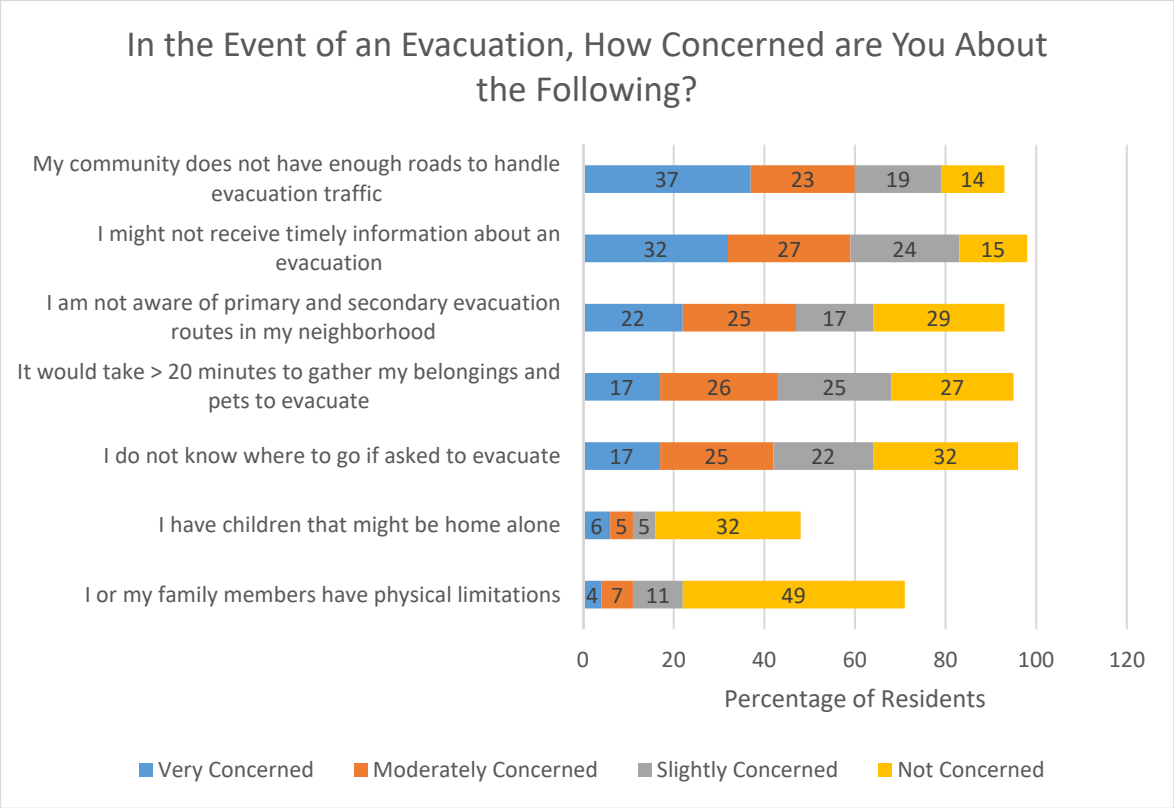

Figure 3-0-10. Resident concerns in the event of an evacuation.

Resident Comments

During the survey, residents were given the option to add comments for each section. Nearly 300 comments were submitted throughout the survey and are provided in the Additional Tables and Figures section of this document. The comments revealed perspectives on wildfire that didn't always show through responses to multiple-choice questions. Multiple points of view were represented throughout the comments ranging from strong support for the project to questioning any type of risk of wildfire in the area.

"It is inevitable that park city will burn."

"We are not a high-risk community at all. Park City has a lot of natural water pathways and reservoirs. Over focus on this is nonsensical and a waste of taxpayer dollars."

<u>Evacuation Issues</u> - Residents/workers don't know what to do or where to get information about evacuating. Significant concerns were noted regarding issues for day workers using public transit, and short-term renters who wouldn't know routes for evacuation or receive notification of an evacuation.

"Would buses be deployed to evacuate neighborhoods?"

Lack of Knowledge/Inaccurate Information - Many comments indicated a lack of knowledge about ignition of wildfires or the risk they pose. Other comments reflected inaccurate information or theories. Numerous comments indicated inaccurate information regarding defensible space and forest health, as well as a lack of knowledge on home hardening. Some respondents felt the lack of wildfires in the past indicated low risk for the future.

"Destroying the trees and vegetation is increasing wildfire risk."

"I do not know what slash piles are. There should be a "don't know" option!"

Clear and Concise Information/Guidance from PCMC - While several comments noted support for PCMC ordinances and guidance, many noted the lack of clarity and understandability. Many comments noted challenges with navigating the parkcity.org website – where to find information, user friendliness.

"I would love a clear ordinance to provide clear, concise guidance to park city residents about what they need to do to protect their homes from wildfires."

Old Town Issues - Several respondents indicated concern with both evacuation and mitigation for those living in Old Town. These included concerns over housing density, small lots and lack of egress for residents and visitors.

"I live in Old Town and I am very concerned about access of fire, medical and police resources and egress of residents and visitors during a fire in and around Old Town."

"It's totally not clear to me what old town residents can do for wildlife mitigation when we have no land/ trees and live within arms-reach of neighbors."

Education Resources - Respondents indicated that they want to improve their knowledge so they can take meaningful action. Several noted the actions (or inaction) of stakeholders such as Deer Valley, PCMC Resorts as well as HOAs. This suggests that publicizing the actions and accountability of stakeholders and community organizations could encourage residents to pursue their own planning and action.

"Park City Fire Department needs to make an official response whether the new Alterra project at Snow Park will or will not create issues with fire truck response times during emergencies, fires or evacuations."

"After this study, I would like to know if the City will publish something for residents/visitors as a guide to what residents/visitors need to know in the event of a wildfire and what actions they need to take to evacuate or otherwise seek safety."

Recommendations and Conclusion

Risk for a major wildfire is increasing in the Western United States due to a variety of climate-driven factors and historical management decisions. When wildfires occur, they are burning more intensely and having greater impacts on ecosystems and communities alike. Because of this, there is a wider interest in wildfire risk reduction activities and for greater preparedness. Along these lines, we assessed levels of knowledge, areas of concern, and actions undertaken by a sample of residents in the Park City area. An overall observation from this assessment is that there is a lack of information about mitigating wildfire risk and evacuating in the face of and during a wildfire.

In our sample, their appears to be greater acceptance or a belief that mitigation for wildfires involves actions taken in areas where there are few to no homes but not necessarily on or around one's own property. This is suggested by the high endorsement rates of pile burning and prescribed fire and low or moderate endorsement rates for more effective mitigations on and around the home. This is interesting in light of the national headlines from the 2022 Calves Peak and Hermit Peak fires in New Mexico which started as a prescribed fire but spread beyond control lines and burned 342,471 acres. Prescribed fire is a useful tool in reducing fire intensity and improving forest health, but embers from wildfires in general can travel up to a mile or more and ignite similar fuels within neighborhoods and around homes. Mitigation in one area without similar mitigations in others is not as effective as doing both.

This apparent discrepancy provides a number of important opportunities. First, if endorsement rates in this sample can be taken as broad support for prescribed fire programs, then efforts to coordinate such programs with additional stakeholders could provide important steps to reduce fuel loading within the surrounding forests and improve the health of highly valued landscapes. Second, belief that mitigation is a homeowner's responsibility could support messaging around different types of mitigation homeowners can do on their property. Communications that include home hardening information as well as firewise vegetation and landscaping principles could prove effective outreaches. Lastly and importantly, helping residents understand fire dynamics, fire's place in the ecosystem, and what impacts certain mitigation actions can have and why these are important can be motivating and empowering given the belief that their community faces very high wildfire risks.

Preparedness is an important part of mitigating the risks associated with wildfire. Lessons from the 2018 Camp Fire, which burned through the town of Paradise, CA, underscores the importance of evacuations and having a plan that is known and practiced. In our sample, nearly half of the respondents did not have a plan for how to leave safely from their home and communities. Further, nearly all the respondents to our survey indicated they had not practiced an evacuation. The feedback and concerns identified in our survey strongly encourage that more outreach with specific types of communications be done ahead of wildfire season. Outreach that specifies primary and secondary evacuation routes and where to get information about evacuations are critically important given that over half of respondents indicated they were concerned about these topics.

Our survey is not without its limitations. First, our sample size is small and thus may not represent the range of viewpoints in the wider community. Second, because the survey was intended to be brief and not impose too much burden on respondents, some demographic information was not collected. Such information could have provided additional insights into the data collected.

In conclusion, similar to many other areas in the Western United States, there appears to be an interest in better understanding the wildfire risk facing Park City and what can be done to mitigate those risks. As such, outreach and education to these ends should be a priority. Essential to this is developing a cohesive outreach plan among the Park City Municipal Corporation, Park City Fire Department and local homeowner's associations. Our data also strongly encourages strengthening emergency preparedness in terms of incentivizing residents to perform wildfire mitigation as well as evacuation planning.

Recommendations

Build Wildfire Awareness through Outreach and Education

- Update PCMC website to be clear, concise and understandable for residents.
- Heavily advertise the Summit County/Park City Emergency Alerts program. Employ the local radio, newspaper, social media and HOA newsletters.
- Encourage stakeholders (Park City and Deer Valley Resorts, utilities, and public transit) to prioritize wildfire mitigation actions and publicize this to the local community.
- Coordinate educational programs that cover defensible space, home hardening and emergency planning. These programs could be coordinated with the PCFD's Ready, Set, Go Program.
    - Set up a monthly newsletter or blog to highlight wildfire awareness. HOA, STR licensees and water utility user records could be used to distribute the newsletter.
- Organize a coordinated outreach plan with cohesive messaging from PCMC, PCFD and HOAs.
- Create a robust smoke management plan to communicate information to residents on prescribed fire smoke management (techniques, air quality regulations and FAQs).
- Promote the PCFD Wood Chipping Program if/when it becomes available.
- Support a Neighborhood Ambassador Program to help property owners better understand wildfire risks and spark coordinated action that affects positive change. Utilize property owners and community groups to work with PCMC, Park City Fire District and other partners to address shared risk.

Bolster Emergency Preparedness

- Use Wildfire Awareness Month in May to encourage residents to set up emergency preparedness plans. This could include registering their cell phones and email addresses through Summit County/Park City Emergency Alerts—the official emergency notification system for residents, businesses, second home owners and visitors within the limits of Summit County, Utah.
- Promote preparation of a go-bag and a family emergency plan before the threat of wildfire is in your area. Encourage HOAs to publicize awareness in their neighborhoods of coordinated plans with family and neighbors.
- Address issues with egress routes (where no one knew who had a key) through HOAs. Use newsletters, emails, annual meetings to disseminate information.
- Encourage residents to visit the Rotary Wildfire Ready website to learn about go-bags and evacuation planning.

Incentivize Wildfire Mitigation

- Establish a program that provides wildfire mitigation home assessments and/or a list of certified wildfire mitigation specialists in the area. If not, think of other ways to get information out about assessments.
    - Consider grant funding to build a voucher or discount program to remove financial barriers.
- Adopt ordinances to enforce adequate home hardening.
- Review existing regulations. Anticipate and address challenges. Involve the public. Use examples from other cities, counties or programs that have successfully implemented code updates.

    - Require short-term rentals to have a wildfire assessment done as part of the licensing requirements. Include emergency preparedness as part of this assessment (how to notify renters of evacuation, egress routes).
- Develop a homeowner cost-planning tool for wildfire mitigation work and make it available to the public.

Government, PCFD, Stakeholders Must Lead the Way

- PCMC, PCFD and HOAs represent credible and respected sources for information. By building a cohesive approach, residents and business owners will take guidance leading to meaningful action.
- Major stakeholders such as Deer Valley and PCMC Resorts, Park City Transit and utility companies have an opportunity to be good examples for the community. These organizations taking actions regarding emergency preparedness and wildfire mitigation and publicizing it will go a long way towards encouraging residents to do the same.

Additional Tables and Figures

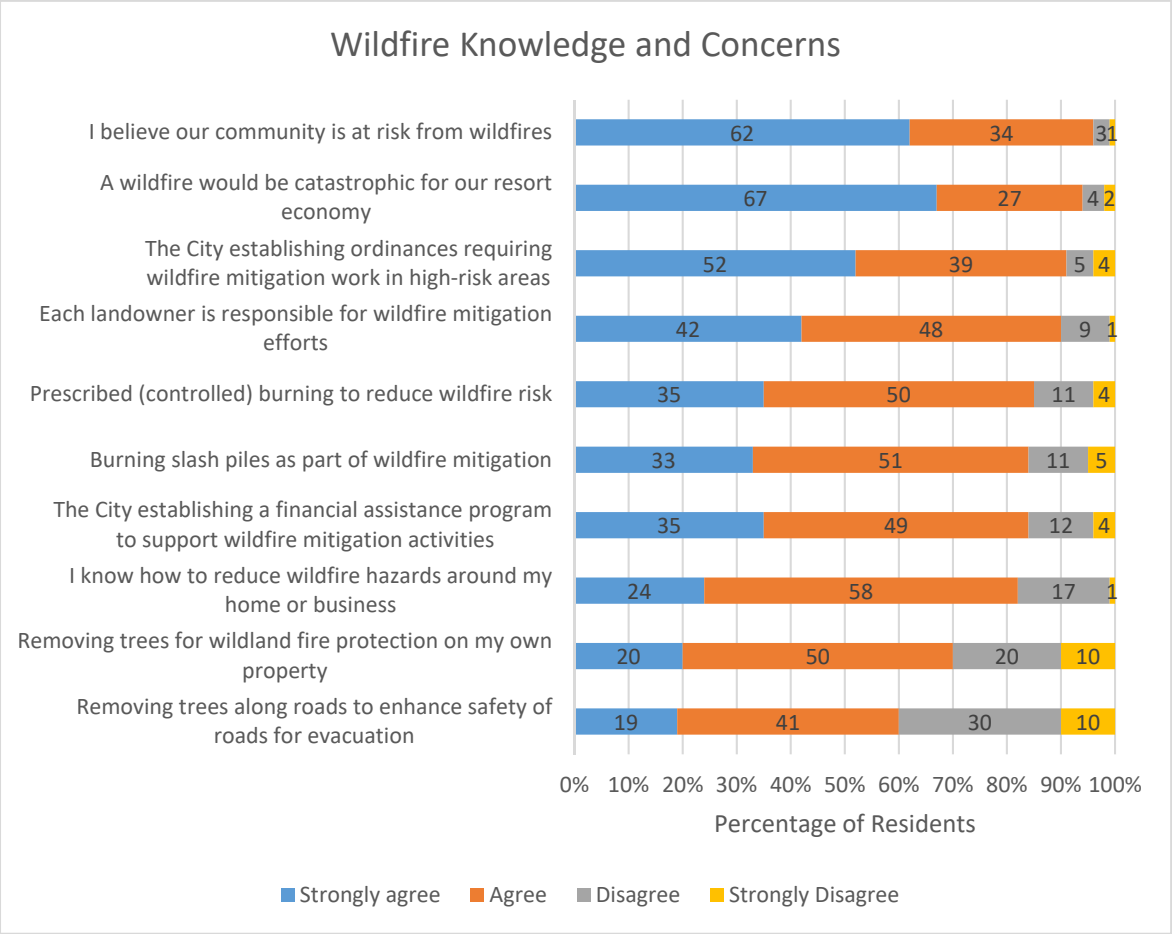

Figure 3-0-11. Residents' level of concern regarding wildfires. Includes data from Figure 4 plus additional responses.

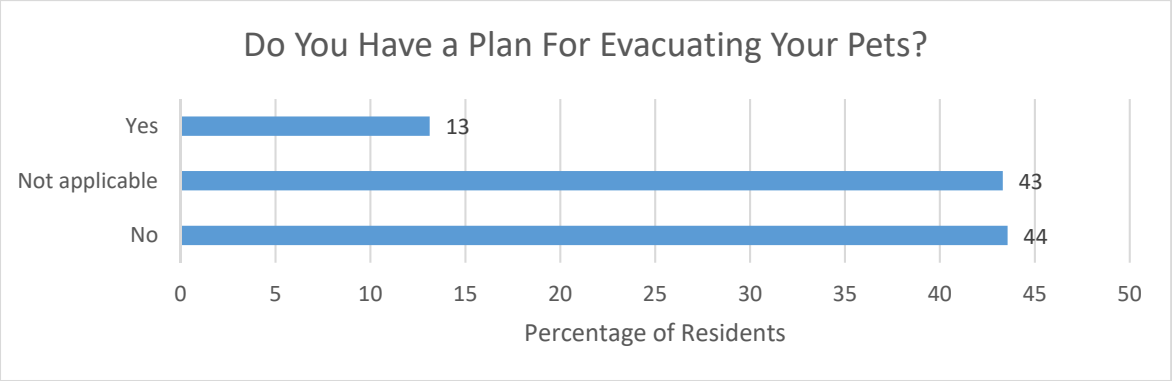

Figure 3-0-12. Residents with plans for evacuating pets.

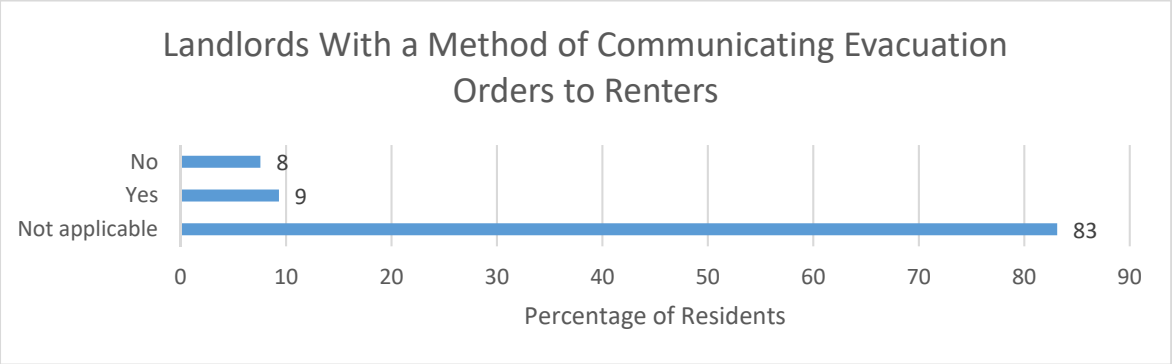

Figure 3-0-13. Short-term rental owner's notification of renters.

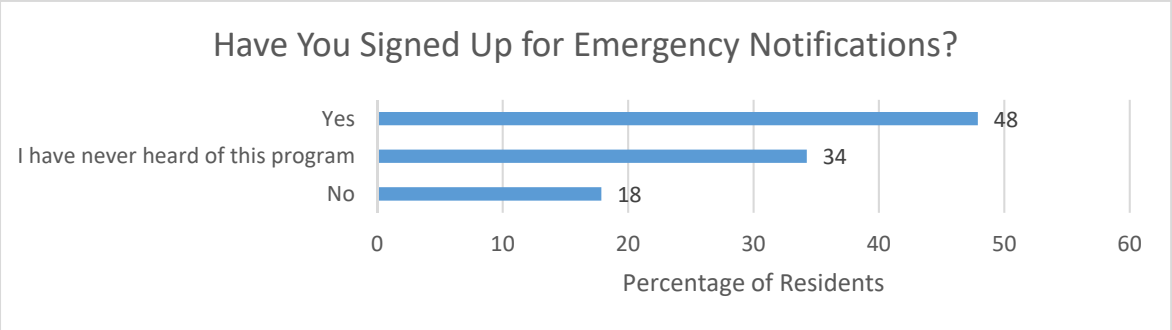

Figure 3-0-14. Residents registered for Summit County/Park City emergency alert system.

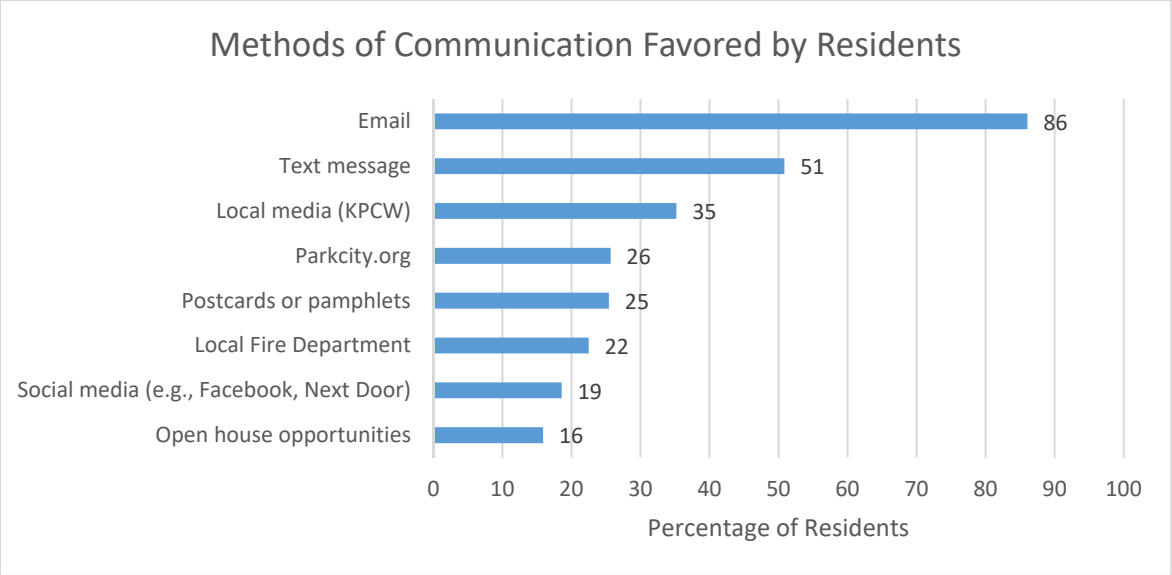

Figure 3-0-15. Preferred methods to communicate wildfire emergency to residents.

Table 1. Residency status of survey respondents. Each respondent was allowed to choose multiple answers.

RESIDENCY STATUS	RESIDENTS (%)
Full-time resident	73
Seasonal resident	22
Owner of rental property	5
Other	3
Business owner	2
Owner of undeveloped lots	1

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Wildfire Adapted Partnership. Fire Adapted Communities Neighborhood Ambassador Approach - Increasing Preparedness through Volunteers. Apr. 2018, https://static1.squarespace.com/static/5b28059d266c074ffe39b9b9/t/5bd7648315fcc0d2d293febc/1540842637107/AmbassadorGuide_v2018-09-24.pdf.

4.0 Suppression Response

In This Chapter

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4.1 Suppression Response

Executive Summary

Safe, effective and risk-based wildfire response is one of the three goals of the National Wildland Fire Management Cohesive Strategy (Cohesive Strategy)—the key strategic framework for addressing wildland fire challenges across the nation. As part of the PCMC Community Wildfire Risk Assessment project, we organized a suppression working group with extensive experience in wildland and structural fire to assess and summarize the wildfire response capacity of the Park City Fire District (PCFD). We developed general recommendations for PCFD based on our team's wildfire suppression experience, industry norms, lessons learned from other small- to medium-sized fire districts in the western U.S. and recommendations and tasks in local, regional, national strategic plans (Cohesive Strategy, 2013 Western Regional Action Plan, 2013 Utah Catastrophic Wildfire Reduction Strategy, 2021 PCMC CWPP and 2013 PCFD CWPP) and best practices from NFPA's Fire Department Wildfire Preparedness and Readiness Capabilities report (Haynes & Madsen, 2017).

Within the PCMC Community Wildfire Risk Assessment Area, several entities have jurisdictional responsibility for wildland fire including Park City Fire District, Summit and Wasatch counties, Utah Forestry, Fire and State Lands, the US Forest Service and the Bureau of Land Management. The largest response duties of these entities fall on the Park City Fire District (PCFD), and such is the focus of this suppression review. PCFD has positioned itself to respond to local wildfires. Additional adjustments could further enhance PCFD's ability to fulfill the third goal of the Cohesive Strategy—safe, effective and risk-based wildfire response--and PCFD's mission to "enhance the quality of life for those we serve, safeguard the environmental and economic base of our community, make a positive difference and provide excellence in service."

Key reasons for PCFD to invest in wildfire response capacity now are: (1) elevated wildfire risk in the Park City area, with risk likely to increase in the coming years due to climate change and increasing development in the wildland/urban Interface; (2) exposure of values at risk to damage from wildfire and post-fire sediment delivery; (3) benefits of proactive measures within the community to reduce the severity and impacts of future wildfires; and (4) current availability of grant funding to support fire department capacity and preparedness. This assessment can fulfill the tasks assigned PCFD in the 2021 PCMC CWPP (Goal B.4. Evaluate response personnel, facilities, and equipment).

Top recommendations for PCFD are:

- Formalize the internal wildland fire program with dedicated and consistent oversight and restructuring.
- Provide additional opportunities for staff to gain wildland fire experience and qualifications.
- Increase resources and availability to support area residents in wildfire risk mitigation, education and activities.
- Update and expand formal fire management plans.
- Reevaluate the potential to support a seasonal wildfire and fuels mitigation crew.

Background

National Wildland Fire Management Cohesive Strategy and the Role of Local Fire Departments

Safe, effective and risk-based wildfire response is one of the central goals of the National Wildland Fire Management Cohesive Strategy (2023; Cohesive Strategy). The Cohesive Strategy is the key strategic framework for addressing wildland fire challenges across the nation. The Cohesive Strategy emerged from the Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act) and was finalized in 2014 after rigorous planning, analyses and stakeholder engagement. A re-evaluation and amendment to the Cohesive Strategy was released in 2023 to address emerging issues, such as climate change, workforce capacity, community resilience, diversity, equity and inclusion. The 2013 Utah Catastrophic Wildfire Reduction Strategy is centered around the same three goals as the Cohesive Strategy.

Local fire departments have a central role to play in implementing the Cohesive Strategy and Utah Catastrophic Wildfire Reduction Strategy. The U.S. Fire Administration under FEMA suggests the following actions for fire departments to support the Cohesive Strategy:

- Help your jurisdiction create a Community Wildfire Preparedness Plan.
- Provide guidance to resident leaders to develop fire-adapted communities.
- Ensure that fire service personnel responding to wildfires have adequate training and equipment.

The Western Regional Strategy Committee proposed a series of goals, actions and tasks in the 2013 Western Regional Action Plan to fulfill the third goal of the Cohesive Strategy. Local fire departments are identified as important implementers for many of the tasks in the action plan, including:

- Develop a local unified vision pre-season through annual operating plans and involve affected agencies and stakeholders (Goal 3.2, Action 3.2.a, Task 8)
- Map areas where aggressive suppression is the expected initial response (Goal 3.2, Action 3.2.a, Task 10).
- Discuss plans for areas and situations (weather, time of year, vegetation types, etc.) in which aggressive suppression is not the desired response (Goal 3.2, Action 3.2.a, Task 11).

GOALS OF THE COHESIVE STRATEGY (UPDATED IN 2023)

RESILIENT LANDSCAPES

Landscapes, regardless of jurisdictional boundaries are resilient to fire, insect, disease, invasive species and climate change disturbances, in accordance with management objectives.

FIRE-ADAPTED COMMUNITIES

Human populations and infrastructure are as prepared as possible to receive, respond to and recover from wildland fire.

SAFE, EFFECTIVE, RISK-BASED WILDFIRE RESPONSE

All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

Roles of Local Fire Departments in Utah for Wildfire Prevention, Response and Proactive Management

Responsibilities for wildfire prevention, response and proactive management in the State of Utah depend on the location where action is occurring. Responsibilities are outlined in the Utah State Code 65A-8-2 (Management of Forest Lands and Fire Control, Fire Control; 2023) and the Utah Division of Forestry, Fire & State Lands Annual Operating Picture. Local fire departments for municipalities have the responsibility to:

1. Reduce the risk of wildfire to incorporated, privately owned and municipality owned forest, range, watershed and wildland-urban-interface land, with private landowner permission, through appropriate wildfire prevention, preparedness and mitigation actions; and
2. Ensure effective wildfire initial attack on forest, range, watershed and wildland-urban-interface land within the municipality's fire protection boundary.

Local fire departments may assign these responsibilities to a fire service provider or an eligible entity through contract, delegation, interlocal agreement or another method (Utah State Code 65A-8-2-200.5; effective 01/01/2017).

The Utah Cooperative Wildfire System (CWS) was established by the Utah legislature in 2017 to create a system wherein the state incurs the costs of large and extended-attack wildland fire ("catastrophic fires") in exchange for local governments agreeing to implement prevention, preparedness and mitigation actions that are proven to reduce the risk and costs of wildland fire in the long run (Utah Division of Forestry, Fire and State Lands, 2023). Eligible entities include counties, cities and certain special districts. All 29 counties in Utah and most cities (including Park City and Summit County) have opted into the CWS. Participating entities must meet the following three criteria to receive the option of authorizing the Delegation of Fire Management Authority and Transfer of Fiscal Responsibility to the State (Utah Division of Forestry, Fire and State Lands, n.d.) when wildfires escape initial attack:

1. **Annual participant commitments:** Commitments are met through prevention, preparedness and mitigation work—direct spending or in-kind efforts—accomplished at the local level. Commitments are calculated based on average historic fire cost within the jurisdictional boundary and a risk assessment evaluation by the Utah Wildfire Risk Assessment Portal (UWRAP). Participant commitments are regularly recalculated with older fires dropped and newer fires added to the estimate of average historic fire cost.
2. **Initial attack:** The participating entity and its associated fire department make the best possible initial attack (IA) to control and contain wildland fires in this early phase. Increasing wildfire preparedness through training, annual firefighting refreshers and purchase of equipment that will enhance their wildland firefighting IA capabilities.
3. **Community Wildfire Preparedness Plan (CWPP):** Participating entities must create CWPPs within two years of opting into CWS and keep their plan updated. CWPPs must identify local values at risk, priority areas and actions to reduce risk. Staff of the Utah Division of Forestry, Fire and State Lands can provide assistance to participating entities when preparing their CWPP.

Importance of PCFD's Wildfire Response Capacity

Park City Fire District (PCFD) is involved in local initial-attack wildfire response and has experience with several local and out-of-area incidents. All firefighters with PCFD are required to have wildland fire qualifications (hold red cards) and the Department holds annual wildland fire refresher trainings and has one Type 3 wildland fire engine available for out-of-district wildfire deployments. PCFD firefighters have gone on 20 deployments across the U.S. in the past 12 years. PCFD played a key role in responding to the 2021 Parleys Canyon Fire north of Park City. Quick action by PCFD responding crews in conjunction with the Summit County Sheriff's Department resulted in organized evacuations of threatened homes, and laid the foundation for the arrival of state and federal resources, including firefighting aircraft over the fire in a very short timeframe, helping to prevent any loss of life and property.

Key reasons for PCFD to invest in wildfire response capacity in the coming years are:

1. Elevated wildfire risk in the Park City area, with risk likely to increase in the coming years due to climate change and with the expansion of the wildland/urban interface (see chapter 5.0).
2. Exposure of values at risk to damage from wildfire and post-fire sediment delivery (see chapters 2.0 and 5.0).
3. Benefits of proactive measures within the community at reducing the severity and impacts of future wildfires (see chapter 5.0).
4. Strategic alignment with the Cohesive Strategy, 2013 Utah Catastrophic Wildfire Reduction Strategy, 2013 Western Regional Action Plan, PCFD's mission to "enhance the quality of life for those we serve, safeguard the environmental and economic base of our community, make a positive difference, and provide excellence in service," and tasks in the 2013 Park City Fire District CWPP (Utah Division of Forestry, Fire and State Lands, 2013) and 2021 PCMC CWPP (Utah Division of Forestry, Fire and State Lands, 2021) (Table 4-1 and 4-2).
5. Current availability of grant funding to support fire department capacity and preparedness (see list of potential funding sources at the end of this chapter).

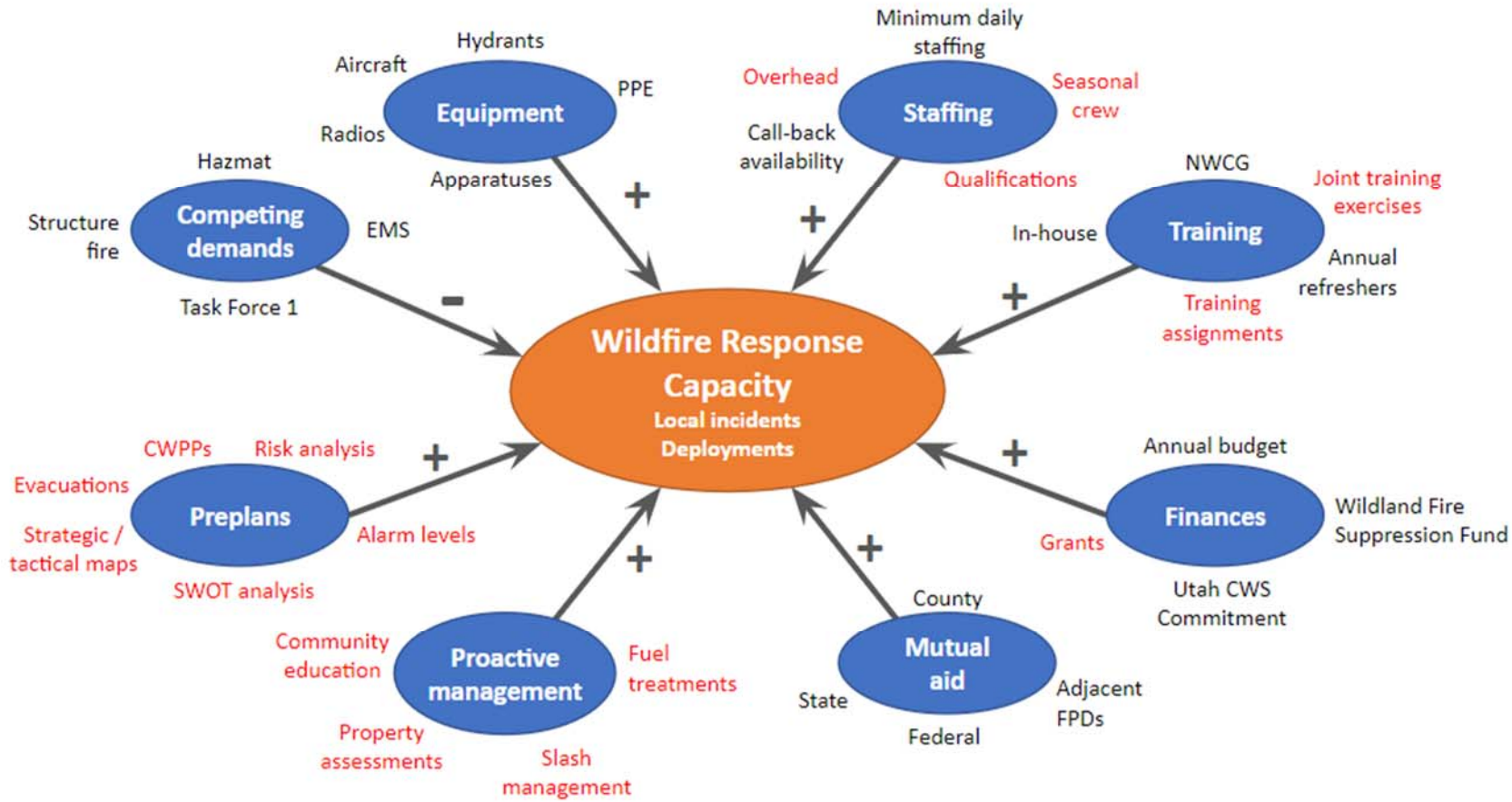

Figure 4 0-1. Figure 1. The capacity for fire departments to respond to local wildfires and participate in out-of-area deployments is influenced by a variety of factors. Increases in these factors increase wildfire response capacity, except for competing demands, which decrease the capacity of fire departments. Items in red are mentioned in general recommendations for PCMC and PCFD.

Methods

We organized a suppression working group with extensive experience in wildland and structural fire to summarize PCFD's wildfire response capacity and provide general recommendations. Wildfire response capacity for local incidents and out-of-area deployments is influenced by a myriad of factors related to competing demands for staffing, equipment, training, finances, mutual aid, preplans and proactive management (Figure 4-0-1). We assessed conditions in each of these areas based on conversations with PCFD leadership and review of relevant documents, such as 2020-2022 PCFD Annual Reports, 2020 Blue Ribbon Committee report, PCFD pre-plans, minute meetings for the PCFD Administrative Control Board, 2021 PCMC CWPP (Utah Division of Forestry, Fire and State Lands, 2021), 2013 Park City Fire District CWPP (Utah Division of Forestry, Fire and State Lands, 2013), Utah Statewide Operating Plan (2013), PCMC's Comprehensive Emergency Management Plan (2020), 2022 Pre-Disaster Mitigation Plan for Summit, Utah, and Wasatch Counties (Mountainland Association of Governments, 2022), and Utah State Code.

We developed general recommendations for PCFD based on our team's wildfire suppression experience, industry norms, lessons learned from other small- to medium-sized fire districts in the western U.S., recommendations and tasks in local, regional and national strategic plans (Cohesive Strategy, 2013 Western Regional Action Plan, 2013 Utah Catastrophic Wildfire Reduction Strategy, 2021 PCMC CWPP, and 2013 PCFD CWPP) and best practices from NFPA's 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report (Haynes & Madsen, 2017).

Key Findings

Competing Demands

PCFD has an important role in wildland fire response and proactive management. However, they face similar challenges as other small- to medium-sized fire departments in the wildland urban interface, including competing demands for staffing, training and funding (Madsen et al., 2018). In addition to wildland fire response and community outreach, PCFD responds to structural fires, engages in fire prevention inspections, community outreach, plan reviews and special events, provides emergency medical services, AEMT ambulance transport, heavy rescue and hazmat response for all of Summit County, and provides community EMS training. PCFD is contractually committed to respond to nation-wide emergencies through Utah Task Force 1, up to several times a year. Understandably, these other responsibilities make it harder for PCFD to commit staff time to wildland fire training and out-of-area deployments.

> *Historically, local fire departments have focused on structural fire protection while wildfire protection has been the domain of the state and federal government. Each type of protection requires different firefighting techniques and equipment: urban protection is a focused effort to protect structures (requiring heavy duty personal protective equipment, including breathing apparatus, that allows for brief exposure to intense heat that can occur within a building), whereas wildland firefighting emphasizes a more extensive effort to prevent perimeter spread (requiring lighter weight protective equipment that allows for long periods of intense physical work). As a result, direct involvement in wildfire management, particularly fire mitigation efforts, has not always been seen by local fire departments as in their purview of responsibilities. (Madsen et al. 2018, page 451)*

Due to an absence of large wildfires near Park City in the past several decades and the abundance of EMS calls they receive, wildland fire response appears to receive a lesser emphasis than other services offered by PCFD. Emergency medical calls are abundant with 32,000 year-round residents in the district and 4 million annual daytime and overnight visitors, mostly in the winter and summer months. According to PCMC annual report, they responded to 6,413 calls for service in 2022—58% of these calls were for EMS, 40% for fire (primarily residential-, commercial-, and automobile-related fires) and 2% for rescue.

Oversight

PCFD's wildland fire program has traditionally been managed as a collateral duty, with responsibilities shared informally at multiple levels from Chief to Captain, Engineer and Firefighter/Paramedic. Duties have typically been assigned to staff that have experience or passion for this area of expertise. Currently, the public-facing aspects of the program to the community are handled by the Fire Marshall (Chief level), while most internal program details are handled by a station Captain and station Engineer.

Staffing

According to PCFD's 2022 Annual Report (Park City Fire District, 2023), they employ 80 paid firefighters, 24 full-time non-firefighter AEMTs and paramedics, 13 part-time EMTs and 17 administrative support personnel. They maintain minimum staff levels of 23 to 26 firefighters and 8 EMTs. On-duty firefighters are distributed among the Department's seven fire stations. All firefighters with PCFD are required to maintain wildland fire qualifications (hold red cards).

PCFD firefighters interested in wildland firefighting can participate in out-of-area deployments as part of the PCFD wildland "division." This voluntary group is not a formal division, and it consists of 20-30 firefighters and one available type 3 engine for off-district wildland fire assignments. Members of the division have gone on 20 deployments across the U.S. in the past 12 years. Firefighters are not allowed to go on deployments during periods of high fire danger, the 4th of July or when local EMS call volumes are high.

PCFD currently has two National Wildfire Coordinating Group-qualified Engine Bosses and three more firefighters that have almost completed their Engine Boss task books. Various firefighters are working on qualifications such as Firefighter Type 1, Firing Boss and Incident Commander Type 5.

Equipment

PCFD is well equipped with wildland fire apparatuses and personal protective equipment. The Department has:

- One Type 1 engine at each of the seven fire stations with 500 feet of 1 ½" forestry hose and three smokey packs for progressive hose lays with 100 feet of 1 ½" and 100 feet of 1" hose.
- Three Type 3 engines, with an additional Type 3 on the way. One of these engines is dedicated for deployments.
- Two side-by-side UTVs for off-trail rescues.
- One OHV Type 7 pumper engine.
- One Type 1 tactical tender and S2 support tender, each with fold-a-tanks.
- Fifteen BKR500 150mHz radios.

- Wildland fire-specific helmets, Nomex, fire packs and deployment shelters for each firefighter.

Fire hydrants are available in the entire developed area that PCFD is responsible for. In general water pressure is adequate throughout the district with the Colony having the highest pressure, but in older areas of the district the system experiences lower pressure, including parts of Quinn's Junction. Park City Water Division is constantly updating their old infrastructure to increase hydrant pressure, but this is a lengthy and expensive process. Bonanza Estate in Wasatch County is outside of the PCFD, does not have hydrants and most homes are on wells. PCFD works with ski resorts to make sure the Department has access to ponds on ski resorts as draft and/or dip sites.

Training

All new firefighters with PCFD receive basic wildland fire training (S-130/190), and all firefighters take annual refresher training (RT-130) and the arduous work capacity test to maintain current red cards. Annual refresher trainings focus on the following topics:

- Communications and radio use, particularly how to communicate with air resources.
- Shelter deployments.
- Progressive hose lays and calculating hydraulic feasibility of hose lays.
- Pump-and-roll tactics.
- Incident command structure.
- Structure triage.
- Evaluating fire weather and fire behavior.

Stated training objectives centered on communication with air resources and progressive hose lays after experiences with recent wildland fires, including the 2021 Parleys Canyon Fire, where it was too steep to engage the fire with engines. Ordering air resources has become more important to the Department after a myth about the financial burden of air resources was dispelled several years ago.

PCFD also offers several NWCG courses to firefighters including firefighter type 1 (S-131), portable pumps and water use (S-211) and wildland fire chainsaws (S-212). Community partners consisting of agencies and the private sector help teach these courses and offer hands-on experience to PCFD firefighters.

PCFD has conducted joint wildfire training with Utah State Air Operations and North Summit Fire District. They occasionally train with the Unified Fire Authority of Salt Lake County, but these joint exercises are focused on heavy rescue and extractions, not wildland fire.

Mutual Aid

Mutual aid agreements are a tool to help organizations prepare for wildfire events that exceed their capacity. As long as PCFD meets the three criteria for participation in the Utah CWS (Cooperative Wildfire System), PCFD can delegate wildfire authority to the State of Utah when wildfires escape initial attack.

Park City is part of a Multi-Jurisdictional Automatic Aid, Mutual Aid, Fire, Training, Emergency Medical, and Other Services Agreement among 11 municipalities, four fire protection districts and the Unified Fire Authority. This agreement specifies that the first fire department or district to arrive on-scene to a wildfire will assume Incident Command and retain such command until relieved by an appropriate officer of the fire department or district within whose jurisdiction the situation is located. PCFD often delegates authority for local wildfire incidents to the Summit County Fire Warden as soon as possible during initial attack.

PCFD does not have formal mutual aid agreements with surrounding agencies that the project team was made aware of. Our team was particularly interested in wildland-urban-interface areas adjacent to the district/county boundaries with Wasatch County Fire to identify the closest resource response to places like Bonanza Flat or areas around Deer Valley. PCFD does have some informal standard operating agreements with Wasatch County and Unified Fire Authority for specific incident response.

MUTUAL AID AGREEMENT

A written or oral agreement between and among agencies, organizations and/or jurisdictions that provides a mechanism to quickly obtain assistance in the form of personnel, equipment, materials, and other associated services. The primary objective is to facilitate the rapid, short-term deployment of support prior to, during, and/or after an incident (NWCG Glossary of Wildland Fire, PMS 205).

Finances

About three-fourths of PCFD's annual revenue in 2022 came from property taxes. The Department received an additional 1% of their revenue from grants and donations. PCFD also receives reimbursement for personnel, equipment, fleet vehicles and supplies when responding to wildland fires outside their jurisdictional area under the Utah Statewide Operating Plan. The policy for reimbursement of interagency fire resources (personnel, equipment, fleet vehicles and supplies) is outlined in Section 5 of the Utah Statewide Operating Plan.

Park City's annual participant contribution to the Utah CWS is currently around $10,000, and Summit County's annual contribution is $80,000. These contributions are likely to decrease in the coming years when two larger, older fires (2018 Tollgate Fire and 2013 Rockport Fire) are dropped from the calculation of average historic fire cost. PCFD meets their CWS participant contribution through their chipping and community education programs (see Proactive Management below).

Preplans

Pre-Attack Plans

Preplanning is an essential activity to prepare local, state and federal agencies for wildland fires, particularly complex wildfires in the wildland urban interface. Preplans can go by various names, including pre-attack plans, pre-planned dispatch, structure protection plans and annual operating pictures. Community Wildfire Preparedness Plans are also a form of preplanning, although their function and content are usually substantially different from pre-attack plans.

In 2008, PCFD prepared Wildland/Urban Interface Quick Access Preplans for eight communities in the district (Bear Hollow, Colony, Daly Canyon, Iron Canyon, Ontario to Empire Canyons, Red Hawk, Swanner, and Upper Deer Valley). Preplans include general descriptions of hazards, tactical objectives, structure fire

protection analyses and water systems (Item 1). These preplans include geographic coordinates for features such as dip and draft sites and safety zones, but they do not include maps. Goals and tactics in the preplans are fairly general, for example, a strategic goal in the 2008 pre plan for Daly Canyon is to "contain fire to a specific geographic area or redirect fire away from populated areas."

A representative from PCFD participates in annual hazard mitigation meetings to prepare Pre-Disaster Mitigation Plans for Summit, Utah, and Wasatch counties. The Fire Marshall with PCFD is also a member of the Emergency Management Group that helps prepare PCMC's Comprehensive Emergency Management Plans (CEMPs). However, the 2020 Park City CEMP has very little information on wildfire response.

Evacuation Planning

The Park City Emergency Manager is responsible for planning and coordinating evacuations during wildfires in PCFD per Utah State Code 53-2a-2-205 (effective 05/04/2022), and the Chief of Police or County Sheriff, depending on jurisdiction, is in charge of ordering and enforcing evacuation orders per PCMC's CEMP. PCFD is only peripherally involved in evacuation planning and operations; PCFD is not assigned official roles for evacuations in the Department's Operational Plan or in PCMC's CEMP. Employees of PCFD participated in a mock evacuation scenario in 2022 in Upper Deer Valley, and the Department conducts community outreach events to encourage all residents to have a home evacuation plan and family communication plan for emergency situations.

Item 1. Content from PCFD's 2008 Wildland/Urban Interface Quick Access Preplans

1. General overview:
    - Description of the subdivision.
    - Units / stations available to respond.
    - Description of water supply availability (hydrants, tenders, tanks in engines and draft options).
    - General fire behavior predictions.
    - List of strategies (e.g., offensive attack, defensive attack, stabilization, property conservation).
    - List of anticipated problems (e.g., evacuation, numerous structures involved, inadequate resources).
    - List of hazards to personnel (e.g., overhead power lines, congested escape routes).

2. Command and control:
    - Attack mode (e.g., offensive, defensive, combination).
    - Strategic goals (e.g., ensure life safety, contain fire to specific geographic areas, protect structures).
    - Tactical objectives (e.g., evacuate or shelter residents, manage utilities, place necessary hose lines, establish control lines).
    - Special concerns (e.g., road access issues, community assets).
    - Location of potential geographic divisions.
    - Alarm response levels.

- Location of potential staging locations.
- Location of potential command posts.

3. Structural fire protection analysis:
    - Site assessment, including general description of number of homes in four different response categories (no protection required, little effort required, maximum effort required, and non-defensible structure), and the locations of the most concerning structures.
    - Firefighter safety, including that location of potential safety zones.
    - General description of fuel conditions.
    - Primary routes for evacuations, with the specification that Park City Police Department will handle evacuations.
    - The proper entity to contact to coordinate turning on and off utilities.

4. Water system:
    - Threads, operating pressures, and outlet sizes for hydrants.
    - Capacity and locations of water tanks.
    - Locations of ponds, creeks, and other natural water sources.

Community Wildfire Preparedness Plans

Community Wildfire Preparedness Plans (CWPPs) empower communities to organize, plan and act on wildfire issues that impact community safety. Preparing and updating CWPPs are requirements for participation in the Utah CWS, and participating entities such as PCFD must assist with CWPP creation. The update period for CWPP's are not specified by the State. Using the State of Utah CWPP Template, PCFD helped create the 2013 Park City Fire District CWPP, and PCFD was on the planning committee for the 2021 PCMC CWPP. These CWPPs included priority action items for PCFD (Table 4-1 and 4-2).

Since completing the 2013 PCFD CWPP, the district has encouraged local entities to complete their own CWPPs that are specific to local needs with no stated plans to update the PCFD's CWPP. PCFD has provided guidance to the following HOAs in PCMC and unincorporated communities outside of PCMC as they produce their own CWPPs: The Colony, Jeremy Ranch, Moose Hollow, Silver Springs, Pinebrook, Summit County Special Service District #3, Stagecoach, Promontory, Sun Peak, Glenwild and American Flag. PCFD has limited capacity to be deeply involved in CWPP preparation.

Table 4--1. Tasks assigned to PCFD as part of the 2013 Park City Fire District CWPP to assist with wildfire prevention, preparedness and mitigation.

CWPP Goal/Task	Community Lead	Timeline	Priority
Goal A. Community will decrease fuels within the community to reduce wildfire impact in and around the community.			
Work with resorts, DR, PCMR nd Canyons to reduce fuels	PCFD, Resorts, FFSL, PCMC, Summit County	Ongoing	High
Increase the number of homes & HOAs with defensible space	PCFD, FFSL, PCMC, Summit County	Ongoing	High
Investigate additional chipping options for the entire CWPP area potentially with state resources	PCFD, Summit County, PCMC, Resorts, FFSL	Ongoing	Medium
Educate the landscaping contractor community in Firewise landscaping & defensible space	PCFD, Summit County, PCMC, FFSL	Ongoing	Medium
Goal C. Community will evaluate, upgrade, and maintain community wildfire preparation and response facilities and equipment			
Firefighting helicopter with bucket	PCFD, Summit County	Spring 2014	Medium
New fire station at Quinn's Junction and at Summit Park	PCFD	Spring 2014	Medium
Two Type 3 fire engines and two 3,500-gallon water tenders	PCFD	Fall 2013	High
Goal D. Community will develop and implement a comprehensive emergency response plan.			
Identify evacuation routes with signage	PCFD, PCMC, HOAs	Fall 2013	High
Communicate fire evacuation plans to residents	PCFD, PCMC	Fall 2013	Medium
Finish community fire plan and pre-attack plans	PCFD, PCMC, Summit County	December 2012	High
Goal E. Community will actively address identified regulatory issues impacting community wildfire prevention and response needs.			
Educate HOA groups to post fire-regulation signs at the entrance of each HOA community	PCFD, HOAs	Summer 2013	Medium
Develop model WUI code for new structures	PCFD, Building Officials, PCMC and Summit County Planning Depts	Spring 2014	Medium
Goal F. Community education about wildfire risk, preparation and response			
Promote awareness that Park City is within the wildland urban interface and at high risk for wildfire	PCFD, PCMC, Summit County	May-October annually	High
Have Firewise Utah booth at community events (e.g., Silly Market, Wednesday concerts at Deer Valley, 4th of July, Miners Day)	PCFD, FFSL	May-October annually	Medium
Encourage additional communities to become Firewise/develop CWPPs and acknowledge those that complete this work	PCFD, FFSL	2013-2015	Medium
Maintain and expand the chipper program as able to reduce fuel load	PCFD, FFSL	2013-2014	High
Model fire hazards throughout PCFD (sandbox exercises)	PCFD, PCMC, Summit County	November 2013	High

Table 4-2. Tasks assigned to PCFD as part of the 2021 PCMC CWPP to assist with wildfire prevention, preparedness, and mitigation.

CWPP Goal/Subgoal/Task	Community Lead	Timeline	Priority
Goal A. Prevention			
Expand chipper program	PCFD	2019-2022	1st
Goal B. Preparedness			
Goal B.1. Evaluate, upgrade and maintain community wildfire preparation			
Increase response agency depth	PCFD, County	Ongoing	1st
Lot assessments – PSA to help homeowners do their own	PCFD	Ongoing	3rd
Goal B.2. Educate community members to prepare for and respond to wildfire			
Preparedness fairs and public meetings	City, PCFD, EM	2019-2025	2nd
Goal B.4. Evaluate response personnel, facilities and equipment			
Personnel, training and qualiifications	PCFD	Ongoing	1st
Equipment requirements and maintenance	PCFD	Ongoing	1st
Facilities evaluations and improvements	PCFD	Ongoing	1st
Local IMT / Response Type – Type III incidents	PCFD	Ongoing	2nd
Goal C. Mitigation			
Goal C.1. Decrease fuels within the community to reduce wildfire impact in and around the community.			
Chipper program (FEMA grant)	PCFD, Summit County	2020-2022	1st

Proactive Management

Fuel mitigation

Fuel treatments are a land management tool for reducing wildfire hazard by decreasing the amount and altering the distribution of wildland fuels. Managing slash produced from fuel treatments and mitigation in the home ignition zone is vital to reducing wildfire risk. PCFD operates a chipping program with a three-person seasonal crew, one chipper and one heavy truck to haul chips between mid-April and mid-August or September. PCFD annual reports show that PCFD processed 1,225 piles in 2022, 887 piles in 2021 and 1,300 piles in 2020. Usage of the program tends to be concentrated in the Summit Park/Pinebrook and Jeremy Ranch area. In 2021 and 2022, PCFD participated in a grant program with FFSL in Summit Park to chip and remove woody material to reduce wildfire fuel load. Currently PCFD disposes of chips by giving them to large local landowners, landscaping companies and private residents. PCFD stated that the limited local options to get rid of woodchips is the biggest threat to maintaining the chipping program.

Beyond the seasonal chipping crew, PCFD does not have the capacity to support fuels mitigation projects on private or city-owned land. PCFD previously scoped establishing a 5-person hand crew to support local wildfire response and out of area deployments. However, the startup cost was deemed too high for their current budget, with the PCFD's priority being local emergency response to their service area.

Community engagement and outreach

Local fire departments can play a particularly effective and central role in engaging citizens and facilitating community risk reduction efforts. PCFD engages in community outreach around wildfire and home fire prevention, emergency medical response and general wildfire awareness. In 2020, PCFD reported engaging

in eight presentations on wildfire awareness, six group home assessments with an average of 10 residents per group and 14 meetings to work on CWPPs and FireWise status with HOAs. One of PCFD's fire inspectors developed a video series to educate homeowners on home hardening and defensible space. There are six FireWise communities in the PCFD response area: Pinebrook, Sun Peak, The Colony, Summit Park, Stagecoach Estates and Promontory.

PCFD also operates a voluntary wildland structure inspection program. Formerly a full-time seasonal employee visited homes to evaluate the property and home construction using Firewise standards and recommend improvements to homeowners so they could better protect their home in the event of a wildfire. This program was only in existence in 2020 when PCFD conducted 124 inspections. The reason for terminating the program was stated to be that PCFD felt it wasn't utilized by the community; however, the COVID-19 pandemic may have played a role in the lack of participation. PCFD will continue to do home inspections on an as-available basis but does not have additional staffing to meet the potential demand. PCFD has expressed plans for hosting a NFPA-equivalent Structure Assessment training in 2023 for district employees and interested public to assist with local-level structure inspections as they relate to wildfire risk.

Recommendations and Conclusion

PCFD has laid the foundation for an effective wildfire response capacity, and additional adjustments could enhance the district's ability to keep the community safe from wildfire. The 2021 Parleys Canyon Fire demonstrated the important role of PCFD in rapid initial attack, and the Utah CWS requires participating entities and associated fire departments to make the best possible initial attack (IA) to control and contain wildland fires in this early phase. This assessment can help support PCFD's fulfillment of tasks assigned to the Department in the 2021 PCMC CWPP (Goal B.4. Evaluate response personnel, facilities, and equipment).

We developed general recommendations for PCFD based on our team's wildfire suppression experience, industry norms, lessons learned from other small- to medium-sized fire districts in the western U.S., recommendations and tasks in local, regional and national strategic plans (Cohesive Strategy, 2013 Western Regional Action Plan, 2013 Utah Catastrophic Wildfire Reduction Strategy, 2021 PCMC CWPP, and 2013 PCFD CWPP) and best practices from NFPA's 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report (Haynes & Madsen, 2017; Table 4-3). We recognize that many of these tasks require time, resources and leadership commitment to enact, and PCFD would need to assess the relative importance for feasibility of these tasks. Fortunately, there are several funding sources available to fire departments to enhance their ability to provide fire protection and wildfire response (Item 2).

Out of a broader list of recommendations (Table 4-3), our team chose five items to highlight and prioritize for consideration. Some of these actions are relatively bite sized and efforts could be started internally without big changes to budgeting or other constraints.

Top recommendations for PCFD:

- Formalize the internal wildland fire program with dedicated and consistent oversight and restructuring.
- Provide additional opportunities for staff to gain wildland fire experience and qualifications.
- Increase resources and availability to support area residents in wildfire risk mitigation, education and activities.
- Update and expand formal fire management plans.

- Reevaluate the potential to support a seasonal wildfire and fuels mitigation crew.

According to the NWCG, "In a perfect situation, all [wildland-urban] interface areas should be pre-planned to provide an overview of the possible actions, hazards, resources, etc., that are beneficial during an incident. These plans should be jointly prepared by all agencies potentially involved" (National Wildfire Coordinating Group, 2013). The 2nd Edition of the Wildland Urban Interface Chief's Guide states, "Similar to pre-planning for high-occupancy or high-hazard structures in your jurisdiction, response agencies should pre-plan wildland and wildland–urban interface areas as well" (Wildland Fire Policy Committee, 2021). The 2013 Western Regional Action Plan emphasized the importance of developing local unified visions pre-season through annual operating plans that involve all affected agencies and stakeholders (Goal 3.2, Action 3.2.a, Task 8).

The goal of safe, effective and risk-based wildfire response is paramount and critical along with the goals of creating Fire Adapted Communities and managing for resilient landscapes when considering this section of the PCMC Community Wildfire Risk Assessment. All three of these goals must come together to achieve success in managing future wildfires in the Park City area. The 2021 Parleys Canyon Fire and its potential adverse impacts to the greater Park City area is a testament to why suppression response is important if we desire to live in fire-dependent ecosystems.

Before the next large-scale wildfire, it is important to increase experience and enhance qualifications, while looking at potential voids in critical resources and conducting pre-fire planning to create successful outcomes. Such efforts depend upon not just the PCFD but all involved interagency cooperators to enable Park City as a whole to be resilient as a community and ecologically before the next wildfire threat. These efforts have the potential to not only reduce the risk to homes, critical infrastructure and other highly valued resources and assets but also to reduce the risk to human life and the community of Park City that many enjoy.

Table 4-3. Recommendations to enhance PCFD's wildfire response capacity. BP = best practices from the NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report (Haynes & Madsen, 2017).

RECOMMENDATION	RATIONALE	ALIGNMENT WITH OTHER STRATEGIES
Competing Demands		
Make a department-wide commitment to enhanced wildland fire response through a formal statement demonstrating support for employee participation in wildfire assignments.	PCFD has elevated wildfire risk, and wildfires can easily transition into urban conflagration with rapid home-to-home fire spread. Other mutual aid resources, including the County Fire Warden, might be unavailable for several hours during initial attacks, particularly when there are multiple ignitions or ongoing incidents at the same time. Increasing department capacity to respond to wildfires will make residents in this community safer.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2021 PCMC CWPP: Goal B.1 (see Table 2).
Program Oversight		
Formalize and invest in a Wildland Fire Division with a dedicated wildland fire coordinator to manage all aspects. Structure the roles and responsibilities of additional leaders and participants to meet the needs of the program.	Management of the District wildland program has historically fallen on staff as a collateral duty, with responsibilities shared informally at multiple levels from Chief, Captain, Engineer, and Firefighter/Paramedic. Providing consistent and dedicated oversight, along with programmatic restructuring, would serve to increase clarity, enhance participation, and meet growing needs with higher levels of effectiveness.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2021 PCMC CWPP: Goal B.1 /B.4 (see Table 4-2). 2013 PCFD CWPP: In support of achieving all listed goals.
Staffing and Training		
Develop a depth and breadth of wildfire and prescribed fire qualifications and experience within PCFD by actively supporting off district and out-of-area deployments. Emphasize the importance of mid-level qualifications such as FFT1, engine boss, strike team and task force leader, and incident commander, to increase depth of critical	The best way to quickly develop wildfire experience is to support out-of-area deployments. Knowledge gained from deployments can help PCFD be even more effective with local initial and extended attacks. While PCFD requires all firefighters to hold Wildland Firefighter 2 (FFT2) qualifications, there are minimal qualifications within the district beyond this level or above. Thus, PCFD has built	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2021 PCMC CWPP: Goal B.1 (see Table 4-2).

leadership on incidents expanding beyond initial attack.	a normal where assistance from the outside is assumed beyond a low complexity initial attack wildfire. In the spirit of Interagency cooperation, making resources available to the interagency community supports the concept of shared resources and making a contribution for when PCFD will again need resources from outside of the district.	
Re-evaluate the potential to establish a 5-person seasonal crew to participate in fuel mitigation projects and wildfire assignments. Train and equip crew to respond to fires in limited access areas throughout the district that require hiking in with potential for limited support. PCFD previously determined such a crew would be cost-prohibitive, but this cost might be offset with grant funding and reimbursements from fire assignments (see recommendations on finances below).	A seasonal crew dedicated to fuel mitigation and wildfire assignments could rapidly expand PCFD's experience and response capacity. Small- to medium-sized fire departments throughout the west have seasonal wildland fire crews, such as Unified Fire Authority and Utah County in Utah, Boulder Mountain Fire, Lefthand Canyon, and Elk Creek Fire Protection Districts in Colorado, and have realized improvements in their department's capacity to respond to wildfire and to mitigate fuels in the community.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Resilient landscapes, fire adapted communities, and safe, effective, risk-based wildfire response. 2013 PCFD CWPP: Goal A (see Table 4-1). 2021 PCMC CWPP: Goal B.1 and Goal B.4 (see Table 4-2). NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report: Risk reduction activities BP 4.
Hire additional non-firefighter paramedics.	Hiring additional non-firefighter paramedics could help PCFD fulfill local EMS responsibilities when firefighters are on assignment.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2021 PCMC CWPP: Goal B.1 and Goal B.4 (see Table 4-2).
Utilize Recognition of Prior Learning (RPL) and prioritize out-of-area deployments for firefighters seeking to enhance their wildland fire qualification, especially when considering the position of Engine Boss (ENGB).	PCFD's capacity to participate in out-of-area deployments will be greatly enhanced by increasing the number of qualified Engine Bosses.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2021 PCMC CWPP: Goal B.1 and Goal B.4 (see Table 4-2).
Encourage firefighters to gain air-resource experience or open related task books (e.g. Helicopter Crewmember) and participate in a helitack assignment.	Air resources are crucial for addressing wildfires near the WUI, particularly around PCFD where engines cannot access remote and steep areas.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.

	Additional experience communicating with aircraft could greatly benefit PCFD.	2021 PCMC CWPP: Goal B.1 and Goal B.4 (see Table 4-2).
Participate in annual wildfire-related training with adjacent fire protection districts and mutual aid partners.	Relationships built during interagency training can help local agencies coordinate more effectively during local incidents.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.
Equipment		
Purchase large pumpkins as alternative water sources for portable pumps and dip sites for helicopters.	Parts of PCFD have hydrants with low water pressure, and bucket drops can be challenging if interstates need to be shut down. Portable water sources are important for nimble wildfire suppression operations.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.
Finances		
Actively pursue reimbursements for out-of-area deployments.	Off-district assignments have potential to generate revenue for the PCFD. Fire departments should never lose money on deployments, and they can make money due to high reimbursement rates for engines and equipment.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.
Write grants to support a 5-person seasonal fuel crew and other mitigation activities.	Several grants are available for fire departments to improve their ability to safety and effectively provide fire protection. See Item 2 for a list of available grants.	NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report: Risk reduction activities BP 6.
Work with PCMC and Summit County through the Administrative Control Board to explore the option of a mill levy on the local ballot to expand PCFD's budget for wildfire response.	Similar measures have been passed in other fire districts, Sunshine Fire Protection District Co and Boulder County Co, to support wildfire mitigation and emergency response.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.
Preplans		
Update and expand preplans from 2008 to cover all areas in PCFD and prepare a plan for responding to wildfires of different sizes. Revised plans should include additional details, including maps, communication plans, and medical plans.	High-quality preplans can help fire departments respond rapidly to initial attacks and share important local information with incoming resources (e.g., maps with the location of values at risk, local hazards, evacuation routes, and water sources). Preplans are also an opportunity for PCFD to identify strengths and weaknesses in the Department's ability to respond to wildfires.	The 2013 Western Regional Action Plan: Goal 3.2, Action 3.2.a, Task 8, 10, and 11. Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2013 PCFD CWPP: Goal D (see Table 4-1).

		NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report: Strategies and tactics BP 5, 7, and 8.
Formalize alert levels for wildfire response	Preplans from 2008 include alert levels, and a reevaluation and formalization of these levels could help PCFD be prepared to rapidly mobilize as wildfires grow in size and complexity.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response.
Participate actively in evacuation planning for PCMC.	PCFD is not responsible for implementing evacuations, but a solid understanding of evacuation plans and protocols can help PCFD coordinate with law enforcement during wildfires. PCFD has valuable insights about access needs for emergency vehicles. During wildfires, PCFD can also help assess the safety of law enforcement officers and residents during evacuations and re-entry after.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Safe, effective, risk-based wildfire response. 2013 PCFD CWPP: Goal D (see Table 1).
Update the 2013 PCFD CWPP to align with recent CWPPs for PCMC and other communities. Update goals to reflect the current direction of PCFD.	Wildfire risk, response capacity, and strategic goals for PCFD have changed since 2013. While PCFD has worked with PCMC and individual HOAs to develop site specific CWPPs, an updated and overarching district CWPP is important to serve as foundation and document to tier from for more localized CWPPs. The 2013 CWPP does not incorporate findings from the recently updated Utah Wildfire Risk Assessment Portal or the PCMC CWRA that this report is part of, nor does it include lessons learned from recent wildfires, such as the 2021 Parleys Canyon Fire. It is important to assess progress and reevaluate goals from the 2013 CWPP. Some funding sources require CWPPs that are less than 10 years old, and updated CWPPs are also required for participation in the Utah CWS.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Fire adapted communities. NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report: Risk reduction activities BP 3.
Proactive Management		
Re-evaluate the potential to establish a 5-person seasonal crew to participate in fuel mitigation projects and wildfire assignments.	See explanation above under recommendations for staffing.	See strategic alignment under recommendations for staffing.
Continue funding and supporting the PCFD chipping program. Consider expanding the	The PCFD chipper program is highly valuable to the community and helps residents dispose of fuel around their homes. PCFD does an annual	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Fire adapted communities.

program if the local market and community needs change in the future.	SWOT analysis of the program and will be able to determine if this situation changes.	2013 PCFD CWPP: Goal A and Goal F (see Table 4-1). 2021 PCMC CWPP: Goal A and Goal C.1 (see Table 4-2).
Enhance the ability of PCFD in providing voluntary wildfire mitigation property and structure inspections. Advertise and promote these inspections widely across the community through HOAs and other groups.	Residents are often confused about what they need to do to mitigate hazards in the home ignition zone, and one-on-one consultations can help residents understand and prioritize actions to mitigate risk. Previous efforts occurred at the height of Covid-19 and could have impacted interest. PCFD plans on sponsoring a NFPA equivalent Wildland Fire Structure Assessment training in 2023 for staff and the public.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Fire adapted communities. 2013 PCFD CWPP: Goal A and Goal F (see Table 4-1). 2021 PCMC CWPP: Goal B.1 (see Table 4-2). NFPA 2017 Fire Department Wildfire Preparedness and Readiness Capabilities report: Risk reduction activities BP 7 and 8.
Evaluate existing fire codes and consider updating to incorporate WUI codes from IFC and NFPA.	Increase firefighter and resident safety and further develop a response environment that is proactively supportive of suppression response.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Fire adapted communities. 2013 PCFD CWPP: Goal E (see Table 4-1).
Ensure availability of department resources to the general public to provide direction and answer questions relating to wildfire risk, WUI issues, home hardening, etc.	Through the PCMC CWRA process the public's acknowledgement of PCFD's role in wildland fire management was recognized. In the Community Survey, the PCFD was acknowledged by a number of respondents for being a trusted source of wildfire information.	Cohesive Strategy and 2013 Utah Catastrophic Wildfire Reduction Strategy: Fire adapted communities. 2013 PCFD CWPP: Goal A and Goal F (see Table 4-1). 2021 PCMC CWPP: Goal B.2 (see Table 4-2).

Item 2. Funding opportunities for fire departments to expand their wildfire response capacity.

- **Assistance to Firefighters Grants (AFG)** help firefighters and other first responders obtain critical resources necessary for protecting the public and emergency personnel from fire and related hazards. (https://www.fema.gov/grants/preparedness/firefighters)
- **Fire Prevention & Safety (FP&S) Grants** support projects that enhance the safety of the public and firefighters from fire and related hazards. (https://www.fema.gov/grants/preparedness/firefighters/safety-awards)
- **Staffing for Adequate Fire and Emergency Response (SAFER)** grants directly fund fire departments and volunteer firefighter organizations to help increase their capacity. (https://www.fema.gov/grants/preparedness/firefighters/safer)
- **Community Wildfire Defense Grants (CWDG)** are funded annually through the US Forest Service and help communities create and update CWPPs while also implementing projects outlined in recent CWPPs. (https://www.fs.usda.gov/managing-land/fire/grants)
- **Utah Fire Department Assistance Grant Program** provides technical and financial assistance to the fire departments of Utah to improve their ability to safely and effectively provide fire protection and manage hazardous material incidents. (https://ffsl.utah.gov/fire/fire-grants/)

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5.0 Wildfire Risk Assessment

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5.1 Quantitative Wildfire Risk Process

Executive Summary

The purpose of the Park City Municipal Corporation's (PCMC) Quantitative Wildfire Risk Assessment (QWRA) is to provide information about wildfire hazard and risk to Highly Valued Resources and Assets (HVRAs) around Park City. HVRAs are simply the things that people care about. These can be critical services the community relies upon (e.g. electrical grid, water supply, etc.) or the surrounding natural areas such as forests and streams. A wildfire risk assessment is a quantitative analysis of how HVRAs are potentially impacted by wildfire.

The PCMC QWRA has been completed to inform local land managers and community stakeholders in wildland fire and fuels management and risk analysis within the PCMC Project Area. Our team of experts adopted this science-based strategy for PCMC highlighting areas with the highest probability of reducing wildfire risk based on fuel treatments.

Wildfire risk assessments are not in and of themselves decision-making tools (Calkin et al., 2011; Scott et al., 2013). Assessing wildfire risk under existing conditions provides baseline information on how risk is distributed across the assessment area and which HVRAs face the greatest expected loss (or benefit) from wildfire. This information may be used in the planning, prioritization and implementation of wildfire prevention, preparedness and risk mitigation strategies (Helmbrecht et al., 2019) for Park City.

The PCMC QWRA was a multi-phased process that used the Interagency Fuels Treatment Decision Support System (IFTDSS) as a platform. Integral datasets were derived by evaluating local fire and weather history and executing numerous wildfire simulations to establish baseline Fuel and Fire Behavior Models (datasets). Through community participation, particularly with local stakeholders and subject matter experts, a list of the most highly-valued resources and assets was developed for the Park City Project Area. These resources and assets included categories such as Critical Infrastructure, Recreational Infrastructure, Wildlife Habitat, among others. The final output of the QWRA process establishes an "Expected Weighted Net Value Change " which quantifies how the presence of wildfire may affect the resources and assets that the community values most, either in a positive or negative way. The data and corresponding maps provide a clear visual representation of where wildfire presents the highest threat, or may provide benefit - areas where forest restoration and/or fuels reduction projects may be most influential in reducing fire risk.

Background

Why does Park City need a Wildfire Risk Assessment?

Park City is at risk of severe consequences from wildfire based on its mountainous location surrounded by various ecosystems that are dependent upon fire. Due to a variety of risk factors, it has been found that Park City's probability of wildfire is greater than 91% of communities in the nation (USDA et al. 2023).

Figure 5-0-1. Park City is surrounded by a variety of ecosystems.

The CWRA project area is included within the Wasatch-Cache-Uinta National Forest's Fireshed. Firesheds are areas to plan for the management of fire and identify needed treatment zones. Out of ten priority firesheds in the region of Nevada, Utah, Idaho and Wyoming, this region ranked fourth in priority for mitigating fire risk to nearby communities (Ager et al. 2021).

Many people may not realize the risk of fire to their homes and communities. This is especially true if fires are infrequent or small and of short duration. In the case of Park City, there is a limited record of recent and historical large wildfires within the landscape area. In some ways it represents a fire shadow, similar to a rain shadow. The majority of wildfires that occur are human caused and easily accessible to fire personnel. Natural ignitions from dry thunderstorms are possible in the area, but most storms developing along the Wasatch Mountains bring precipitation. These precipitation events help to suppress ignitions or limit the size and extent of wildfires.

In the absence of live fire, modeling fire behavior and its effects to HVRAs is necessary to understand the potential risks. There are limitations of fire behavior models and some interpretation is necessary. A team of fire and natural resource professionals developed a science-based strategy that builds upon shared responsibility, strengths, and place-based relationships in alignment with the National Cohesive Wildland Fire Management Strategy.

Using the Utah Fire Viewer and Interagency Utah Fire History Points, 52 fires dating back to 1992 were found within the analysis area. There have likely been more fires as the dataset is incomplete. Most fires were reported at zero acres and the largest, the 2000 Ability Center Fire, at 25 acres. While relatively small in size at 541 acres and outside of the PCMC CWRA project area, the impacts of the Parleys Canyon Fire were far-reaching. The fire started under prolonged and exceptional drought conditions. Suppression costs exceeded $3 million ($4,600 per acre) and resulted in the evacuation of 8,000 residents. Since 1992, eight notable fires located outside of the immediate vicinity of Park City are captured on the following table (Table 5-1).

Table 5-1. Notable fires outside of the immediate vicinity of Park City.

Year	Fire Name	Size (acres)	Notes
2022	Flat Line Fire	25	May fire in Gambel oak near Jordanelle Reservoir
2021	Parleys Canyon Fire	541	8,000 evacuated and over $3 million in costs
2020	Saddle Fire	630	Located near Midway; caused by a juvenile
2018	Tollgate Fire	287	Caused by a vehicle
2014	Rockport Estates Fire	120	200 homes evacuated
2013	Rockport Fire	5,000	Caused by lightning with eight structures burned
2012	Fox Bay Fire	500	Located near Jordanelle Reservoir in Wasatch County
1990	Wasatch Mountain Fire	2,962	Located near Midway. Resulted in two fatalities and 20 structures burned.

Forest Health and Disturbance

A combination of successful fire suppression over the past century resulted in forest health issues seen today caused by past timber harvest, grazing and mining practices (Hessburg et al., 2015). Though tree mortality from insects, disease, fire and weather-related events are natural processes that help forests change over time (Campbell and Leigel, 1996), these disturbances have greatly changed over the past few decades. Additionally, climate change and the rise of invasive plant species detrimentally affect forest health and contribute to hotter, more intense fires (Keyes et al., 2019; Coates et al., 2016). The results are increasing sizes of wildfires, longer durations of burning and more destruction to communities and natural ecosystems (USDA, 2022; Hessburg et al., 2015).

Figure 5-0-2. Forests around Park City are experiencing forest health issues.

In some areas, the forests around Park City are experiencing significant forest health issues. These issues are typically caused by dense forest conditions, insect infestations, sudden aspen decline, lack of rejuvenating fire, and invasive species. Insect infestations were the most recent cause of significant tree mortality, but drought, disease, and other disturbances all contribute.

The challenges and issues facing forests also affect the safety of nearby communities and peoples' experiences with the forest. Dead standing trees are highly visible on the slopes around the community, especially in Daly Canyon and across the Park City Mountain Zone. In time, these trees will fall and increase the fuel loading on the ground. This adds to the existing concentrations of down logs and tree branch material that are not quickly decomposing due to the aridity of this area. This down woody material can remain on the ground for decades. It will not quickly go away on its own without fire or human intervention.

Unfortunately, allowing natural fires to burn is not possible here. This leads to an increase in fuel loading and increases the likelihood that fires will burn hotter and more intense. While mortality is a natural life cycle of forests and provides wildlife habitat and nutrient cycling, much of it can be detrimental. It can negatively impact recreation, certain types of wildlife habitat (e.g. the loss of large, green trees for species that need dense cover), and make the control of fires very difficult or dangerous, among others.

Excessive density -- Both conifer (evergreen) and deciduous (broad-leaf) forests are experiencing stress from high density conditions, drought or lack of natural, healthy disturbance regimes.

Insect infestations -- In the mixed conifer forests, both the native fir engraver beetle (*Scolytus ventralis*) and the recent arrival of the non-native balsam woolly adelgid (*Adelges piceae*) have caused significant tree damage and mortality around this area (USDA Forest Health and Protection, 2022).

Sudden aspen decline -- Many aspen stands are stressed from climate change and recurring drought, past management practices, and fire suppression (Rogers, 2017). Normally one of the more fire-resistant forest types, the increase in conifers around aspen can change how fire interacts with them. This means that aspen forests, thought to be natural fuel breaks, may not act as such during a fire.

Lack of rejuvenating fire -- Gambel oak is another species that has evolved with fire. It sprouts vigorously following mixed-severity fires and maintains dominance for decades to a century following fire. However, as Gambel oak ages shoot mortality increases, and along with seasonal impacts like spring frost kill can add to fuel loading. This may lead to increased probability of ignition, fire spread and higher burn severity (Kaufman et al., 2016).

Invasion by exotic species – Sagebrush and grasslands are experiencing the invasion of the exotic cheatgrass (*Bromus tectorum*), an annual grass. Cheatgrass cures quickly and is available to burn earlier in the summer, often creating a highly flammable fuel bed of continuous light flashy fuels. This is quickly changing the fire behavior in the sagebrush ecosystems to more frequent, higher intensity burns (UoW / CSU 2013).

Like many other places, Park City may not have a long and storied history of frequent and large fires. However, in recent years the increasing number of fires is putting stressed forests, sagebrush and grasslands at risk for higher intensity fire events. In turn, this threatens homes, businesses and the highly valued resources and assets of the area.

Risk Overview

Unplanned wildland fires can result in significant, long-lasting impacts to ecological, social and economic systems. Therefore, it is necessary to identify and quantify the risk wildfire poses to those systems, in order to develop cost-effective mitigation strategies (Scott, 2013). Conducting a Wildfire Risk Assessment involves analyzing the three key components that make up wildfire risk:

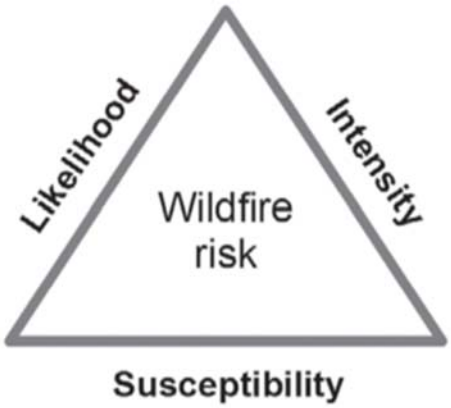

Figure 5-0-3. The three components analyzed in a wildfire risk assessment.

Likelihood - Through analyzing the landscape of the project area, the history of predominant weather patterns and randomized possible ignition points of wildfires, assessing how likely a wildfire is to occur at any given point can be calculated.

Intensity - By analyzing the vegetation across the project area, and using science-based research of how fire tends to behave in the present vegetation types, the varying intensity across the landscape at individual points can be measured.

Susceptibility - Determining susceptibility is done by investigating what the community cares about, in terms of geographic features within the project area. Once identified, quantifying the value of those features comparatively, and the impacts wildfire would have on them allows susceptibility to be measured.

What is a QWRA?

Quantitative wildfire risk assessments (QWRA) are specialized risk analyses that quantify where fire is most likely to occur, the intensity at which they burn and how they may impact valuable assets and resources within a region or a community. QWRAs are also designed to provide land managers, fire personnel and other emergency responders the information they need to make risk-informed decisions. These include how to most effectively address wildfire risk, aid in emergency preparedness planning and guide forest restoration and fuel treatment priorities (Scott et al., 2013).

These values in the QWRA process are called 'highly valued resources and assets (HVRAs) and are, in the simplest terms, the things that people care about. These can be critical services that the residents and business owners rely upon (e.g., electrical grid, water supply, etc.) or the surrounding natural areas like forests and streams. Not all HVRAs are threatened by fire, some may actually benefit, for example, certain types of fire-adapted ecosystems (i.e., aspen forests). While most wildfires are often more threatening than beneficial, there are places in a landscape where fire is helpful. Information about the difference between threat and benefit will help land managers target the areas with the highest need for fuel treatments or fire suppression response strategies. This will have far-reaching effects for emergency response planning, fuels reduction, forest restoration project planning and post-fire rehabilitation projects.

Key Findings

Key findings under this analysis pertain to:

1. Fire Behavior Modeling
2. Highly Valued Resources and Assets
3. Exposure Analysis
4. Relative Importance
5. Response Function
6. Risk Assessment

Each of the steps listed above produce datasets that provide value to land managers and emergency response personnel, while also creating data in sequence as part of the overall QWRA analysis. Key findings from each step are described through the following section and will culminate in a final Risk Assessment output to be incorporated into the overall CWRA.

Fire Behavior Modeling

Baseline fire behavior modeling is the first step to the QWRA. This was accomplished using the Landfire data and IFTDSS, along with both expert and local knowledge to refine datasets and modeling processes to more accurately depict existing conditions. The advantage of IFTDSS is that the platform is publicly available and can be replicated and compared in the future by individuals with knowledge of the IFTDSS program and fire behavior.

Multiple wildfire simulations used local weather history and random ignitions to initiate and calculate numerous fire behavior datasets. Outputs of the fire behavior modeling that were carried forward in the QWRA process include **burn probability (BP), conditional flame length - intensity (CFL) and integrated hazard**.

> **Burn Probability** -- Burn probability indicates the likelihood that a point in space will burn. Probability is derived from the frequency in which that point in space burned under numerous wildfire simulations with random ignitions. Three areas of interest with elevated burn probability with values of higher (60-80 percent of maximum) to highest (80-100 percent of maximum) exist within the project area. Of highest concern is the Park City Mountain Zone, an area associated with forest health concerns and fuel buildup. The Deer Valley/Deer Crest Zone along the southern U.S. 40 Highway corridor is also significant because of Gambel oak and sagebrush that could experience rapid rates of spread and higher potential fire occurrence. The third area is sagebrush flats in the northeast corner of the Round Valley Zone, again due to potential for rapid rates of spread and higher potential fire occurrence.
>
> **Conditional Flame Length** -- Conditional flame length (CFL) is the sum product of flame lengths across six fire intensity levels. The highest values of CFL (feet) within the project area largely correlate to susceptible vegetation types, specifically areas of dense conifer. But it also includes areas of Gambel oak, maple and other mature hardwood brush forests.
>
> **Integrated Hazard** -- Integrated hazard combines BP and CFL into a categorical dataset that describes foundational hazard designation across the PCMC project area. This includes five categories ranging from 'lowest hazard' to 'highest hazard.' A foundational hazard designation prior

to the implementation of community-valued resources and assets allows us to evaluate wildfires' effects equivocally across the project area based solely on expected wildfire behavior. Alongside BP and CFL, integrated hazard datasets are carried forward in the QWRA process to be input into further analyses. Areas that show elevated (higher-highest) integrated hazard corresponds to areas of high BP and CFL, including the Park City Mountain Zone, eastern Deer Valley Zone, western Bonanza Flats and the northeast portion of Round Valley.

Figure 5-0-4. Example of sub-HVRAs mapped as part of the Recreation Infrastructure Primary HVRA category.

Highly Valued Resources and Assets (HVRAs)

HVRAs are the physical values the Park City community cares about, values that can be displayed on a map. They are categorized as primary HVRAs, and sub-HVRAs. The initial list of primary HVRAs was modeled after the Federal Emergency Management Agency list of community lifelines, which are defined as the most fundamental services in a community that, when stabilized, allow all other aspects of society to function.

The finalized list of HVRAs was expanded beyond those identified as community lifelines by an assembled group of community stakeholders in order to include additional values tailored to the Park City community, such as recreational infrastructure (i.e., trails), resort infrastructure and wildlife habitat. The full list of primary and sub-HVRA's is shown in Table 5-2.

Table 5-2. All Primary and sub-HVRAs developed as part of the PCMC QWRA.

PRIMARY HVRAS	SUB-HVRAS
Critical Infrastructure	Transmission Lines, Local Distribution Lines, Utility Infrastructure, Water Infrastructure, Water Connectivity
Resort Infrastructure	Ski Lifts, Resort Day Lodges, Other Resort Infrastructure, Access Roads, Snow Making Ponds
Heritage Resources	Listed Historical Sites, Park City Historic District
Human Habitation	Low Medium and High WUI Density, Schools, Daycare Facilities & Senior Centers, Children's Camps
Ecological Integrity	Aspen Forests, Sagebrush/Grassland Range with Cheatgrass potential, Sagebrush/Grassland Range without Cheatgrass potential, Mountain Meadows, Mixed Conifer Forests, Mixed Conifer/Hardwood Forests, Oak Brush, streams wetlands and riparian area, Fire Dependent Ecologically Sensitive Areas, Fire Sensitive Ecologically Sensitive Areas
Recreation Infrastructure	Trail Systems, Public lands, Avalanche PRAs with Fixed Values, Avalanche PRAs without Fixed Values
Wildlife & Habitat	ESA Listed Species: Ute ladies'-tresses, Bonneville Cutthroat Trout, Western (Boreal) Toad, Flammulated Owl, High Value Elk Moose and Mule Deer Habitat, Wildlife Corridors, Indicator Species – Goshawk
Public Safety	Fire & Police Stations, Hospitals & Medical Center, Primary Evacuation Routes, Secondary Ingress/Egress, Richardson Flat Superfund Site, Contaminated Sites, Communication Towers
Watershed Health	High Drinking Water Importance and High Potential for Sediment Delivery, High Drinking Water Importance and Low Potential for Sediment Delivery, Surface Water

For a more detailed overview of the HVRA selection process see Detailed Methods section of this chapter.

Exposure Analysis

The outputs of the Fire Behavior Modeling and locations of HVRAs were used as inputs for the exposure analysis step of the QWRA. This step measures mean values for the landscape burn probability outputs (Burn Probability, Conditional Flame Length, and Integrated Hazard) within the geographic extent of each primary and sub-HVRA. The data is organized geospatially as well as in table and graphical format. Mean landscape burn probability (LBP) statistics for each HVRA are carried forward in the QWRA process. For a more detailed depiction of how the exposure analysis, fire behavior modeling and HVRAs interact, see Detailed Methods section.

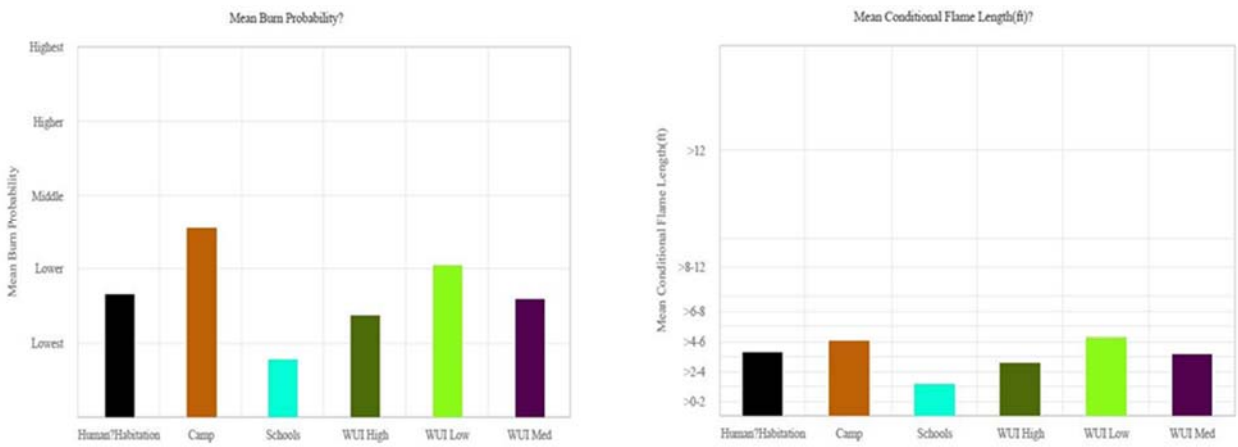

Figure 6-0-5. Mean BP and CFL for Human Habitation (Primary) and associated sub-HVRAs.

Relative Importance

In some Wildfire Risk Assessments, the Exposure Analysis may be used in isolation in order to inform fuel treatment location decisions. The Exposure Analysis process simply evaluates the presence (or absence) of an HVRA at any given location. It does not account for the existence of multiple overlapping HVRAs, or the degree of value the community may place on that HVRA. In order to assess wildfire risk quantitatively and account for the presence of numerous overlapping HVRAs and their respective value, a Relative Importance value is assigned to each HVRA. Relative Importance (RI) was calculated within the PCMC QWRA using ESRI Survey123, where community stakeholders assigned Relative Importance values to each Primary and Sub-HVRA. See figure XX for the top 10 sub-HVRAs with their corresponding Primary category and their RI values. Reference Methods (Detailed) for a full list of Project area HVRAs and their assigned RI.

The results of the RI yielded several key findings that reflect trends of what the Park City community cares about most in this assessment.

- While the economy of Park City is largely driven by tourism surrounding the ski resorts and summer trails network, 'Resort Infrastructure' and 'Recreation Infrastructure' were the two lowest ranking Primary HVRAs.
    - This is very different from what respondents in the Community Survey reported. In the survey, over 90% of respondents were concerned that wildfire would be catastrophic to the resort economy. Additionally, nearly 80% of these same respondents were concerned about a loss of recreational opportunities.
- Protecting the water resources of the community is represented in several HVRA RIs. For example, 'Watershed Health' (i.e. drinking water and surface water) was ranked higher than 'Human Habitation'(i.e. Schools, Daycares, Wildland Urban Interface).
    - This is similar to the views expressed in the Community Survey. More respondents were concerned about impacts to water resources than damage to homes, businesses, or property. However, this difference was slight (only a few percentage points).
- In the 'Ecological Integrity' HVRA, 'Streams, Wetlands, and Riparian Areas', was ranked as the single highest Sub-HVRA within that category.
    - This is in alignment with the views expressed in the Community Survey. Most respondents ranked impacts to water resources over other types of ecological communities as being of higher concern.
- Overall RI for 'Wildlife & Habitat' is low (54), but wildlife corridors, crossings, and migration routes were the highest ranked Sub-HVRA in that category with an RI of 100, 30 points above the next highest (Elk, Moose and Deer Habitat).
    - Community Survey respondents were overwhelmingly concerned about wildlife habitat - their concerns were higher for wildlife habitat than impacts to water, damages to structures, etc.

See Table 5-3 below for the Primary HVRA RIs, listed in order with their respective highest ranked Sub-HVRA. For the full list of RIs, see the Detailed Methods section.

Table 5-3. Primary HVRA RIs with respective highest-ranked sub-HVRA.

PRIMARY HVRA	RI	SUB-HVRA	RI
Public Safety	*100*	Hospitals & Medical Center	*100*
Critical Infrastructure	*88*	Water Infrastructure	*100*
Watershed Health	*85*	Watersheds with High Drinking Water Importance AND High Potential for Sediment Delivery Post-Fire	*100*
Human Habitation	*79*	Schools	*100*
Ecological Integrity	*64*	Streams, Wetlands, Riparian Area	*100*
Heritage Resources	*64*	Historic District - Main Street	*100*
Wildlife and Habitat	*54*	Wildlife Corridors, Crossings, Migration Routes, and other High Value Connecting Habitats	*100*
Recreation and Infrastructure	47	Avalanche - Potential Release Areas with values-at-risk	100
Resort Infrastructure	44	Ponds at Ski Resorts	100

Response Function

The physical characteristics and spatial extent of each HVRA are highly variable. For example, schools and homes are composed of structures that may be threatened by wildfire at a wide range of intensities. Mixed Conifer forests cover significant portions of the project area but may experience ecological benefit from the introduction of low-intensity fire. It is critical to capture these wildfire response differences in the analysis to make more informed decisions on risk mitigation strategies.

Each HVRAs' response to wildfire is integrated into the QWRA by assigning each sub-HVRA a response function (RF) value. RFs were developed by subject-matter experts in coordination with fire and fuels experts, and by referencing other QWRAs completed around the mountain west. Response function is assigned at each fire intensity level (FIL), Levels 1-6, derived from conditional flame length data. By integrating RF, decision makers are able to quantify what impact (positive or negative) wildfire will have on each HVRA, and distinguish that impact based on the intensity of fire. Each geographic component of a given sub-HVRA is assigned "value change" (-100 - +100) for each corresponding FIL. See Table 5-4 below for RFs assigned to human habitation and ecological integrity primary HVRAs for the PCMC QWRA. For the full list of sub-HVRA RFs, and additional details about the assigned values, see Detailed Methods section.

Table 5-4. RFs assigned to Human Habitation and Ecological Integrity Primary HVRAs for the PCMC QWRA.

Primary HVRA	Sub-HVRA	Response Function					
		FIL1	FIL2	FIL3	FIL4	FIL5	FIL6
Human Habitation	WUI Low Density	-10	-30	-50	-80	-100	-100
	WUI Moderate Density	-10	-40	-60	-80	-100	-100
	WUI High Density	-20	-50	-80	-100	-100	-100
	Schools	-10	-20	-50	-70	-90	-100
	Daycare Facilities & Senior Center	-20	-50	-80	-100	-100	-100
	Children's Camps - Girl Scout Camp	-20	-50	-80	-100	-100	-100
Ecological Integrity	Aspen Forests	80	100	100	70	50	40
	Sagebrush/Grasslands Range - With Cheatgrass Potential	-30	-60	-90	-100	-100	-100
	Sagebrush/Grasslands Range - Without Cheatgrass Potential	30	10	-20	-40	-60	-80
	Mountain Meadows	100	80	50	30	0	-20
	Mixed Conifer Forests	60	50	20	0	-20	-40
	Mixed Conifer/Hardwood Forest Vegetation	100	80	50	30	0	-20
	Oak Brush	60	80	100	50	20	-20
	Streams, Wetlands, and Riparian Areas	20	10	0	0	-10	-20
	Conservation Easements - Fire Dependent	80	100	100	70	50	0
	Conservation Easements - Fire Sensitive	0	0	-20	-40	-60	-80

Quantitative Wildfire Risk Assessment (QWRA)

The risk assessment phase of the QWRA is the culmination of the fire behavior modeling outputs and HVRA locations into a dataset which depicts how any given point across the project area will be impacted by wildfire. This dataset is represented by **expected weighted net value change (eNVC)**. eNVC is calculated using the LBP data, the geographic extent of the HVRA datasets, the summation of their response functions (value change) and their corresponding relative importance.

eNVC identifies where the highest likelihood of fire would occur based on what HVRAs are present and subsequently what impact (positive/benefit or negative/threat) fire would have at any given point across the project area. eNVC is a unitless value which is further displayed categorically across the landscape (see figure 5-0-6).

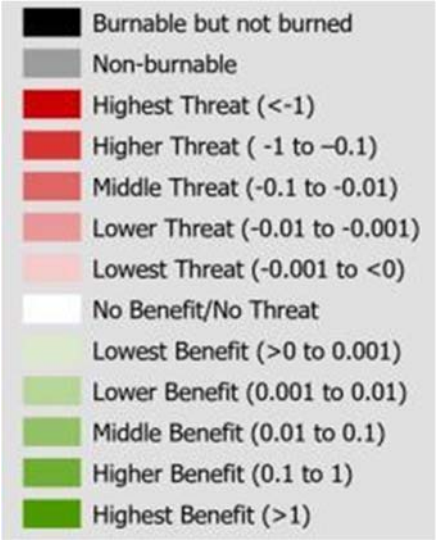

Figure 5-0-6. Range of eNVC values.

The highest positive and highest negative (benefit/threat) values are depicted independently in Figure 5-0-7. This allows us to visualize trends across the project area of what areas would benefit the most from fire, and what areas would be the most threatened. For example, the northeast corner of the project area shows significantly more area of 'highest threat' comparatively. In the western part of the project area, the outputs show a more even distribution of 'highest threat' and 'highest benefit.'

Limitations and Uncertainties

Data and Modeling Limitations

As with all models, there are various limitations and assumptions that go into the analysis that are considered when interpreting the data. When using a chained modeling approach, errors in one model can be passed on to subsequent steps in a modeling framework (Keane et al., 2013; Drury et al., 2014; Hyde et al., 2015). The base data used by IFTDSS in wildfire behavior is complex, and models are a simplification of reality.

For example, the base input data used in IFTDSS Fire Behavior analysis, LANDFIRE, is delivered at a 30-meter pixel resolution. LANDFIRE products are not intended to replace local-scale data products (U.S. Department of Agriculture, 2023). For the purposes of this project, the data is useful for assessing relative risk across an entire project area and is not intended to assess specific fire behavior in a specific location such as the location of individual homes. Additionally, it is not feasible to predict every possible combination of fire weather conditions, ignition locations, and suppression activities that might occur during a wildfire. Uncertainty will always remain about where and how a wildfire might behave until a fire is actually occurring. Even then, fire behavior can be erratic and unpredictable.

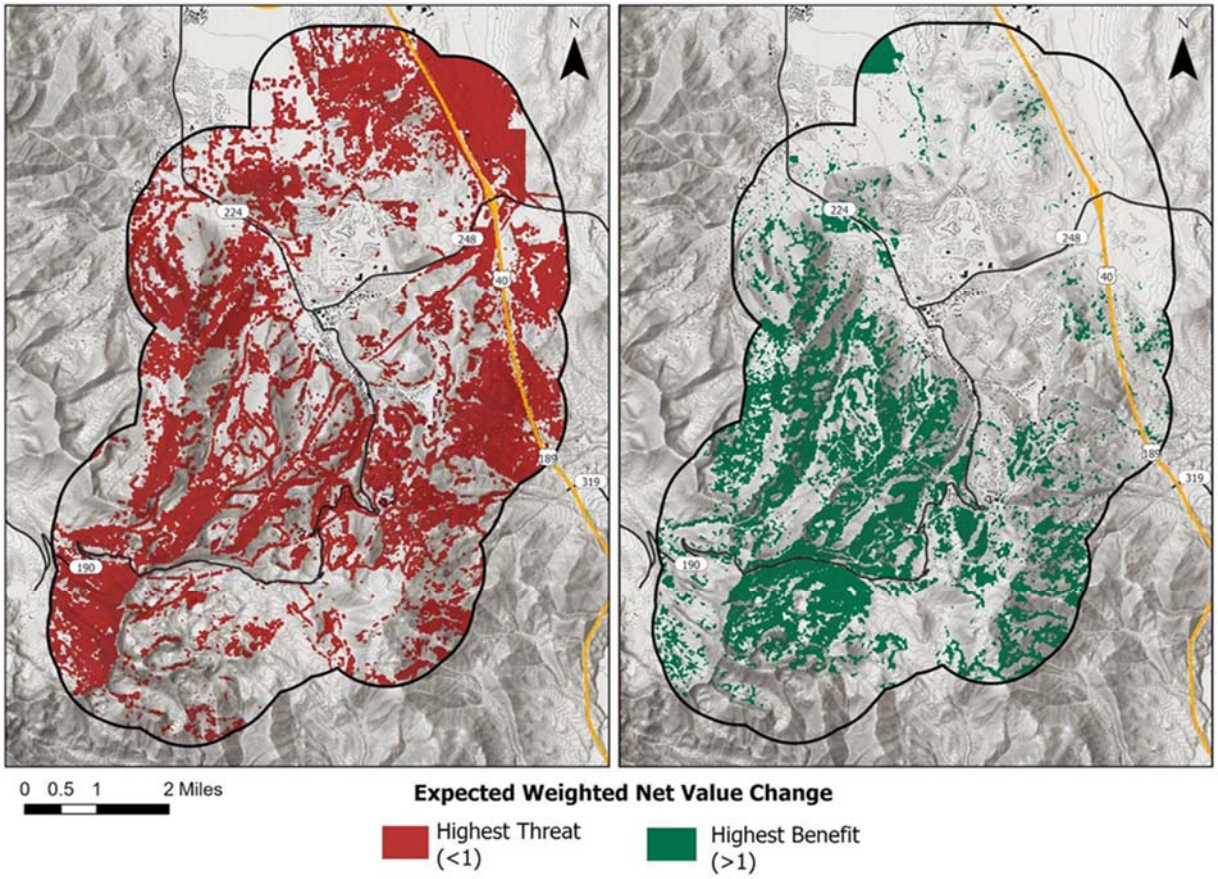

Figure 0-7. The highest positive and highest negative (benefit/threat) values depicted independently in the project area.

HVRA Development

The stakeholders group, who developed the HVRA list and respective relative importance, represent a diverse collection of entities that manage and make decisions in the Park City area. This group's decisions regarding the relative importance of HVRAs may implicitly be viewed as consistent with the general public's values. However, based on findings from the community survey, that is not always the case.

Additionally, the relative importance survey was only completed by 10 of the more than 30 individuals identified as community stakeholders. The respondents of the survey did represent an adequate level of diversity across the community; however, surveys are always more reflective of reality with more responses. It is also important to note that the relative importance and HVRAs are a snapshot in time. Thus, the overall design of the project was based around the ability to replicate the process in the future as many of the input factors will inevitably change.

Recommendations and Conclusions

Utilizing the output eNVC data, quantitative comparisons can be made between parcels or neighborhoods and **allow for effective prioritization of forest restoration and fuels treatment project planning**. A prioritization of PCMC-owned lands was performed as part of this CWRA and is included in chapter 6.0. How the eNVC data may be used to inform prioritization of areas that are in need of fuel treatment is also outlined in the following chapter. It is available to land managers within the Project area upon request.

While the information is quantitative and conclusive, the scale at which the input data is derived is only appropriate for identifying target areas across the entire project area. It should not be used to define property-scale treatment areas. The base data used by IFTDSS in wildfire behavior (used in the calculation of eNVC) is complex, and these models are a simplification of reality. Thus, smaller scale assessment of vegetation and how it is distributed, is integral to development of effective treatment plans for individual parcels and neighborhoods within the project area. This can be done using a high resolution drone or remote sensing imagery to gather an accurate high-resolution local-scale analysis of what vegetation conditions are on the ground.

Input and output datasets of the QWRA process may also be used by land managers, fire planners, fire responders, land use planners, environmental assessors, among others. The QWRA process and its associated platforms are publicly available and designed to be updated and repeated as conditions change over time. Keeping essential data for vegetation, HVRAs and weather up to date and relevant is a recommended part of the risk assessment process.

In combination with other modeling and expert knowledge, the QWRA can help address fire risk by directing Park City Municipal Corporation and private landowners to areas of greatest concern. In doing so, the community can begin to take actions using the tenets of the National Cohesive Wildland Fire Management Strategy. This could lead to them serving as a model within Utah and the west to follow the vision: "*To safely and effectively extinguish fire when needed; use fire where allowable; manage our natural resources; and as a nation, learn to live with wildland fire.*"

Detailed Methods

The Interagency Fuels Treatment Decision Support System (IFTDSS) platform was used to develop potential wildfire hazard data within the PCMC CWRA project area. An overview of the QWRA process, as implemented by IFTDSS, is shown below in Figure 5-0-8.

Fire Behavior Modeling

As wildfire is often unpredictable in its behavior, modeling wildfire involves various limitations and assumptions which should be considered when interpreting data outputs. For geographic extents like the CWRA project area (33,000+ acres), the IFTDSS framework is useful in interpreting relative risk across the landscape. It is not used for assessing the risk in a specific location at the structure-scale. IFTDSS relies on data sourced from LANDFIRE (XX) datasets including terrain, tree canopy and surface fuels at a 30m x 30m pixel resolution. A full 'Fuels and Fire Behavior Report' is included in Appendix X.X. Fire behavior modeling workflow is generalized below (Figure 5-0-8).

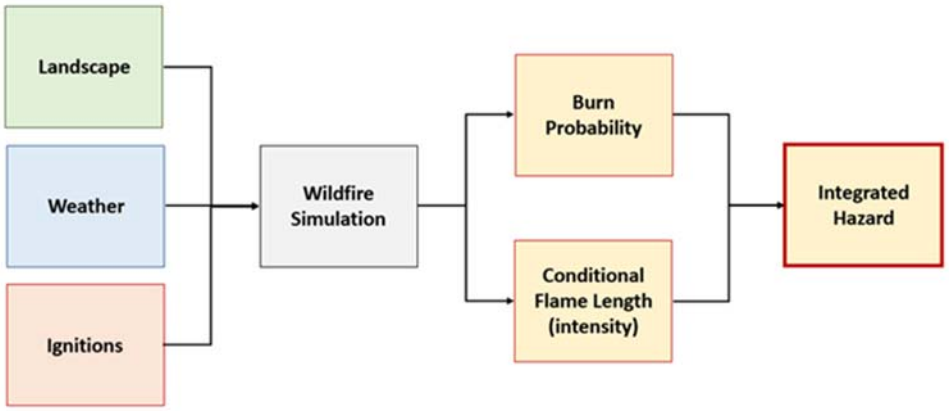

Figure 5-0-8. Landscape evaluation process.

The foundational landscape stage defines the area of analysis as well as associated landscape characteristics including elevation, aspect, slope, fuel type datasets. The area of analysis was run with a standard buffer supplied within the IFTDSS system but was narrowed to an area of interest (AOI) including only the PCMC project area. The Park City Urban Core Zone was deliberately omitted from analysis due to the absence of contiguous burnable fuel types, and the presence of dense development makes fire modeling impossible using the methods described.

Fuel Model (40) categorically assigns a fuel type to each 30m x 30m pixel within the landscape, provided by LANDFIRE (2016) datasets. In comparison to manually derived vegetation datasets developed within other stages of the PCMC project, as well as local fuels knowledge, adjustments to the fuel models were made prior to further analysis. This best represents the existing condition (EC). In developing an EC, 215 acres of fuel model TL8 (long-needle pine litter, e.g., ponderosa) were identified by LANDFIRE primarily within the interior of the mixed conifer stands experiencing a significant level of forest decline.

A small area of fuel model TL8 was identified in an area of Gambel oak above and southeast of Park City proper. Considering the limitations of IFTDSS, global changes are required and all TL8 was changed to SB2 – slash-blowdown (SB2). The reason for this global change is that TL8 is defined as a moderate load long-needle pine litter with a moderate spread rate and low flame length. Except for the occurrence of limber pine, there are no known long-needle pines within the project area.

The TL8 – long-needle pine litter fuel model was globally changed within the project area to SB2 to represent the significant insect-caused dead standing and down woody material in the existing condition of mixed conifer. The primary carrier of fire in SB2 is moderate dead and down light blowdown. Fine fuel load is 7 to 12 tons/acre, evenly distributed across all diameter classes up to 3 inches in diameter with a depth of about 1 foot. Blowdown is scattered, with many trees still standing exhibiting moderate spread rate and flame length.

The TL3 fuel model – timber litter - moderate load, conifer litter is showing up in alpine areas above treeline, avalanche chutes and where short grass with scattered trees are present. A global change was made for 2,211 acres to the GR1 fuel model - short, sparse dry climate grass (dynamic). It is anticipated there will be minimal impact on fire behavior as TL3 has a very low rate-of-spread (ROS) and low flame length with GR1 identified as low for both outputs. There is a small area of open and younger aspen and small area of willow

identified as TL3 that was adjusted, as changes are global, but should not significantly impact overall fire behavior outputs.

Fifty-three acres of humid climate shrub, grass and timber-shrub were also suspected, but not changed within the fuels dataset due to small spatial extent and minimal impact on overall fire behavior output datasets. The largest of 47 acres of Moderate Load, Humid Climate Shrub appears to be associated with transitions into aspen.

A breakdown of fuel types within the AOI is outlined below in Table 5-5. Burnable area based on the project-adjusted fuel models is approximately 29,761 acres out of 31,913 total analysis area acres

Table 5-5. Fuel types within the project area of interest (AOI).

Fuel Model	Fuel Description	Acres	Percent
GS2 (122)	Grass-Shrub - Moderate Load, Dry Climate Grass-Shrub (Dynamic)	6,156	19%
TU5 (165)	Timber-Understory - Very High Load, Dry Climate Timber-Shrub	4,308	13%
TU1 (161)	Low Load Dry Climate Timber-Grass-Shrub (Dynamic)	4,018	13%
SH7 (147)	Shrub - Very High Load, Dry Climate Shrub	3,282	10%
GS1 (121)	Low Load, Dry Climate Grass-Shrub (Dynamic)	3,119	10%
GR1 (101)	Short, Sparse Dry Climate Grass (Dynamic)	3,108	10%
GR2 (102)	Grass - Low Load, Dry Climate Grass (Dynamic)	2,248	7%
NB1 (91)	Urban/Developed	1,654	5%
TL5 (185)	Timber Litter - High Load Conifer Litter	1,285	4%
TL6 (186)	Timber Litter - Moderate Load Broadleaf Litter	1,277	4%
NB9 (99)	Bare Ground	340	1%
TL2 (182)	Timber Litter - Low Load Broadleaf Litter	280	1%
SB2 (202)	Slash-Blowdown - Moderate Load Low Load Blowdown	215	1%
NB3 (93)	Agricultural	197	1%
SH5 (145)	High Load, Dry Climate Shrub	136	1%
SH2 (142)	Moderate Load Dry Climate Shrub	118	1%
TL9 (189)	Timber Litter - Very High Load Broadleaf Litter	59	0%
NB8 (98)	Open Water	51	0%
SH3 (143)	Moderate Load, Humid Climate Shrub	47	0%
TL1 (181)	Low Load Compact Conifer Litter	7	0%
GR3 (103)	Low Load, Very Coarse, Humid Climate Grass	5	0%
SH1 (141)	Low Load Dry Climate Shrub (Dynamic)	2	0%
TU2 (162)	Moderate Load, Humid Climate Timber-Shrub	1	0%
Total		31,913	100%

Weather History

Local weather data inputs were derived from the nearest and/or most representative Fire Remote Automated Weather Stations (RAWS). While RAWS do not exist within the PCMC project area, nearby stations

exist within representative elevations (6,100-11,153 feet amsl) including Pleasant Grove (5,200 feet amsl), Norway Flats (8,280 feet amsl) and Ray's Valley (7,300 feet amsl) (see Table 5-6).

Table 5-6. Fire RAWS closest to Park City.

FIRE RAWS	ELEVATION (FEET)	DISTANCE FROM PARK CITY (MILES)	DIRECTION FROM PARK CITY
Pleasant Grove	5,200	20	SW
Norway	8,280	22	E
Ray's Valley	7,300	39	SSE

Weather data was analyzed in Fire Family Plus 5.0. Fire Family is a software package used to calculate fuel moistures and indices from the U.S. National Fire Danger Rating System (NFDRS). It uses hourly or daily fire weather observations primarily from RAWS. A significant interest group (SIG) of the three RAWS was created to determine extreme fuel and weather conditions at the 97th percentile and used as the input into IFTDSS. For example, 97th percentile weather conditions represent extreme conditions that are not exceeded in terms of hotness and dryness except for 3 percen of the days during the typical fire season (May-October). Comparisons were made with local live and dead fuel moisture sampling conducted by the Uinta-Wasatch-Cache National Forest as reported in the National Fuel Moisture Database.

Wind directions and speeds were developed based on weather station wind data from several stations around the Park City area, and gridded using WindNinja (USFS 2018) to compute spatially varying wind fields for landscape modeling inputs.

Fire Behavior Model Outputs

1. *Landscape Fire Behavior* (LFB) - Numerous geospatial datasets and report summaries are generated as part of the LFB output including flame length (ft), rate of spread (chains/hr), crown fire activity (type), among others. They serve as standalone supplementary resources under the scope of the QWRA process and are not used further in any quantitative analysis for the PCMC QWRA. For a detailed summary of LFB outputs as applied to the project area, reference Appendix (Fuel and Fire Behavior Report).
2. *Landscape Burn Probability* (LBP) - Landscape burn probability includes a relative likelihood of fire occurring and its intensity under the input set of weather and fuel moisture conditions. This information is expressed in **burn probability (BP)** as a proportional value (0-1) representing the number of simulations in which that location burned versus the total number of simulations executed. **Conditional flame length (Intensity) (CFL)** is expressed as the mean value (ft) of flame lengths observed in all model runs from varying ignition source locations. Both of these outputs are numerical datasets used to further derive **integrated hazard**. Integrated hazard is expressed as a categorical designation for each individual pixel within the project area, ranging from lowest to highest hazard. These integral outputs are carried forward in the QWRA process.

Highly Valued Resources or Assets (HVRAs)

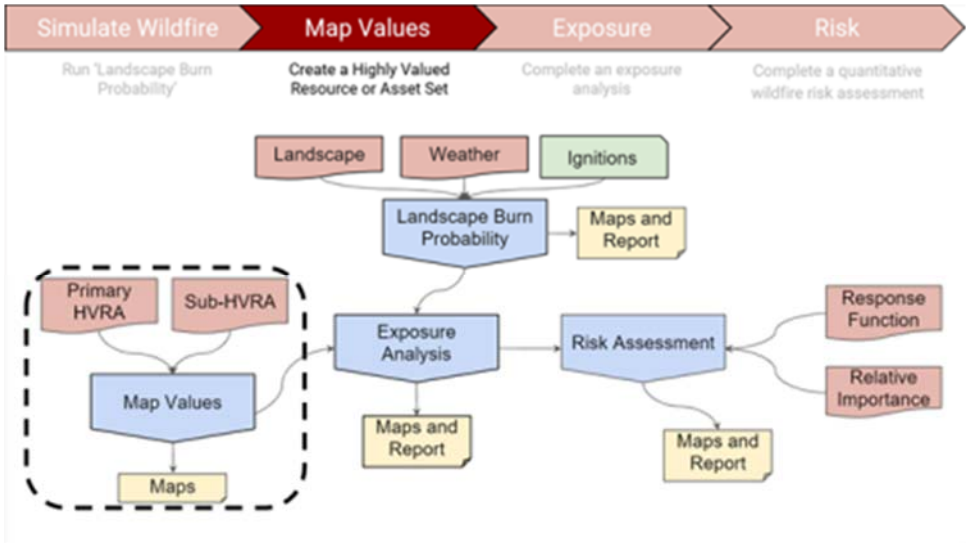

Figure 5-0-9. Identifying map values in a quantitative wildfire risk analysis process.

HVRAs are things the community cares about within the analysis area that can be displayed as geographic features (geospatial data). HVRAs are categorized in **primary HVRA** groupings and contain individual **sub-HVRAs**. For example, the **primary HVRA** could be 'critical infrastructure,' the **sub-HVRA** would be 'power line.' **Sub-HVRAs** are the geospatial components that are used in risk assessment calculations.

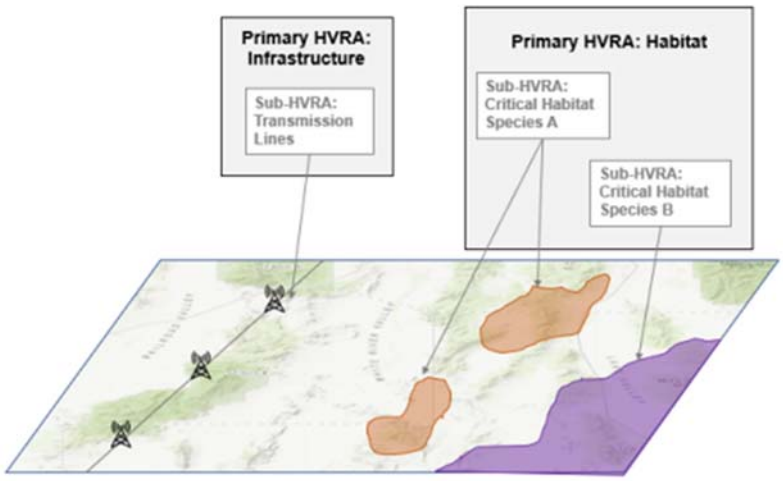

Figure 5-0-10. HVRAs are things the community cares about within the analysis area that can be displayed as geographic features.

Development of PCMC HVRAs

The initial framework for HVRA development was modeled after the FEMA Community Lifelines framework to include the community components necessary for the continuous operation of critical government and business functions (FEMA). In the development of the Park City Community Wildfire Risk Assessment, HVRAs were then refined or newly derived from community members and local stakeholders representing community groups and organizations. Stakeholders included representatives from Park City Municipal Corporation, Summit County, local ski resorts, Park City Fire District, utility infrastructure representatives, local land managers and conservation organizations.

A finalized list of nine primary HVRAs categories were identified and include 49 sub-HVRAs, as shown below in Table 5-7 along with data sourcing information.

Table 5-7. Final list of nine primary HVRA categories and 49 sub-HVRAs with data sourcing information.

PRIMARY HVRA	SUB-HVRA	DATA SOURCE
Critical Infrastructure	Transmission Lines	Direct from Utility Provider
	Local Distribution Lines	Direct from Utility Provider
	Utility Infrastructure (i.e. substations)	Direct from Utility Provider
	Water Infrastructure (pumps, springs, tanks, treatment plants)	USEPA FRS; digitized from 2006 Bureau of Reclamation Report, Utah Geospatial Resource Center, National Hydrography Dataset (USGS)
	Water Connectivity (tunnels, culverts)	Utah Geospatial Resource Center
**Utility infrastructure GIS datasets included in risk assessment, but not represented in maps within this report - for reasons of provider security and/or confidentiality*		
Resort Infrastructure	Ski Lifts	Developed by Alpine Forestry, sourced from ski resort websites and aerial imagery
	Resort Day Lodges	Developed by Alpine Forestry, sourced from ski resort websites and aerial imagery
	Other Resort Infrastructure (i.e., pumphouses, maintenance shops and other buildings)	Developed by Alpine Forestry, with supporting non-geospatial map products supplied by ski area representatives
	Access Routes on all Resorts	Developed by Alpine Forestry, with supporting non-geospatial map products supplied by ski area representatives
	Ponds at Ski Resorts	Developed by The Ember Alliance, with supporting non-geospatial map products supplied by ski area representatives
Heritage Resources	Listed Historical Sites (Federal, State, and Park City)	Park City Municipal Historic Site Inventory, digitized by Alpine Forestry

	Historic District - Main Street	Park City Municipal Corp. GIS Zoning Map
Human Habitation	WUI Low Density	Utah Geospatial Resource Center / The Ember Alliance (Density Class)
	WUI Moderate Density	Utah Geospatial Resource Center / The Ember Alliance (Density Class)
	WUI High Density	Utah Geospatial Resource Center / The Ember Alliance (Density Class)
	Schools	Utah Geospatial Resource Center
	Daycare Facilities & Senior Center	Utah Geospatial Resource Center
	Children's Camps - Girl Scout Camp	Developed by Ember Alliance sourced from Google Maps, Utah Geospatial Resource Center
Ecological Integrity	Aspen Forests	LANDFIRE Existing Vegetation Type (EVT)
	Sagebrush/Grasslands Range – With Cheatgrass Potential	LANDFIRE Existing Vegetation Type (EVT), Early Estimates of Exotic Annual Grass (USGS)
	Sagebrush/Grasslands Range - Without Cheatgrass Potential	LANDFIRE Existing Vegetation Type (EVT), Early Estimates of Exotic Annual Grass (USGS)
	Mountain Meadows	LANDFIRE Existing Vegetation Type (EVT)
	Mixed Conifer Forests	LANDFIRE Existing Vegetation Type (EVT)
	Mixed Conifer/Hardwood Forest Vegetation	LANDFIRE Existing Vegetation Type (EVT)
	Oak Brush	LANDFIRE Existing Vegetation Type (EVT)
	Intermittent and perennial streams, wetlands, and riparian (include buffer 150 feet)	National Hydrography Dataset (USGS, Utah Dept. of Natural Resources, US Fish and Wildlife Service)
	Ecologically Sensitive Areas - Fire Dependent - Conservation Easements	Utah Geospatial Resource Center, National Conservation Easement Database, Park City Corp. GIS, Utah Open Lands, Summit Land Conservancy
	Ecologically Sensitive Areas - Fire Sensitive - Conservation Easements	Utah Geospatial Resource Center, National Conservation Easement Database, Park City Corp. GIS, Utah Open Lands, Summit Land Conservancy
Recreation Infrastructure	Trail Systems	Utah Geospatial Resource Center
	Public Lands (Only Land Owned by State, Federal, or PCMC)	Bureau of Land Management (BLM)
	Avalanche - Potential Release Areas with values-at-risk	Resilient Landscapes (Chapter 2) - Developed by Alpine Forestry
	Avalanche - Potential Release Areas, no values-at-risk	Resilient Landscapes (Chapter 2) - Developed by Alpine Forestry

Wildlife & Habitat	ESA Listed Species: Ute ladies'-tresses	Developed by Sageland Collaborative with LANDFIRE Existing Vegetation Type (EVT)
	Bonneville Cutthroat Trout	National Hydrography Dataset (USGS)
	Western (boreal) Toad	Developed by Sageland Collaborative with LANDFIRE Existing Vegetation Type (EVT)
	Flammulated Owl	Developed by Sageland Collaborative with LANDFIRE Existing Vegetation Type (EVT)
	High Value Elk, Moose, and Mule Deer habitat	Utah Division of Wildlife Resources
	Wildlife corridors, crossings, migration routes, and other high value connecting habitats.	Developed by Sageland Collaborative, Snyderville Basin General Plan (2015)
	Indicator Species – Goshawk	Developed by Sageland Collaborative with LANDFIRE Existing Vegetation Type (EVT)
Public Safety	Fire Stations - Police Stations	Utah Geospatial Resource Center
	Hospitals & Medical Centers	Utah Geospatial Resource Center
	Primary Emergency Routes - 224 & 248	Utah Department of Transportation Open Data GIS
	Secondary Ingress/Egress - Other Connecting Through Streets	Developed by Alpine Forestry, sourced by Utah Department of Transportation Open Data GIS
	Richardson Flat Superfund Site	USEPA Geospatial Data Download Service
	Contaminated Sites (mine tailings, etc.)/Prevent from Burning	USEPA Geospatial Data Download Service
	Communication Towers - Repeaters, Radio Towers, Cell Towers	Homeland Infrastructure Foundation-Level Data (HIFLD)
Watershed Health	High Drinking Water Importance and High Potential for Sediment Delivery Post Fire	Resilient Landscapes (Chapter 2) - Developed by The Ember Alliance
	High Drinking Water Importance and Low Potential for Sediment Delivery Post Fire	Resilient Landscapes (Chapter 2) - Developed by the Ember Alliance
	Surface Water (lakes, streams, springs)	Utah Geospatial Resource Center

Exposure Analysis

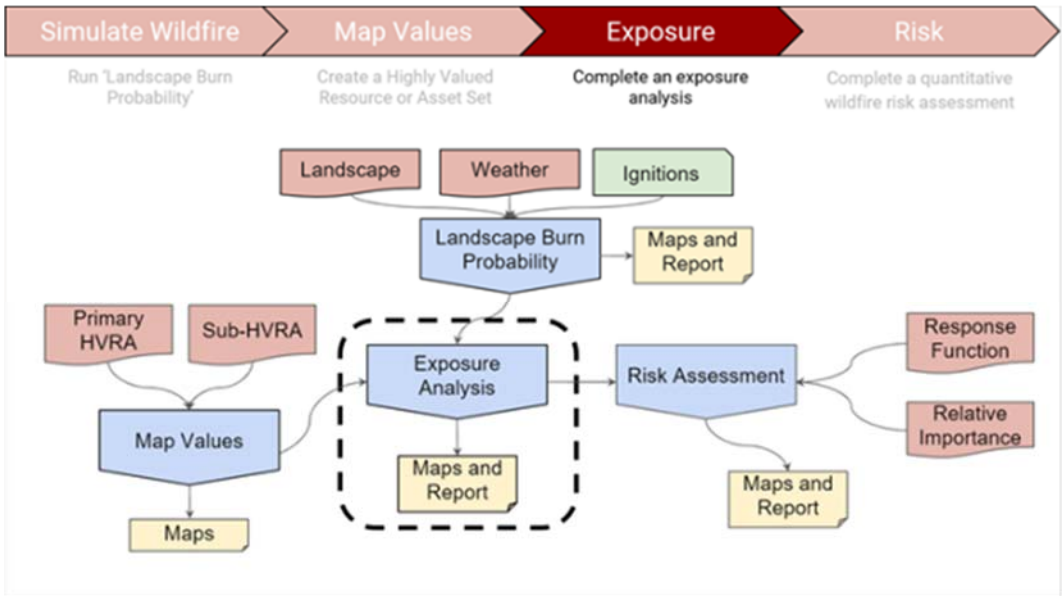

Figure 5-0-11. Exposure analysis in a quantitative wildfire risk analysis process.

Using IFTDSS, exposure analysis takes the datasets from landscape burn probability outputs and characterizes them across the geographic extent of the HVRAs. This process calculates the following outputs of the landscape burn probability for each HVRA.

- Mean Burn Probability
- Mean Conditional Flame Length
- Mean Integrated Hazard
- Mean of product of Burn Probability and Conditional Flame Length
- Relative Extent
- Expected Area Burned

See figures below for an example of the data from 'Public Safety.'

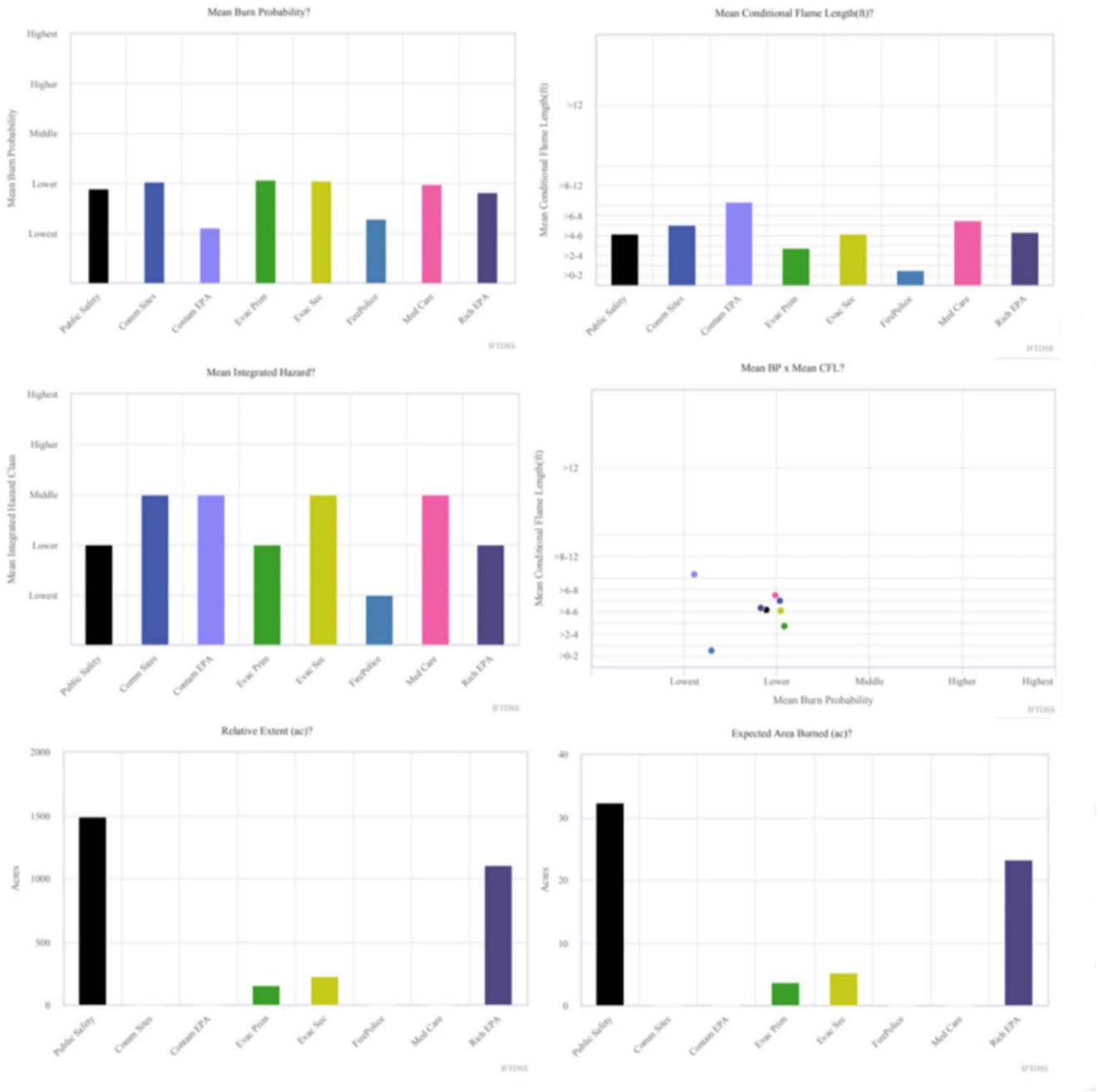

Figure 5-0-12. Example data from 'public safety.'

The resulting datasets from the exposure analysis can be and are used independently to provide context and inform treatment decisions as they provide spatial context to where fire behavior will intersect with HVRAs. However, it is solely a qualitative analysis and insufficient for the overall goal of the QWRA. For the purposes of conducting the QWRA, the exposure analysis output is a necessary step in the process as it, 1) summarizes the output landscape burn probability data within the geographic extent of each HVRA

individually, and 2) converts the geospatial HVRA data into raster format which is required for further analysis. The quantitative component is the process of viewing landscape burn probability with all the HVRAs together.

Quantitative Wildfire Risk Assessment

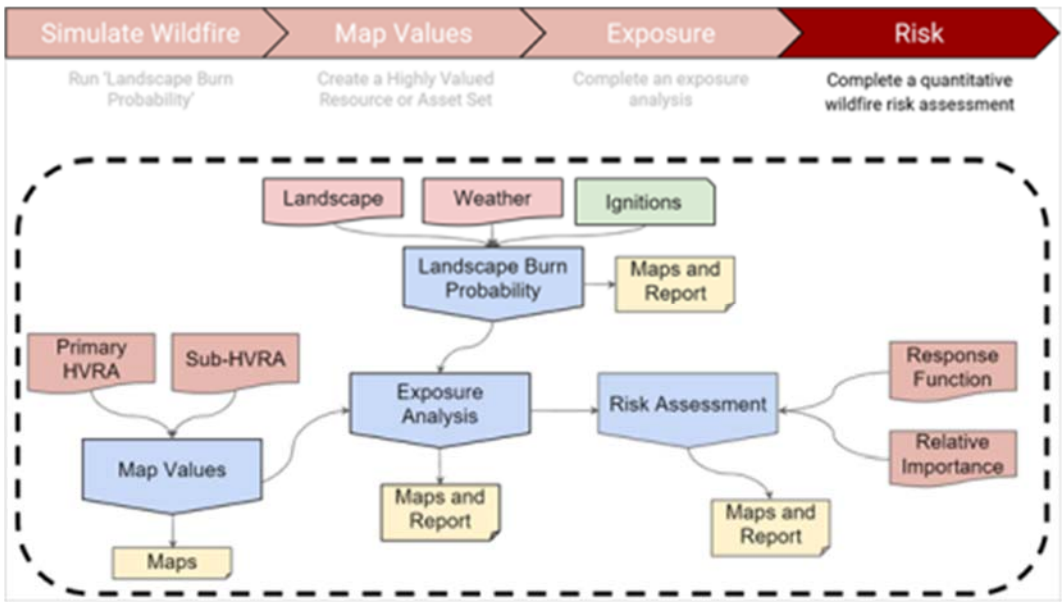

Figure 5-0-13. Quantitative wildfire risk analysis process

The QWRA is the culmination of the landscape burn probability, HVRA development and exposure analysis to assess wildfire risk quantitatively. The process is done within IFTDSS by inputting the mean burn probability and the mean conditional flame length from the fire behavior report, the dataset of the HVRAs from the exposure analysis, and two additional pieces of quantitative data (relative importance and response function).

Relative Importance (RI) of HVRAs

HVRAs can be assessed as they relate to wildfire risk individually with the summary report of the exposure analysis. However, when looking at multiple overlapping HVRAs, all created by stakeholders with differing resource management objectives, the issue of weighting importance comes in. Once the HVRA list was finalized, a survey was sent to the stakeholder group asking them to give each HVRA and sub-HVRA a score between 0 and 10. They were also asked when scoring the sub-HVRAs, to give their top choice in each category a score of 10. Stakeholder RI values were then averaged and multiplied by a factor of 10 for input into the QWRA analysis. This allowed us to characterize and summarize risk to a given area where multiple HVRAs exist.

Table 5-8. Relative importance value of each primary and sub-HVRA.

PRIMARY HVRA	RI	SUB-HVRA	RI
Critical Infrastructure	88	Transmission Lines	73
		Local Distribution Lines	68
		Utility Infrastructure (i.e. substations)	72
		Water Infrastructure (pumps, springs, tanks, treatment plants)	100
		Water Connectivity (tunnels, culverts)	87
Resort Infrastructure	44	Ski Lifts	48
		Resort Day Lodges	53
		Other Resort Infrastructure (i.e., pumphouses, maintenance shops and other buildings)	56
		Access Routes on all Resorts	68
		Ponds at Ski Resorts	100
Heritage Resources	64	Listed Historical Sites (Federal, State, and Park City)	74
		Historic District - Main Street	100
Human Habitation	79	WUI Low Density	66
		WUI Moderate Density	74
		WUI High Density	83
		Schools	100
		Daycare Facilities & Senior Center	87
		Children's Camps - Girl Scout Camp	44
Ecological Integrity	64	Aspen Forests	50
		Sagebrush/Grasslands Range – With Cheatgrass Potential	57
		Sagebrush/Grasslands Range - Without Cheatgrass Potential	57
		Mountain Meadows	56
		Mixed Conifer Forests	59
		Mixed Conifer/Hardwood Forest Vegetation	66
		Oak Brush	50
		Intermittent and perennial streams, wetlands, and riparian (include buffer 150 feet)	100
		Ecologically Sensitive Areas - Fire Dependent - Conservation Easements	72
		Ecologically Sensitive Areas - Fire Sensitive - Conservation Easements	72
Recreation Infrastructure	47	Trail Systems	51
		Public Lands (Only Land Owned by State, Federal, or PCMC)	69
		Avalanche - Potential Release Areas with values-at-risk	100
		Avalanche - Potential Release Areas, no values-at-risk	70
Wildlife & Habitat	54	ESA Listed Species: Ute ladies'-tresses	61
		Bonneville Cutthroat Trout	68
		Western (Boreal) Toad	68
		Flammulated Owl	61
		High Value Elk, Moose, and Mule Deer habitat	70
		Wildlife corridors, crossings, migration routes, and other high value connecting habitats.	100
		Indicator Species – Goshawk	63
Public Safety	100	Fire Stations - Police Stations	91

		Hospitals & Medical Centers	100
		Primary Emergency Routes - 224 & 248	91
		Secondary Ingress/Egress - Other Connecting Through Streets	75
		Richardson Flat Superfund Site	59
		Contaminated Sites (mine tailings, etc.)/Prevent from Burning	60
		Communication Towers - Repeaters, Radio Towers, Cell Towers	77
Watershed Health	85	High Drinking Water Importance and High Potential for Sediment Delivery Post Fire	100
		High Drinking Water Importance and Low Potential for Sediment Delivery Post Fire	87
		Surface Water (lakes, streams, springs)	82

HVRA Response to Wildfire (Response Functions)

Simulating how a given HVRA will respond to wildfire is a difficult task and is subject to substantial uncertainty (Scott, Joe H.; Thompson, Matthew P.; Calkin, David E. 2013). Depending on the intensity of wildfire, current conditions, past and future impacts of climate change and other dynamic processes, the responses to wildfire can and will vary greatly across the list of HVRAs.

No one person or group can be privy to the host of variables that determine an HVRA's response to wildfire. Therefore, subject-matter experts were assigned to each HVRA and tasked with defining the **response function (RF)** for the subsequent sub-HVRAs. For example, avalanche specialists, wildlife specialists and fuels specialists worked in coordination to develop response functions for specific primary or sub-HVRAs in which their specialty is best suited. Several workshops took place among the subject-matter experts incorporating individual subject-matter expertise combined with comparable RFs in other QWRAs until response function values were finalized. RFs are expressed quantitatively to identify **"value change" (-100 - +100)** to each HVRA based on different levels of fire intensity.

A RF of -100 indicates a strong loss of value to that HVRA, and a RF of +100 indicates a strong gain, where occurrence of fire may provide benefit. The RFs for an HVRA may vary based on the landscape burn probability output scale (**fire intensity level (FIL)** 1-6) from the fire behavior section. This variability in RF accounts for the fact that a given HVRA will have a different response to wildfire based on different fire intensity levels. An example showing the different RFs and variable FILs is shown below in Table 5-9.

Figure 5-0-14. Response functions are expressed quantitatively.

Table 5-9. Response functions for a partial collection of the sub-HVRAs. For example, "Ecologically Sensitive Areas - Fire Dependent" only stands to benefit or remain unaffected by the various fire intensity, while "WUI High Density" only shows a loss across the fire intensity level scale. For a full list of response functions see Appendix XX.

Primary HVRA	Sub-HVRA	Response Function					
		FIL1	FIL2	FIL3	FIL4	FIL5	FIL6
Critical Infrastructure	Transmission Lines	0	0	-20	-40	-60	-80
	Local Distribution Lines	-10	-20	-40	-60	-80	-100
	Utility Infrastructure (i.e. substations)	0	-10	-30	-50	-70	-90
	Water Infrastructure (pumps, springs, tanks, treatment plants)	-10	-20	-40	-60	-80	-100
	Water Connectivity (tunnels, culverts)	0	0	0	-20	-40	-40
Resort Infrastructure	Ski Lifts	20	10	0	-20	-50	-80
	Resort Day Lodges	-20	-40	-60	-80	-100	-100
	Other Resort Infrastructure (i.e., pumphouses, maintenance shops and other buildings)	-10	-20	-50	-70	-90	-100
	Access Routes on all Resorts	-10	-20	-50	-70	-90	-100
	Ponds at Ski Resorts	0	0	-20	-40	-50	-80
Heritage Resources	Listed Historical Sites (federal, state, Park City)	-40	-60	-80	-100	-100	-100
	Historic District - Main Street	-40	-60	-80	-100	-100	-100
Human Habitation	WUI Low Density	-10	-30	-50	-80	-100	-100
	WUI Moderate Density	-10	-40	-60	-80	-100	-100
	WUI High Density	-20	-50	-80	-100	-100	-100
	Schools	-10	-20	-50	-70	-90	-100
	Daycare Facilities & Senior Center	-20	-50	-80	-100	-100	-100
	Children's Camps - Girl Scout Camp	-20	-50	-80	-100	-100	-100
Ecological Integrity	Aspen Forests	80	100	100	70	50	40
	Sagebrush/Grasslands Range - With Cheatgrass Potential	-30	-60	-90	-100	-100	-100
	Sagebrush/Grasslands Range - Without Cheatgrass Potential	30	10	-20	-40	-60	-80
	Mountain Meadows	100	80	50	30	0	-20
	Mixed Conifer Forests	60	50	20	0	-20	-40
	Mixed Conifer/Hardwood Forest Vegetation	100	80	50	30	0	-20
	Oak Brush	60	80	100	50	20	-20
	Streams, Wetlands, and Riparian Areas	20	10	0	0	-10	-20
	Conservation Easements - Fire Dependent	80	100	100	70	50	0
	Conservation Easements - Fire Sensitive	0	0	-20	-40	-60	-80
Recreation Infrastructure	Trail Systems	20	10	0	-10	-30	-50
	Public Lands (Only Land Owned by State, Federal, or PCMC)	20	10	0	-10	-30	-50
	Avalanche - Potential Release Areas with values-at-risk	-20	-40	-60	-80	-100	-100
	Avalanche - Potential Release Areas, no values-at-risk	0	-20	-40	-60	-80	-100
	ESA Listed Species: Ute ladies'-tresses	100	100	80	50	20	0

Wildlife & Habitat	Bonneville Cutthroat Trout	10	0	-20	-70	-100	-100
	Western (Boreal) Toad	100	100	70	50	30	10
	Flammulated Owl	0	0	0	-30	-80	-100
	High Value Elk, Moose, and Mule Deer habitat	50	20	10	-10	-20	-40
	Wildlife corridors, crossings, migration routes, and other high value connecting habitats.	30	20	0	0	-10	-10
	Indicator Species – Goshawk	70	50	0	0	-50	-80
Public Safety	Fire Stations - Police Stations	-10	-20	-50	-70	-90	-100
	Hospitals & Medical Centers	-10	-20	-50	-70	-90	-100
	Primary Emergency Routes - 224 & 248	-10	-20	-50	-70	-90	-100
	Secondary Ingress/Egress - Other Connecting Through Streets	-10	-30	-60	-80	-100	-100
	Richardson Flat Superfund Site	-10	-20	-50	-70	-90	-100
	Contaminated Sites (mine tailings, etc.)/Prevent from Burning	-10	-20	-50	-70	-90	-100
	Communication Towers - Repeaters, Radio Towers, Cell Towers	-10	-30	-60	-80	-100	-100
Watershed Health	High Drinking Water Importance and High Potential for Sediment Delivery Post Fire	10	0	-20	-50	-80	-100
	High Drinking Water Importance and Low Potential for Sediment Delivery Post Fire	10	10	0	-20	-50	-80
	Surface Water (lakes, streams, springs)	10	10	0	-30	-60	-90

The addition of the quantitative component to the assessment allows for more effective land management decisions by summarizing the predicted benefit or loss from wildfire on overlapping values across the landscape through the calculation on **expected weighted net value change (eNVC)**.

eNVC represents the overall change (positive/benefit or negative/threat) on a given pixel. while factoring in Landscape Burn Probability outputs and the geospatial HVRA dataset with response functions, and relative importance of each. This was done in IFTDSS and yields the following outputs:

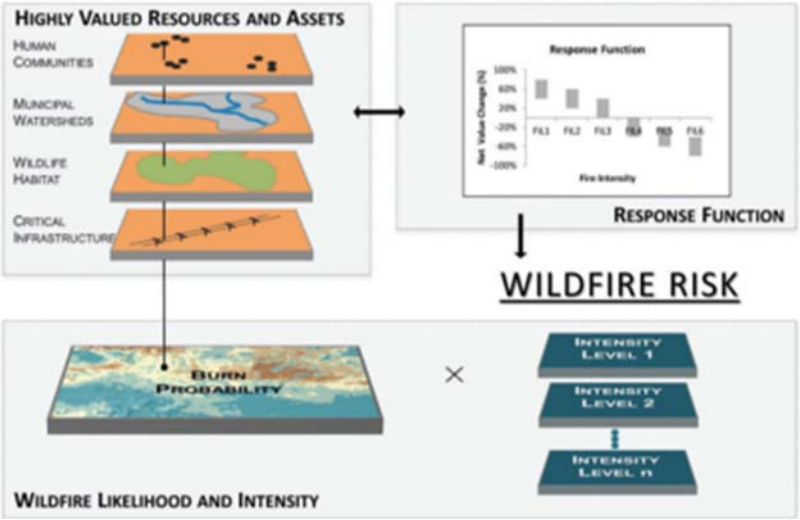

Figure 5-0-15.

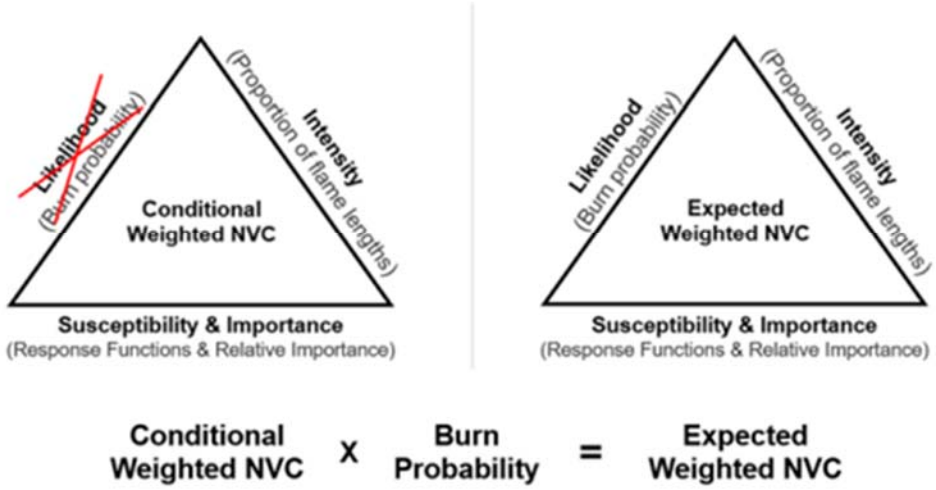

Figure 5-0-16.

Conditional Weighted NVC: This dataset highlights the NVC to the HVRAs with the assumption that fire will happen (Burn Probability=1.0). This can be useful in areas with greater frequency of fire. It is expected that eventually the entire project area will burn. In the case of Park City, with less fire history and many values at risk of any intensity wildfire, leaving Burn Probability out of the equation is not useful for strategic planning.

Expected Weighted NVC (eNVC): This dataset is the product of Conditional Weighted NVC and Burn Probability. According to IFTDSS, it is the single best dataset to use for identifying areas to conduct hazardous fuels treatments. It allows land managers to better understand where to focus mitigation and strategic planning efforts to lower risk, improve forest health, and increase the overall resilience of the community and surrounding environment. This was the dataset carried forward in the subsequent implementation chapter to prioritize treatment areas for Park City Municipal Corporation.

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6.0 Planning and Resources

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6.1 Implementation Planning

Executive Summary

The Community Wildfire Risk Assessment (CWRA) follows guidance provided by the National Cohesive Wildland Fire Management Strategy, also known as "The National Strategy." This strategy describes ways that local governments and residents can make their community safer. This chapter focuses on the "Resilient Landscapes" goal for lands owned by Park City Municipal Corporation (PCMC) within the project area. Within this goal, fuel treatments are recommended as a way to change fire behavior. Treatments can help safeguard community assets and values by aiding in fire control during a wildfire.

The National Strategy calls for the prioritization of fuel treatments to reduce fire intensity, structure ignition and extent of overall damage to communities. Anything that can burn is fuel for a fire. Fuel treatments are actions that reduce the amount of material ready to burn. This means any plant material such as grasses, shrubs, trees, dead leaves and pine needles can help a fire spread. When these materials pile up over time, fires can burn hotter, larger, longer and faster, making control of fires more difficult and dangerous (U.S. Department of the Interior, 2022).

PCMC has an opportunity to directly affect fire behavior and its effects simply because the city owns so much land. City-owned lands account for 5,898 acres. This represents approximately 18% (or nearly 1 of every 5 acres) of the total project area. Further analysis of PCMC and other lands across the four zones indicates a strong need for fuel treatments. A lack of vegetation management over the past few decades coupled with high forest cover indicates that there are more than 2,700 acres of PCMC-owned land at high-priority levels. An additional 2,400 acres of PCMC-owned land was categorized as medium to lower priority. These areas may be treated after the high-priority areas are complete, or there may be areas where maintenance treatments may keep the impacts from fire low.

Objectives for treatments fall into two general categories focused on: 1) wildland-urban interface (WUI) and 2) natural resources. The WUI treatments would address the direct protection of homes, businesses and other structures. Conversely, treatments designed to enhance natural resources would benefit from fire or fuel treatments to restore benefits of fire to ecosystems. Treatments in certain areas may benefit both objectives.

A combination of findings from other reports within the CWRA, fire modeling, the Quantitative Wildfire Risk Assessment (QWRA) and field work have resulted in a roadmap for where and how city managers should focus forest restoration and fuel reduction projects. This information was analyzed and mapped with geographic information systems (GIS). A team of subject-matter experts developed a prioritization method and interpreted model outputs. Additional findings from field surveys were all compiled to form implementation plans.

In wildfire risk management, higher integrated risk and more aggressive fire behavior is generally associated with forested/vegetated areas. ESRI ArcGIS Pro was used in order to extract information about integrated risk and expected net value change from the QWRA outputs. This information was applied to areas of treatable (i.e., forested) land on PCMC-owned properties. This process identified priority areas for fuel treatments categorized from lowest to highest priority.

Field visits to PCMC-owned lands provided current information about which plant or tree species occur and the general health of forests. Satellite-derived data (e.g., LANDFIRE) is useful for modeling and telling us where conifer or deciduous forests occur. However, this computer-derived data is implemented at the landscape-scale. We utilized on-the-ground observations to collect more reliable descriptions of tree species, tree size, tree density, growth under overstory canopies and the presence of insects and disease.

The implementation plans frame the outputs of the QWRA in prioritization values, creating a prioritization model for PCMC lands. They also apply modeled outcomes to the existing conditions observed in the field, developing resources and recommendations for the city as well as community stakeholders.

Background

The impacts caused by wildfires to human life, property, wildlife habitat and water resources have increased in the last few decades. Communities in the wildland-urban interface (WUI), like Park City, are becoming increasingly at-risk as development expands further into surrounding natural areas. These adjacent wildlands are burning at high intensities and the result is more lives in danger, structures lost and impacts to valuable ecosystems that support wildlife and water resources.

The Community Wildfire Risk Assessment (CWRA) follows the framework provided by the National Cohesive Wildland Fire Management Strategy, also known as “The National Strategy.” It describes ways that local governments and residents can make their community safer. This chapter focuses on actions PCMC can take to support the “Resilient Landscapes” goal. Within this goal, fuel treatments are used to reduce the likelihood of high-intensity wildfire and reduce potentially negative impacts, slow rates of spread and aid in containment efforts.

Fuel treatment planning for the Park City-owned land includes:

1. Prioritizing where fuel treatments should take place. This is a quantitative analysis derived from the QWRA (Chapter 5) and treatable acreage that includes forest vegetation.
2. Field observations by technical specialists used to validate findings from modeling software. These field surveys provide more context about the relative wildfire risk.
3. Information about fuel treatment types, how they may benefit the community and ways to protect valuable assets and resources during implementation.

Wildfire Risk

Summit County, Utah, is listed as high priority for broad-scale fuels management and community planning and coordination within the National Strategy. This places an emphasis on managing fuels around communities where there is a threat from wildfire, where there exists fire-adapted vegetation and where communities are concentrated with a broader wildland landscape (National Strategy).

How Park City Municipal Corporation (PCMC) Can Address Wildfire Risk

PCMC owns 5,898 acres within the 33,074 acres of the project area (See Table 6-1). This area represents approximately 18 percent (or nearly 1 in every 5 acres), allowing the city a unique opportunity to directly address the threat of catastrophic wildfire impacts to the community. The size of parcels ranges from less

than one acre to 1,534 acres. Many of these parcels are adjacent to one another, creating large blocks of continuous city property.

Table 6-1. Land ownership in the project area.

LAND OWNERSHIP	ACRES	PERCENT OF PROJECT AREA
Park City Municipal Corporation (open space, conservation easements)	5,898	18%
Landowners who own more than 10 acres (low density WUI, resorts, etc.)	14,329	43%
Small landowners (less than 10 acres), includes medium to high density WUI	12,847	39%

Well planned fuel treatments may also mitigate the potential for post-fire effects to over one thousand homes or businesses, wildlife habitat, riparian areas and other valuable resources described in other reports within the CWRA.

What is the need for fuel treatments around Park City?

There is a need to address wildfire risks in every zone in the project area. This need, however, varies across the project landscape and can include factors beyond implementing fuel treatments. Each zone has differing objectives in what fuel treatments would achieve based on the resources at risk, forest and vegetation characteristics, and how much land is owned by PCMC (Table 6-2). GIS-derived priorities provide systematic and quantitative prioritization. However, further evaluation during field surveys offers refinement of priorities at the zone-scale based on these varying characteristics.

Primary objectives considered:

1. Community protection (“WUI”) mainly targets the protection of homes, businesses, and important city infrastructure.
2. Increasing the ability for forests, streams, wildlife, and other natural resources to withstand or bounce back from fire (“Natural Resources”) or,
3. A combination of WUI and natural resource protection.

Table 6-2. The amount of PCMC-owned lands by zone, extent of PCMC influence on the landscape, and primary treatment objectives.

Zone	Zone Area (ac)	PCMC Owned Land (ac)	Percent of Total Area Owned by PCMC	Primary Treatment Objective	Description
Round Valley	7392	2431	32	WUI	Home and business protection, wildfire response review
Deer Valley	9163	1018	11	WU	Home, business and resort protection
Bonanza Flat	7255	1534	21	Natural resources	Forests, water and wildlife would benefit from fuel treatments or fire; smaller, focused WUI protection
Park City Mountain	8094	790	9	WUI and natural resources	Home, business and resort protection; protect city water supply

Community Support for Using Fuel Treatments to Address Fire Risk

In general, fuel treatments are supported by residents and stakeholders in the community as represented by the community survey (Chapter 3.0). This presents a major opportunity for PCMC to start planning more fuel treatments. The majority of respondents agreed with the use of prescribed (controlled) burning, cutting or limbing trees or other wildfire risk-reduction activities. Furthermore, a group of stakeholders involved in the process broadly expressed their support for a variety of measures, including fuel treatments, to safeguard important HVRAs.

How Fuel Treatments Work

The National Strategy (2011) calls for the prioritization of fuel treatments to reduce fire intensity, structure ignition and the extent of overall damage to communities. Anything that can burn is fuel for a fire. Fuel treatments are actions that reduce the amount of material ready to burn. This means any plant material such as grasses, shrubs, trees, dead leaves and pine needles can help a fire spread. When these materials pile up over time, fires can burn hotter, larger, longer and faster. This makes control of fires more difficult and dangerous (U.S. Department of the Interior, 2022).

The three primary means of managing fuels are prescribed fire, managing wildfire and non-fire treatments involving mechanical (e.g., thinning), biological (e.g., grazing) or chemical (e.g., herbicide) methods (The National Strategy). There is a need to use these actions where economically viable and where they meet landowner objectives. It will also take the active involvement of community members to promote wildfire mitigation strategies.

It is not a one-size-fits-all plan, but one that recognizes the need for communities to assess their wildfire hazards from the inside out, from urban areas to surrounding wildlands. The CWRA only covers the use of prescribed fire and using non-fire treatments. Managing wildfires is outside the scope of this document (The National Strategy).

There are numerous examples of how fuel treatments have helped to reduce fire intensity, aided in fire control and prevented loss of life and property across the western U.S. (Buffalo Fire in CO, 2018; Golf Course

Fire in CO, 2018; Wallow Fire in AZ and NM, 2011; San Juan Fire in AZ, 2014; Angora Fire in CA, 2007; East Troublesome Fire in CO, 2020). Regionally, completed fuel treatments on lands administered by the Bureau of Land Management in Utah resulted in reduced fire behavior in areas where wildfires crossed those treatments. This was demonstrated through ongoing monitoring and data logging from sites. Furthermore, it has been found that treatments are more likely to result in benefits that exceed costs, such as minimizing post-fire damage to infrastructure and reducing the likelihood of post-fire debris flows (Hunter and Taylor, 2022; Sediment Delivery Report).

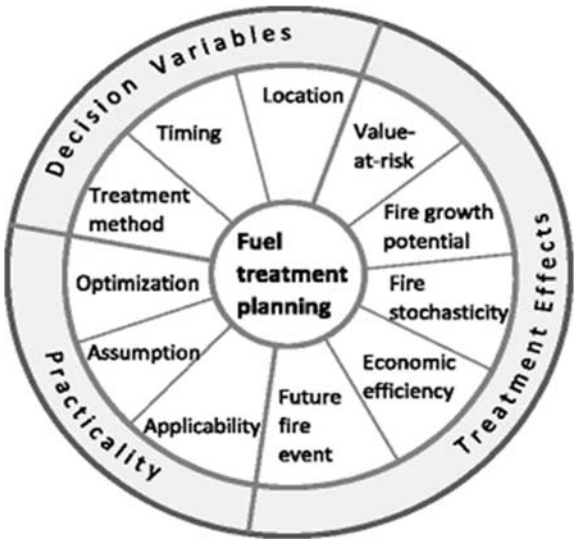

Figure 6-0-1. The complexity of decision making in designing fuel treatments (Chung, 2015).

Studies show that fuel treatments are effective at reducing the rate of spread, extent and severity of wildfires within and outside treated areas. Fuel treatments were found to help reduce the cost of suppression activities by changing fire behavior (Jain et al., 2021). Fuel treatment effectiveness is also based on the types (thinning, burning or a combination of both) and longevity of treatment. Vegetation patterns, topography, climate, spatial organization and extent of treatments, fire behavior and timing, and fire weather during the event also play a part (Jain et al., 2021; Ott et al., 2023; Kalies and Yocom, 2016; Martinson and Omi, 2013; Prichard et al., 2020; Prichard et al., 2021; Moghaddas et al., 2010).

Further research has shown that smaller, but strategically placed, treatments on a fraction of the landscape can reduce fire spread across the greater area (Tubbesing et al., 2019). This shows that while the effectiveness of fuel treatments is based on a complex web of interconnected factors (Figure 6-0-1), the careful planning of treatments may result in positive outcomes for communities.

Fuel Treatment and Benefits to Humans and Natural Resources

The benefits to communities do not stop with the containment of wildfires. Treatments may produce positive outcomes to forests and other resources across a wide range of climates and landscapes, even in the face of climate change (Burke et al., 2020; Sohn et al., 2016). Fuel treatment activities may:

- Reduce the amount of fuel ready to burn and emit less smoke than wildfires (Liu et al., 2017)
- Affect fire intensity while providing critical wildlife habitat and protecting water resources (Kennedy and Johnson, 2014; Stream Conditions Report; Dwire et al., 2016)
- Minimize long-term impacts to soils (Alcañiz et al., 2017)
- Decrease the susceptibility of forests to drought, insects and disease and undesirable fire effects (The National Strategy, 2016 Environmental Protection Agency).

Methods

Foundational Goals

GIS data from the QWRA (Chapter 5) and field surveys were utilized in evaluating the need for forest restoration and fuel treatments across the project area. These tools also support the development of methodology for setting priorities. The resulting data will provide a roadmap for city managers and local land managers identifying where forest restoration and fuel treatments projects may have the greatest impact.

Other aspects considered in treatment planning included information from the following:

- Avalanche Terrain Assessment
- Post-fire Sediment Delivery
- Stream Condition Surveys
- Fire Behavior Model Outputs.

Field Surveys

Field visits to PCMC-owned lands were completed in 2022 and 2023. These visits provide validation of fuel models and the general health of forests. Remotely-sensed data (e.g., LANDFIRE) is useful for modeling and differentiating forest types across at a landscape scale. However, ground-truthing or manual edits to input fuel models are integral components of fuels and fire behavior modeling. This satellite-derived data is not intended to be used for high-resolution detection of on-the-ground forest conditions (i.e., individual tree species, tree size, stem densities, understory composition and presence and diagnosis of insects and disease). Information from field visits can supplement quantitative prioritization methods. They will assist with continually refining priorities for fuel treatments across the project area moving forward through implementation and individual project planning.

Verification of modeling accuracy was completed by collecting field data to determine:

- Fuel loading (e.g., descriptions of what fuels and fuel loading looks like such as logs or branches),
- Types and abundance of plant and tree species,
- Tree density (how many trees are growing in an area),
- Tree mortality (dead trees that contribute to current and future fuel loading),
- Tree regeneration (seedlings)
- Forest health issues (insects and disease, or weather-related die off)

These estimates captured information in targeted areas that were representative of the larger landscape. “Walk-through” field visits would be considered a biased sample because the sample is not random or statistically accurate. However, they provided valuable information about overall forest conditions at a larger scale.

Equipment used for informal surveys included ESRI Field Maps software to locate photo points and add descriptions of forested areas. The data recorded in field mapping software included species composition, estimates of tree density in a basal area and trees per acre (using an angle gauge and logger’s tape), and tree size using a diameter tape.

These field reviews either confirmed or changed conclusions about high-risk areas from modeling software, mapping and other reports in this risk assessment. Modeling and remotely-sensed data contain some amount of error. Personal knowledge of the area helps refine the message of what the modeled data is telling us. The information gathered during field visits generally supported the reports, modeling and mapping to-date, but went one step further in determining additional details regarding fuel treatments over time. This does not provide exact acreages or boundaries of potential treatments, rather it validates prioritization methodologies and further identifies parcels needing more immediate attention versus others that could be treated in future years.

Figure 6-0-2. Heavy conifer fuel loads located east of Bloods Lake on the Bonanza Flats parcel - identified in Fuel Models as Mixed Conifer Forest and Woodland (###) - September 2022.

There are many ways to determine the need for fuel treatments across a large landscape. Using all available tools such as reports, reviews, additional mapping, and field visits refined our key findings for priority treatments. This is designed to be a more holistic approach, considering many different outcomes to prepare for wildfire.

GIS Methodology

Expected weighted net value change (eNVC), outlined in Chapter 5.0, quantitatively identifies how wildfire may affect any point within the project area, both negatively and positively. The eNVC values include negative values (threat) and positive values (benefit) and are displayed categorically. Fuels and fire experts, in conjunction with GIS technicians, recognize that **areas of high threat or high benefit should be targeted, as forest restoration and fuel treatments in both of these areas will have the greatest impact to overall forest health and wildfire resiliency**.

Negative pixel values (threat) for eNVC were converted to positive values and are displayed in conjunction with areas of benefit as a 'prioritization value' dataset. The prioritization values remain consistent with the original eNVC output values from IFTDSS, with all values displayed as positive numbers, and can be visualized across the project area independent of parcel ownership.

Using ESRI ArcPro Spatial Analyst, each individual PCMC parcel (as a geospatial feature class) was assigned the following data:

- Mean numerical values for **eNVC 'benefit'** and **eNVC 'threat'**
- **'Cumulative prioritization value' (CPV)**
  Mean Threat Value (eNVC)(-1) + Mean Benefit Value (eNVC)) = Cumulative Prioritization Value*
- **Treatable acreage** within PCMC-owned parcels, i.e., acreage of vegetative cover or combustible fuels available for treatment within each parcel.

Table 6-3. The highest CPV values among the 309 PCMC-owned parcels and associated stored data (see Table 6-12 for full parcel list).

Parcel ID	Location	Parcel Acreage	Treatable Acreage (est.)	Mean Threat Value E(wNVC)	Mean Benefit Value E(wNVC)	Cumulative Prioritization Value
PC-224-B-X	Prospector Ridge	8.6	3.8	-78.0	1.54	79.5
PC-364-A	Treasure Hill	60.8	59.2	-76.5	1.94	78.5
THILL-5-X	Treasure Hill	42.6	30.4	-42.9	1.8	44.7

The cumulative (summation) method for CPV calculation weighs priority of parcels that meet the following criteria:

- Parcels with the highest values of threat
- Parcels with the highest values of benefit
- Parcels with medium to high values of both benefit and threat

Based on CPV, PCMC-owned parcels were distributed equally (quantile distribution) into five categories ranging from 'highest priority' to 'lowest priority' (Table 6-4).

Table 6-4. Five categories of PCMC-owned parcels ranging from 'highest' to 'lowest' priority.

Category	Description
Highest Priority	PCMC owned parcels in the 80th percentile or greater for 'Cumulative Prioritization Value'
Higher Priority	PCMC owned parcels within the 60-80th percentile for 'Cumulative Prioritization Value'
Medium Priority	PCMC owned parcels within the 40-60th percentile for 'Cumulative Prioritization Value'
Lower Priority	PCMC owned parcels within 20-40th percentile for 'Cumulative Prioritization Value'
Lowest Priority	PCMC owned parcels in the 20th percentile or below for 'Cumulative Prioritization Value'

Key Findings

City and stakeholder land managers need to know: Where do we start? This can be overwhelming when faced with many options to reduce the threat of fire with fuel treatments. It takes time to enact change, acquire the needed funding and to find people to do the work. In addition, implementing effective fuels treatments may require cross-boundary partnerships among multiple landowners to best serve the goals of the greater community.

Project-wide Prioritization

'Prioritization values' create a visual representation of priority, incorporating both values for threat and benefit. This will allow land managers access to the QWRA results for their own project prioritization purposes, as well as to visualize opportunities to work towards implementation of cross-boundary forest restoration and fuel-treatment projects with their neighboring land managers.

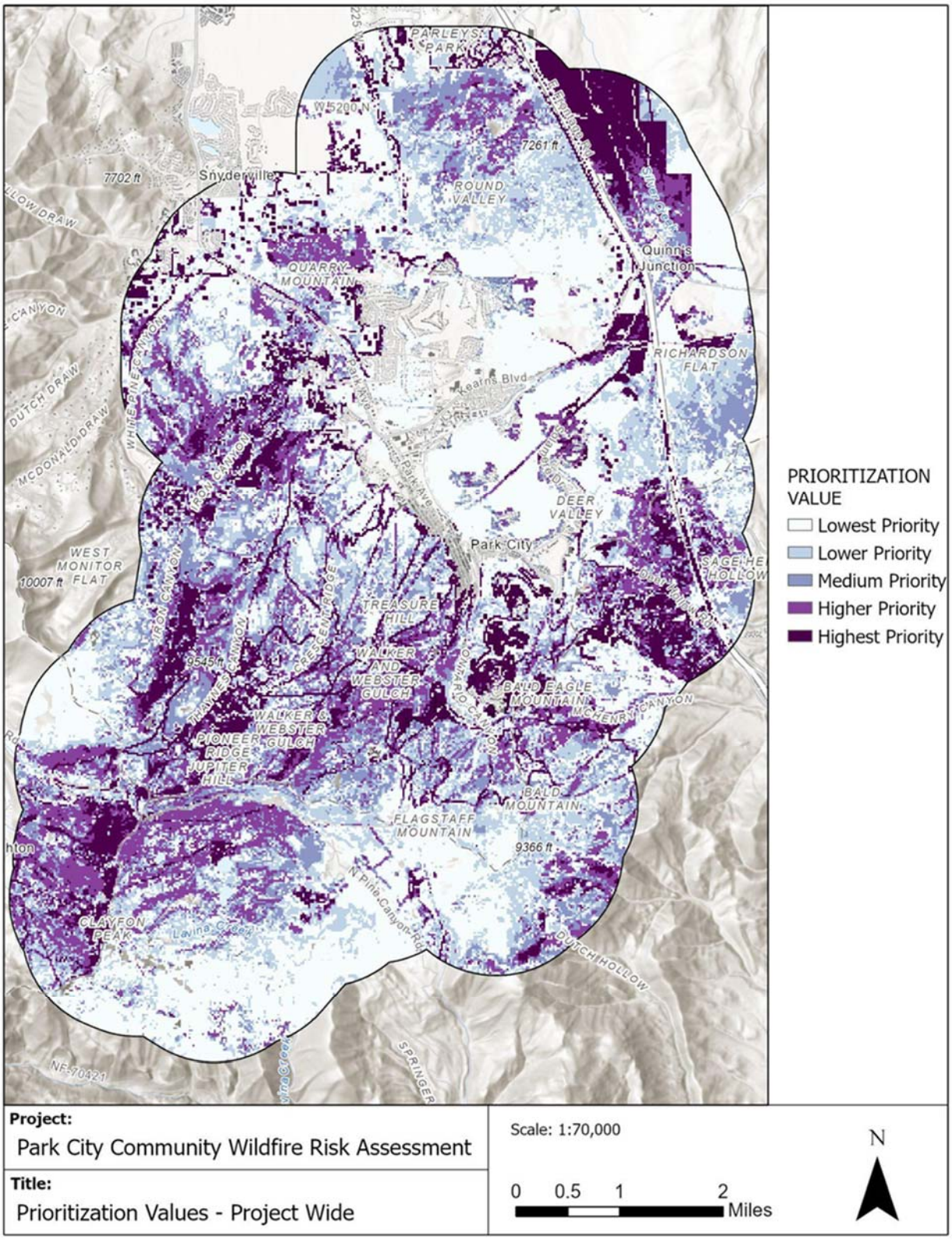

Figure 6-0-3. Prioritization values across the project area.

Prioritization of PCMC-Owned Lands

'Cumulative prioritization values' and subsequent categorization for each PCMC-owned parcel identifies parcels that meet the following criteria:

- Parcels with the highest values of threat
- Parcels with the highest values of benefit
- Parcels with medium to high values of both benefit and threat

Table 6-5. Distribution of PCMC-owned parcels among the five categories of CPV and parcels that were deemed 'non-burnable' by either the IFTDSS fuel model or a higher-resolution custom PCMC vegetation map.

Priority Level	Number of Parcels	Total Acres	Total Treatable Acres
Highest Priority	14	492	410
Higher Priority	16	2,288	1,487
Medium Priority	17	1,134	731
Lower Priority	15	730	374
Lowest Priority	16	502	374
No Priority (Non-Burnable)	229	741	--

Parcel prioritization based on CPV is included in Table 6-12. Additional data associated with each parcel allows for reorganization as needed, based on other criteria (i.e., treatable acreage) for project scaling and budgetary planning. It's important to note that the majority of CPV values are derived from mean 'threat,' as the majority of HVRAs identified within the PCMC QWRA are negatively influenced by wildfire at varying intensities.

Table 6-6. Top 10 'cumulative prioritization values' among PCMC-owned parcels.

Parcel ID	Location	Parcel Acreage	Treatable Acreage (est)	'Cumulative Prioritization Value'	Rank
PC-224-B-X	Prospector Ridge	8.6	3.8	**79.5**	1
PC-364-A	Treasure Hill	60.8	59.2	**78.5**	2
THILL-5-X	Treasure Hill	42.6	30.4	**44.7**	3
MCL-A-X	McLeod Creek	3.1	1.4	**30.7**	4
WLR-A-X	Willow Ranch	10.3	1.4	**22.2**	5
PCA-7-1-A-X	'Guardsman Connector'	1.5	1.5	**18.2**	6
PC-S-55-X	Empire Canyon	1.7	1.7	**18.1**	7
PCA-103-C-X	Willow Ranch	27.5	4.4	**12.4**	8
PP-25-C	Thaynes Canyon	139.3	139.3	**11.9**	9
PP-25-3-X	Iron Canyon	110	108.4	**114**	10

Table 6-7. Top 10 'Treatable Acres' and associated prioritization among PCMC-owned parcels.

Parcel ID	Location	Parcel Acreage	Treatable Acreage	Cumulative 'Prioritization Vaue'	Prioritization Category
	Bonanza Flat	1,344.1	**1,015.4**	8.2	Higher Priority
SS-57-A-X	Round Valley	368.2	**222.7**	4.7	Higher Priority
PP-25-C	Thaynes Canyon	139.3	**139.3**	11.9	Highest Priority
PCA-62-G-X	Round Valley	208.6	**135.4**	2.2	Lower Priority
PP-26	Richardson Flat	130.2	**115.3**	3.5	Medium Priority
PP-25-3-X	Iron Canyon	110	**108.4**	11.4	Highest Priority
SA-S-35-X	Prospector Pocket Park	112.1	**107.3**	2.2	Medium Priority
SS-62-A-X	Florence Gilmore OS	117.6	**91.1**	2.5	Medium Priority
SA-254-1-X	Aerie Open Space 2	93.9	**87.4**	0.4	Lowest Priority
SS-106-A-X	Iron Mountain	83.2	**83.2**	2.8	Medium Priority

Summary of Key Findings by Zone

Round Valley Zone

The Round Valley zone is the northernmost area in the project boundary where PCMC owns 2,431 acres, or approximately 32 percent of the land area. This zone has the highest number of city-owned acres in the project area. However, there is limited opportunity for fuel treatments compared to the other zones. Fuel breaks should be considered around homes and businesses while a thorough review of suppression tactics and continued community fire prevention emphasis are needed.

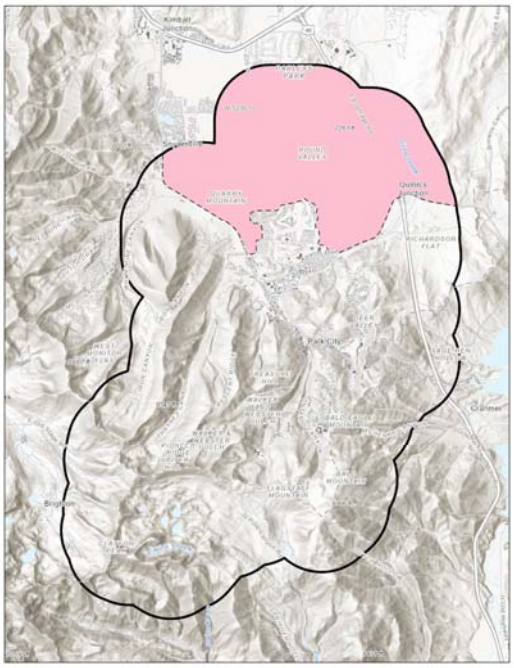

Figure 6-0-4. Round Valley Zone.

Current Condition:

This area has seen a sharp increase in the expansion of the WUI in the past few decades due to its land use, terrain and accessibility. Structures almost fully surround PCMC-owned properties.

This zone and associated PCMC lands can be characterized as being highly exposed to wind. Topography is predominantly gentle and does not have the steep profile like the other three zones. The most abundant vegetation is sagebrush (with cheatgrass potential) and Gambel oak, both of which grow well on these drier sites. A majority of PCMC land here is covered with low-lying, shrubby Gambel oak and sagebrush with smaller areas of taller, tree-like (grows more upright) Gambel oak.

As expected, modeled fire behavior indicates there would be high rates of spread in the lighter, flashier fuels. This is problematic to the structures built on all sides of city parcels. It also poses a risk to other highly valued resources that cross the area. While the lighter fuels can allow for a more effective suppression response, resources need to be in place for initial attack and the potential to burn out where threats to other values are not compromised.

Priority Treatment Areas in Round Valley:

QWRA data indicates that most of the PCMC-owned lands in Round Valley are mostly middle to highest threat due to the modeled fire behavior, vegetation, highly valued resources and assets, and the surrounding wildland-urban interface. Although a need exists for treatment in this zone, there are fewer options for fuel treatments when compared to other areas due to the type and structure of the vegetation (i.e., grasses and sagebrush).

ROUND VALLEY CROSS-BOUNDARY OPPORTUNITIES

Summit County

Utah State University (Swaner)

Snyderville Basin Recreation

Park City School District

Table 6-8. Top five priority PCMC-owned parcels within the Round Valley zone.

Parcel ID	Location	Parcel Acreage	Treatable Acreage	Cumulative 'Priority Value'	Category	Overall Project Ranking
MCL-A-X	McLeod Creek Sub.	3.10	1.45	30.68	Highest Priority	4
WLR-A-X	Willow Ranch Sub.	10.29	1.37	22.18	Highest Priority	5
PCA-103-C-X	Willow Ranch	27.45	4.38	12.43	Highest Priority	8
SS-57-2-A	Round Valley	29.07	11.50	7.37	Highest Priority	16
PCA-18-A-X	Quarry Mtn	22.62	13.98	7.20	Highest Priority	17

There are areas where specific treatments may be applied with good success, but this is generally limited across the Round Valley zone. The application of fuel breaks can provide some buffer between structures and vegetation. Another example is the Willow Creek Ranch parcels. These parcels, located adjacent to Hwy 224 and Meadows Dr., are considered "highest priority" due to the water resources and fire adapted conservation values of the area, but treatment options are limited within these riparian areas.

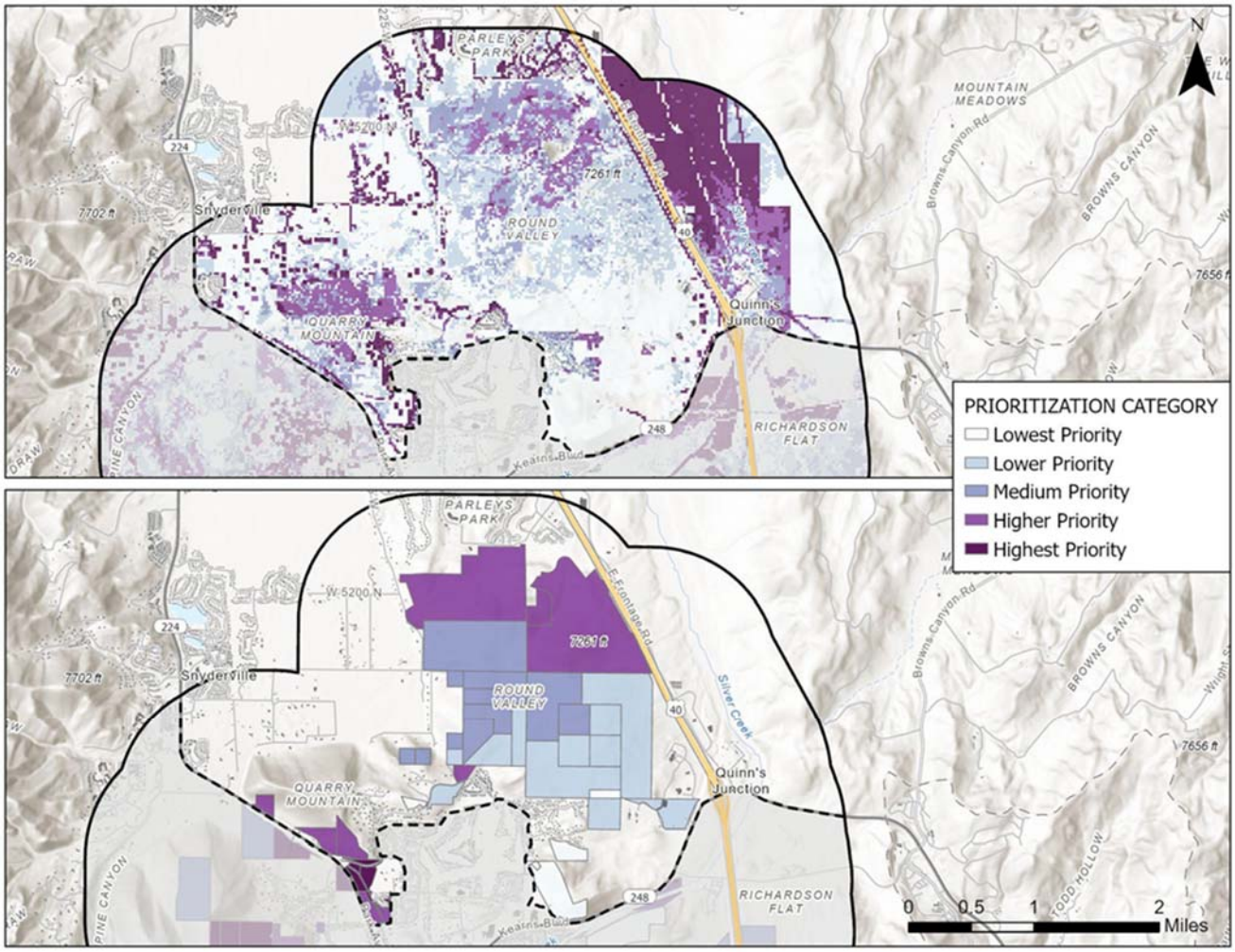

Figure 6-0-5. Distribution of prioritization values (top) and PCMC-owned parcel prioritization (bottom) within the Round Valley zone.

Deer Valley/Deer Crest Zone

The Deer Valley/Deer Crest zone ('Deer Valley zone') is the eastern portion of the project area and contains 1,018 acres of PCMC-owned land. There is a need to implement fuel treatments to protect the dense WUI areas built both within steep canyons and along ridgelines. The largest landowner is Deer Valley Resort, who owns and leases its lands for snow sports in the winter and multiple use trails in the summer. It is especially important to highlight that Deer Valley Resort manages or owns most of the conifer and deciduous forest within the zone, where they have undertaken small-scale management activities since the 1980s

Current Condition:

This area is defined by its varied topography, both steep and gentle elevation profiles, and the significant amount of medium- to high-density WUI. Expansion of the WUI has been somewhat constrained by

ownership and land use (ski resorts). However, topography has not been a limiting factor as residential, hotel and resort structures have been built within tight canyons and on ridgelines.

The infrastructure located here is of high economic value, both in building material and the tourism economy.

The small, narrow and winding roads with dense shrub and tree vegetation may present real challenges in these dense WUI areas during a wildfire evacuation. The main roads within this zone are often congested during normal summertime activities.

This zone includes all vegetation types growing along a wide range of elevations and aspects. They include: low-lying sagebrush areas near Highway 40, Gambel oak and mixed conifer-hardwood forest in the mid elevations, areas on Bald Mountain where limber pine grows on rocky soils with little surrounding vegetation. Each of these vegetation types has a different fire regime, though fires in each often affect neighboring vegetation.

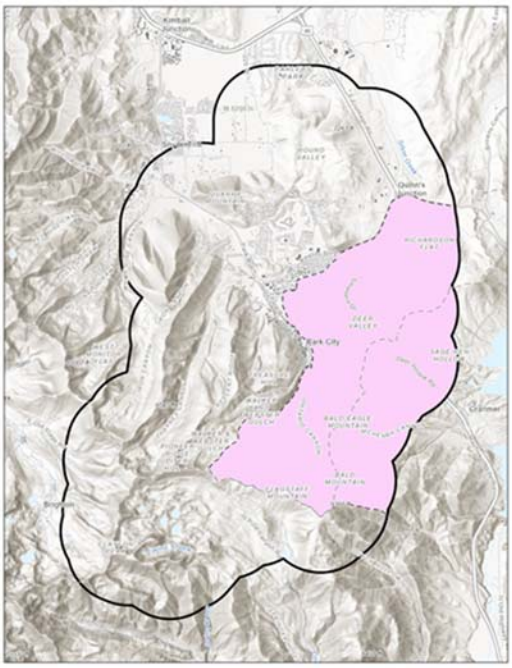

Figure 6-0-6. Deer Valley/Deer Crest Zone.

Adjacent (westside) to Highway 40:

The city owns close to 260 acres of land between Highway 40 and the Morning Star and Park City Heights subdivisions. The PCMC parcels are ranked as mostly middle to highest in terms of integrated risk of fire. Despite a 'medium priority' ranking, short-term fuel treatment will serve as some protection from ignition caused by traffic on Highway 40.

The elevation profile and the frontage along Highway 40 present a difficult problem for this zone. Probability of ignition along Highway 40 is elevated and any fires that start in this lower, drier vegetation may gain momentum and run upslope into deciduous and conifer forests. Upslope vegetation is fragmented by roads and ski terrain. However, these roads and ski runs may not stop fire spread, but could provide better access to areas and allow for the use of snowmaking infrastructure to aid in suppression.

The vegetation is Gambel oak-dominated with sagebrush on the lower slopes adjacent to the highway (with and without cheatgrass potential). There is a risk of invasive vegetation - cheatgrass and another invasive, Dyer's Woad, have already been found in this area.

There remains lengthy frontage landscapes along the highway corridor owned by private landowners where PCMC activities will have no effect on fire behavior.

Solamere/Aerie:

The largest block of city-owned land is located around and between the Solamere and Aerie neighborhoods. The area is covered in dense, mixed hardwood vegetation and shrubs with small patches of conifer, aspen, grasses and sagebrush.

Integrated risk for most PCMC-owned lands is lowest to low hazard. However, field surveys of this area conclude that the model may be underestimating risk on the north-facing slope below the Aerie neighborhood.

The homes on Aerie Drive and Mellow Mountain Road are built at the slope break of steep terrain and have a continuous, thick layer of mixed hardwood and shrub vegetation downslope.

Smaller properties owned by PCMC:

Due to a relative lack of PCMC-owned parcels, there is less opportunity to reduce the risk of fire and negative resource impacts around Daly Canyon, Empire Canyon, Rossi Hill, Bald Eagle Mountain, Ontario Canyon and Glencoe Canyon. These areas are at high risk for sediment delivery following a fire, if one occurs (Sediment Delivery, Resilient Landscapes - Chapter 2.0). The development in these areas consists of high-density WUI with many small landowners/condominium/single residences and large tracts of open land under lease for ski operations by Deer Valley and Mayflower resorts. Modeling shows fire behavior in this zone has a greater potential for high intensity fire with higher potential for crown fire, faster rates of spread and long flame lengths.

DEER VALLEY CROSS-BOUNDARY OPPORTUNITIES

Solamere

Deer Valley Resort

Mayflower Resort

Deer Crest HOA

MIDA

Bald Eagle HOA

Priority Treatment Areas:

Mapping indicates that most of the PCMC-owned lands in the Deer Valley zone are mostly middle to highest threat due to the modeled fire behavior, vegetation, highly valued resources and assets, sediment delivery potential and the surrounding wildland-urban interface.

The highest priority parcels in the Deer Valley Zone are listed in Table 6-9.

Table 6-9. The top five prioritized PCMC-owned parcels within the Deer Valley/Deer Crest Zone.

Parcel ID	Location	Parcel Acreage	Treatable Acreage	Cumulative 'Priority Value'	Category	Overall Project Ranking
PC-224-B-X	Prospector Ridge	8.6	3.8	**79.5**	Highest Priority	1
PCA-7-1-A-X	Guardsman Connector	1.5	1.5	**18.2**	Highest Priority	6
RO-OPEN-X	Royal Oaks Sub. Ph. 1	3.8	2.4	**8.3**	Highest Priority	14
PCA-S-98-II-X	Montage Water Tank	3.0	1.7	**5.5**	Higher Priority	20
PCA-S-46-98-X	Ontario Mine	23.2	10.4	**5.4**	Higher Priority	21

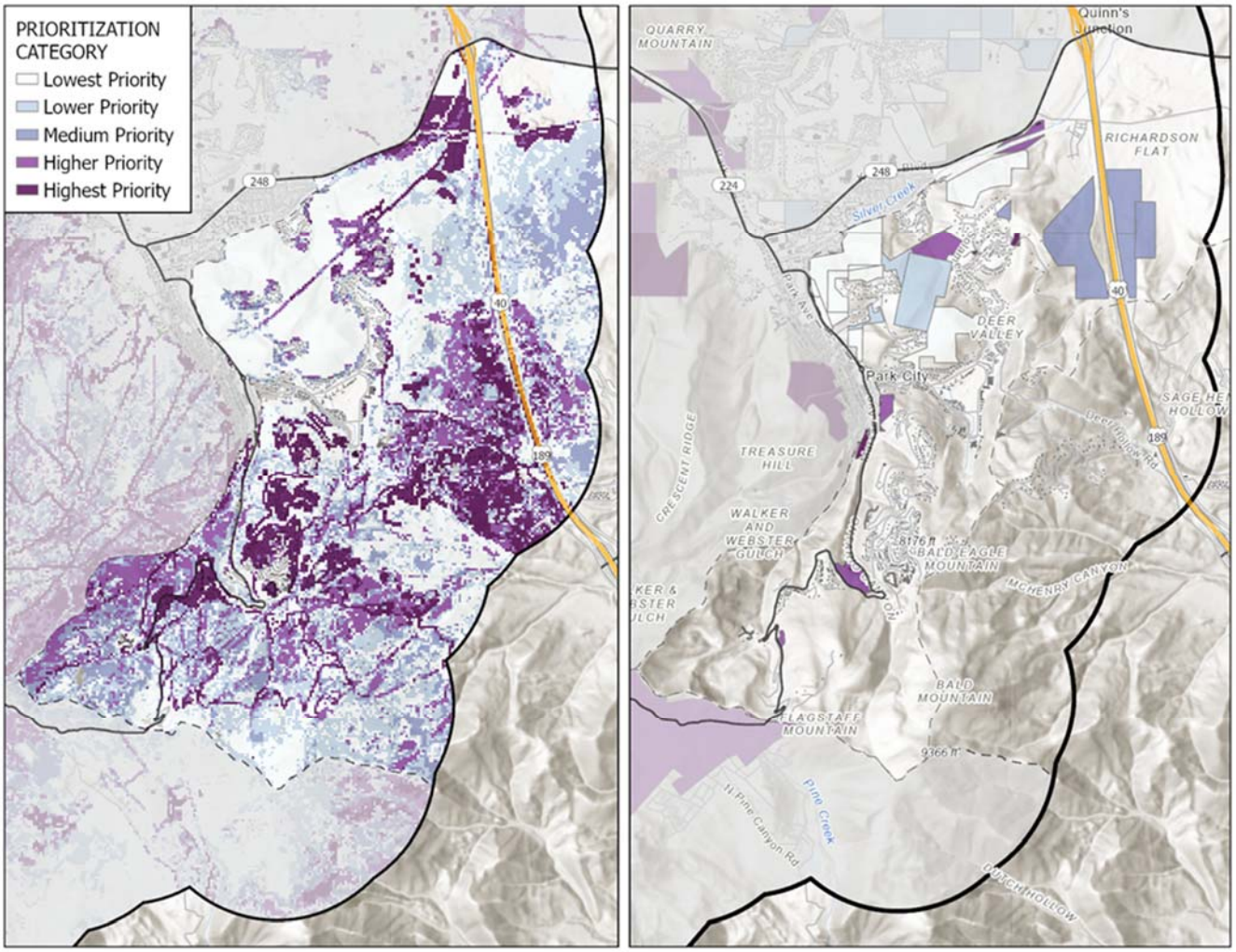

Figure 6-0-7. Distribution of priority values (left) and PCMC-owned parcel priority (right) within the Deer Valley/Deer Crest Zone.

Many of the parcels in this zone are relatively small in area. Even so, small-scale fuel treatments on PCMC-owned parcels targeting WUI protection could be implemented downslope of developments (e.g., below Rossi Hill) to maintain a low integrated risk over time.

There are significant forest health issues in and around Daly Canyon, apparent due to the abundance of dead and dying conifers covering the canyon slopes.

Bonanza Flat

The Bonanza Flat zone covers the southernmost portion of the project area and contains 1,534 acres of PCMC-owned land within a single parcel. The Bonanza Flat Conservation Area Adaptive Management and Stewardship Area Plan (2019) sets forth the vision and management strategies for this area. A key tenet of this plan is the need to improve and maintain the area's diversity. Active management techniques (e.g., thinning, burning, etc.) for vegetation communities is permitted.

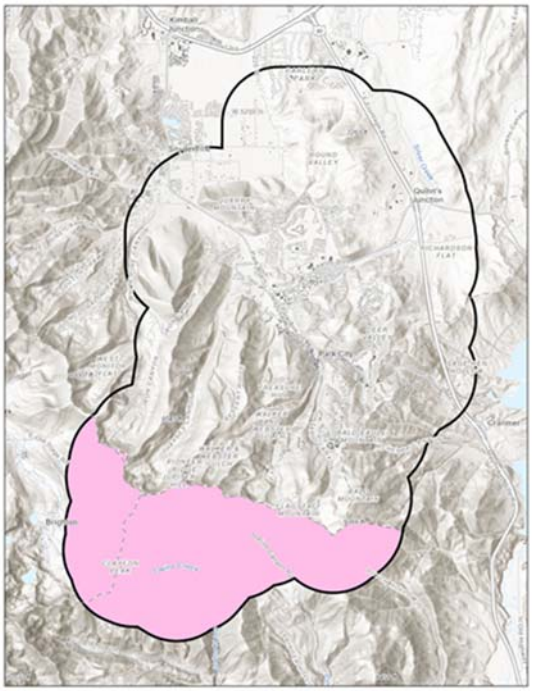

Figure 6-0-8. Bonanza Flat Zone.

Fuel treatment objectives in this zone would primarily benefit the natural resources of the area. The area of WUI is much smaller when compared to other zones, but small-scale fuel treatments would help protect Brighton Estates and Camp Cloud Rim (Girl Scouts of America).

Current Condition:

This area consists primarily of aspen and high elevation conifer forests growing on gentle to steep terrain, but the vegetation is widely variable throughout the zone (Figure XX). The slope gradient steadily increases towards the south and west where rocky mountains and ridges tower over the area.

Most of these steep areas are potential avalanche release zones. Limber pine grows along the bare ridgetops where this zone meets the Deer Valley and Park City Mountain zones. A reservoir lies in the southeast and a series of lakes dot the interior portion of the zone, surrounded by large spruce trees. Forest health issues affect all tree species here, but mainly subalpine fir with lesser damage to spruce and aspen. However, these forest health issues are not as readily visible as in the Park City Mountain Zone. Outside of the aspen groves and extensive conifer forest are areas of grass and sagebrush lining the roads that bring a high number of visitors to enjoy the scenery here.

There is very little WUI in this zone. The structures in Brighton Estates are directly adjacent to the property boundary and the Camp Cloud Rim is situated in the middle of Bonanza Flat. Limited evacuation options exist and fuel treatments along these routes may create safer conditions for evacuation during a wildfire.

This zone is a high-value water supply area for Salt Lake and Wasatch counties.

BONANZA FLAT CROSS-BOUNDARY OPPORTUNITIES
USFS
USFS (Brighton Ski Resort)
Wasatch State Park
Mayflower Resort
Girl Scouts of Utah

In the past, natural fire impacted this area in a variety of ways, from low-severity to high-severity (stand-replacing) fires that maintained the various forest types and patterns. This is one part of the project area where the expected net value change is largely a benefit to highly valued resources than other zones.

A significant portion of the zone is lower to lowest integrated hazard, the highest being near the Girl Scout camp and lakes, affecting the coniferous forests.

Modeled fire behavior in this zone shows higher intensity fire, with longer flame lengths, higher rates of spread and greater crown fire potential occurring in the conifer forests. On the other hand, the aspen forests are predicted to act more like a fuel break or create conditions for a low intensity fire.

Figure 6-0-9. All vegetation types are represented in the Bonanza Flat zone, from grasses and sagebrush to deciduous and conifer forests.

Aspen forests along south side of 224 and North Pine Canyon roads:

- The sizable aspen groves here are mostly healthy with many ages of trees. Aspen is expected to flourish here for the foreseeable future. It has dominated the site for a long time, even with few disturbances.
- Vegetation closest to the main roads includes a mixture of grasses, sagebrush and aspen groves. Many of the aspen groves adjacent to 224 and portions of North Pine Canyon Road do not contain a lot of conifer encroachment. These stands are more likely to act as “fire breaks” in the event of a fire.

Boundary with Brighton Estates:

- The aspen groves adjacent to Brighton Estates have a significant number of conifers growing underneath the main overstory. These ladder fuels contribute to the potential for crown fire and can complicate the control of a wildfire adjacent to this area of WUI.

The lakes region (Blood’s, Brimhall, Silver Lake Islet):

- The spruce-dominated forests that surround the lakes are more likely to experience a high-severity fire. This could impact Camp Cloud Rim, trail systems, high-use recreation area, and adjacent ski areas (Brighton ski area).

Priority Treatment Areas:

Table 6-10. The single PCMC-owned parcel within the Bonanza Flats zone.

Parcel ID	Location	Parcel Acreage	Treatable Acreage	Cumulative 'Priority Value'	Category	Overall Project Ranking
--	Bonanza Flat	1,344.1	1,015.34	**8.21**	Higher Priority	15

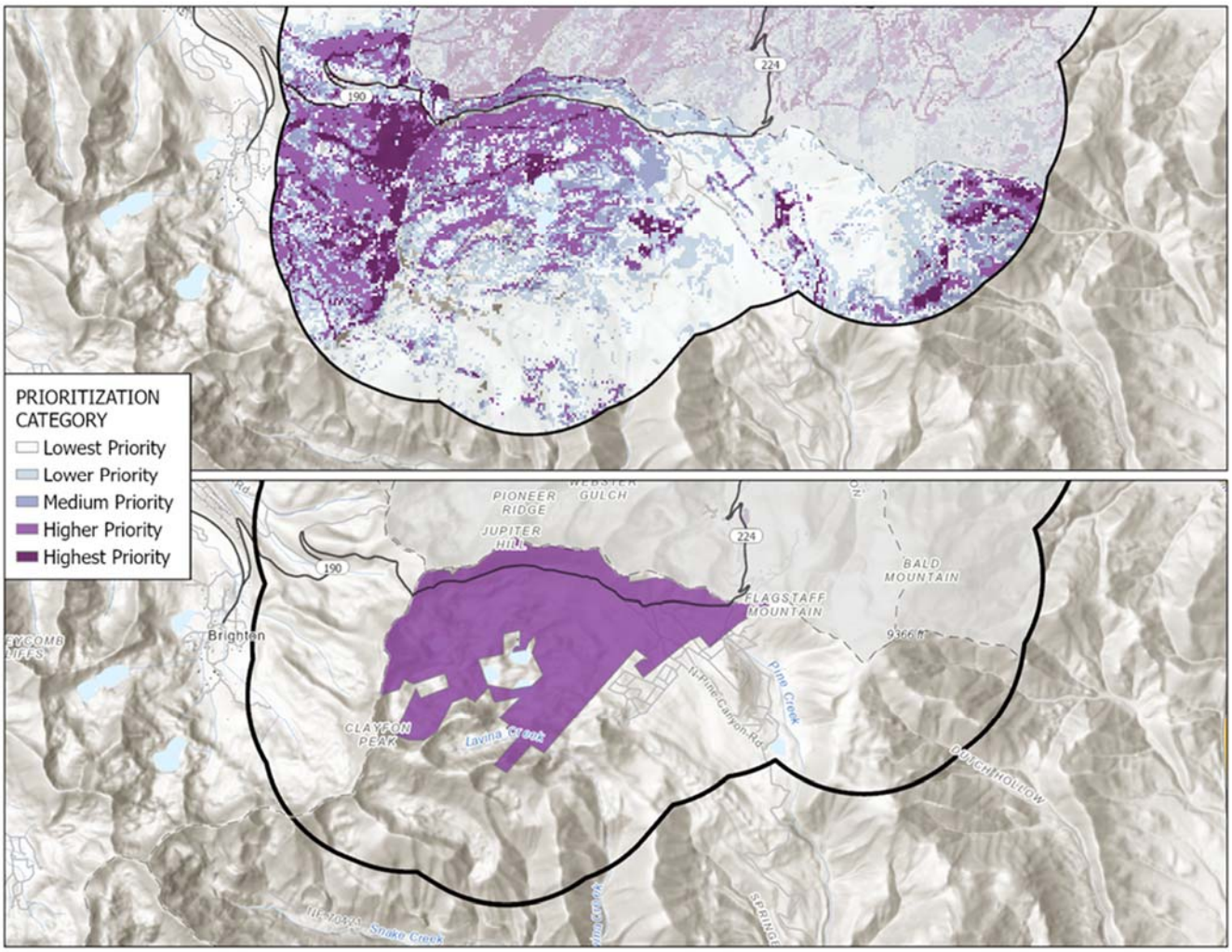

Figure 6-0-10. Prioritization of the single PCMC-owned parcel in the Bonanza Flats zone.

Park City Mountain Zone

The Park City Mountain zone is the western portion of the project area and contains 790 acres of PCMC-owned land, with the largest contiguous portion located on Iron Mountain. This is higher priority for implementing fuel treatments to protect dense WUI areas, the city water supply, ski resort and recreation infrastructure, and address forest health issues.

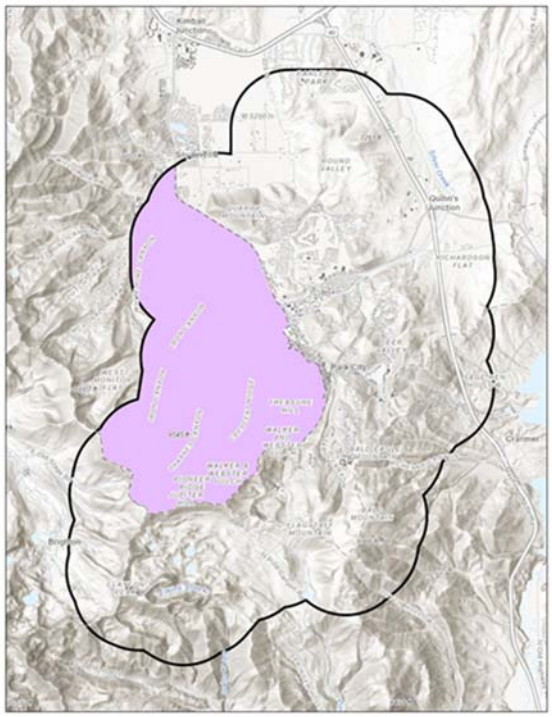

Figure 6-0-11. Park City Mountain Zone

Similar to the Deer Valley zone, the Park City Resort leases a vast expanse of land for snow sports and multi-use trails where most of the forested cover is located. Resort management recently initiated some small-scale forest management projects.

Current Condition:

This zone is dominated by complex terrain with a large elevation profile and steep slopes. Unlike the other zones, this area contains the least amount of gentle topography. Conifer and deciduous forests cover this area and the many dead and dying trees provide evidence of significant forest health issues. In comparison to the other zones, the Park City Mountain area has the most visible forest health issues. In turn, the continuous patterns of forest cover, dead and down trees, and the varied fuel types all contribute to the high fire hazard here.

The Suppression Difficulty Index (SDI) is a product of the Risk Management Assistance (RMA) dashboard from the Wildland Fire Management Research, Development, and Application. It factors in topography, fuels, expected fire behavior under 97th percentile weather conditions, fireline production rates in various fuel types with and without heavy equipment, and access via roads, trails or cross-country travel. The Park City Mountain Zone has the largest percentage rated as highest difficulty (>100) within the analysis area.

PARK CITY MOUNTAIN CROSS-BOUNDARY OPPORTUNITIES
Talisker
Vail Resorts
Iron Mountain Association
The Colony HOA
Utah Department of Natural Resources

Nearly all of the PCMC-owned lands involve open space and much of the city's high value water supply is located here. Many of the canyons in this zone are at an elevated risk of post-fire erosion, potentially affecting the medium to dense WUI below (Sediment Delivery Report). The slopes and canyons are oriented toward Old Town and the Park City Urban core, a high density WUI area. Although the larger zone area contains a lower concentration of hotels and high density WUI overall when compared to the neighboring Deer Valley zone, the infrastructure in this zone is also vital to the town economy. Evacuation of recreation users and residents from developed areas is an important consideration.

All recorded fuel types in the project area are found here. The forests are a dense mixture of conifer and deciduous trees with many ski runs breaking up the forest canopy. Within the mixed conifer stands there is a significant amount of dead and dying trees with high fuel loading in the understory. The potential exists for high-intensity fire across the zone, long-range spotting, and a high suppression difficulty. Very little forest management has been don over the years, although Park City Resort is doing work in some forested areas to enhance ski terrain while removing fuels.

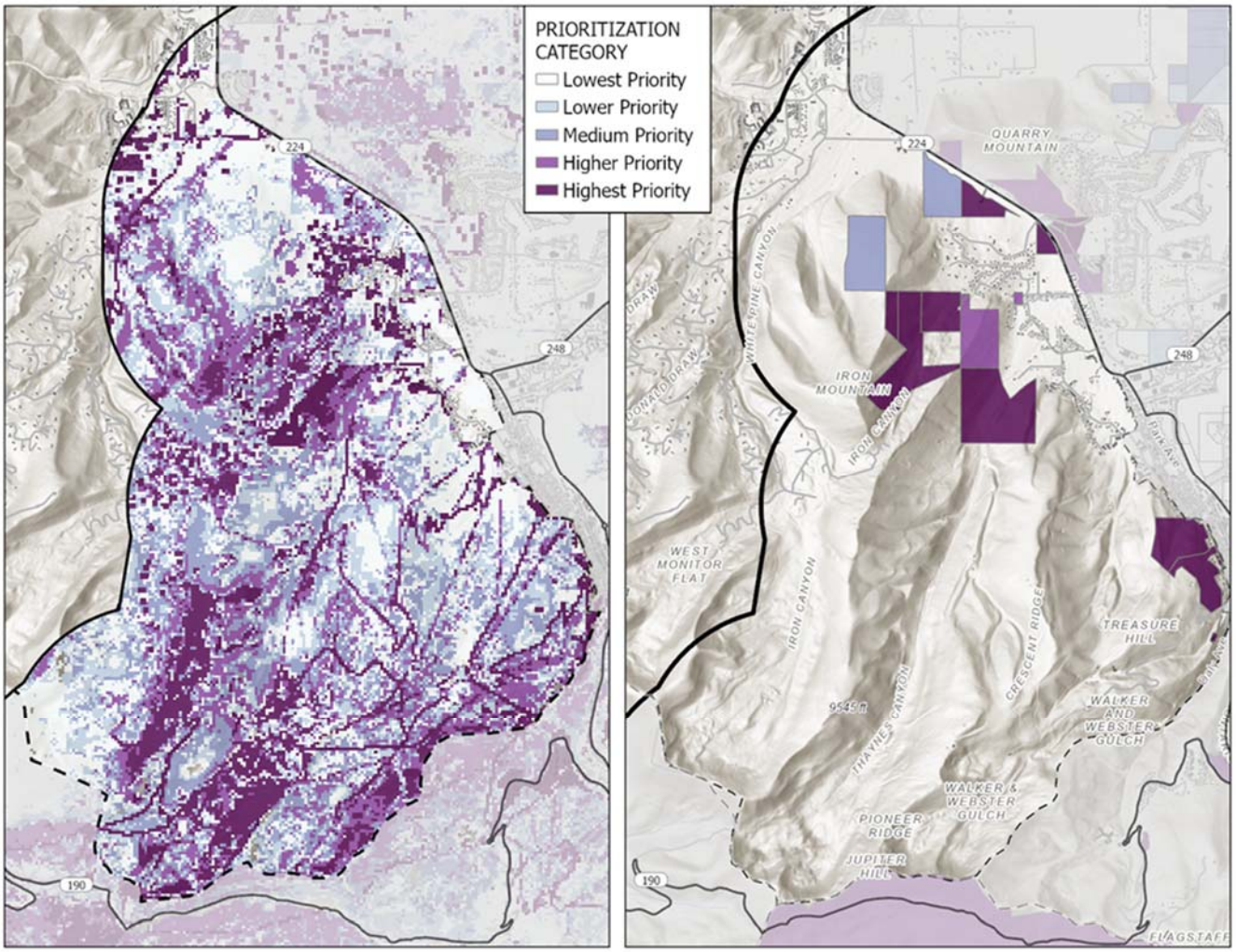

Figure 6-0-12. Distribution of priority values (left) and PCMC-owned parcel prioritization within the Park City Mountain zone.

Priority Treatment Areas:

Table 6-11. Top five rated PCMC-owned parcels by CPV within the Park City Mountain zone.

Parcel ID	Location	Parcel Acreage	Treatable Acreage	Cumulative 'Priority Value'	Category	Overall Project Ranking
PC-364-A	Treasure Hill	60.8	59.2	**78.5**	Highest Priority	2
THILL-5-X	Treasure Hill	42.6	30.4	**44.7**	Highest Priority	3
PC-S-55-X	Daly Canyon	1.7	1.7	**18.1**	Highest Priority	7
PP-25-C	Thaynes Canyon	139.3	139.3	**11.9**	Highest Priority	9
PP-25-3-X	Iron Canyon	110.0	108.4	**11.4**	Highest Priority	10

Major findings on PCMC lands from field surveys are detailed below.

Iron Mountain:

Priority values are high in this area based on the eNVC being mostly higher or highest threat. Integrated risk is mainly higher to highest hazard in the parcels closest to WUI. The remaining parcels are a mix of low to highest integrated risk.

Figure 6-0-13. View of the conifer and deciduous forests in the Iron Mountain parcels.

- A variety of vegetation types grow on this property. Large swaths of aspen, patches of large, healthy conifers, sprawling Gambel oak (both shrub and tree form) and mixed shrub (mountain mahogany, chokecherry, ash, oak, ninebark, snowbrush) grow here.
- There are areas of unhealthy aspen where up to half the stems in a clone/grove have died. These stems will later fall and increase the amount of fuel loading on the ground.
- Patches of conifer forest include white fir, Douglas-fir, subalpine fir and Engelmann spruce. Many of these areas are dense with trees, but they are currently healthy despite the lack of disturbance. Many trees are large which adds to the visual appeal of the area and fire resistance of trees (depending on species) and is beneficial for wildlife habitat. These conifer stands may not remain this healthy and dense under current or future climate scenarios.
- The eastern portion of the property that towers above adjacent homes is steep, shrubby and high risk for severe fire. However, Thaynes Canyon has aspen groves and the immediate area around the trailhead (located within the Iron Canyon Subdivision) has areas of Gambel oak, aspen and grasses.
- Rock outcroppings help break up the continuity of vegetation in the northern portion of the property and could impact fire spread.

Treasure Hill:

Recent treatments on Treasure Hill reduced fuel loading, removed a majority of dead standing trees, removed ladder fuels and increased the height from the ground to tree crowns through limbing practices (monitoring photos and aerial imaging). Gambel oak was thinned around homes, mining towers and the Town Lift. The result of these treatments is fewer hazard trees, reduced ground and ladder fuels and more space between tree canopies.

Based on the methods for prioritization, these parcels are in the highest category of Cumulative Priority Value due to the eNVC being either higher or highest threat, and higher or highest benefit.

McPolin Barn Area:

There is a stand of deciduous forest at the western end of the property, situated at the base of the slope of the mountains above it. The grasses here increase the likelihood of rate of spread and could carry it into the forests above. The stream condition survey notes that the streams here have been the subject of restoration efforts, making them more resilient to fire if one should occur.

Park City Golf Course:

This area has little to no threat from fire as it is a golf course where grass is trimmed and irrigated. Large pixel resolution of the 'Treatable Area' dataset resulted in a small area of the Park City Golf Course being included as a 'higher priority' parcel, but it has subsequently been removed from the priority parcel dataset

Recommendations and Conclusion

Park City has significant opportunities to alter fire behavior and minimize the risk and impacts of wildfire through the use of fuel treatments. Reducing the amount of fuels - any material ready to burn - is key to protecting valued assets of the community. The recommendations and considerations presented here are based upon findings in this CWRA and are designed to help Park City determine next steps for implementation planning.

Project-Wide Recommendations

Collaboration

- Strengthen community and landowner relations. This will inspire further cross-boundary collaboration to achieve mutually beneficial outcomes. Fire does not stop at political or property boundaries. Fuel treatments in one area may lessen the impacts from fire on a neighboring parcel.
    - Strong partnerships increase the likelihood of receiving funding from wildfire protection grants.

Education

- Inform residents and stakeholders about wildfire mitigation. Information from other planning efforts could alleviate knowledge gaps between different community groups.

    - For example, build upon recommendations outlined in the 2022 Pre-Disaster Mitigation Plan for Summit, Utah and Wasatch Counties to implement a fuels management program for local government and residents alike.
- Showcase fuel treatments completed on PCMC-owned lands. Doing so may encourage other landowners and homeowners to do similar actions. This continued education allows all parties to see what works and does not work for a particular area.
- Use interpretative signage and other outreach methods to explain objectives of fuel treatments and provide updates. This will help people understand what is occurring on specific projects.
- Continue educating residents about the threat of fire and fuel treatments. Provide information about how fuel treatments can mimic past fires or other disturbances.
    - Include education about how prescribed fire and fire in general can have a beneficial effect on the landscape. This is sometimes lost in the narrative surrounding wildland fire.
    - Include planning from the 2022 Pre-Disaster Mitigation Plan (Summit, Utah, and Wasatch Counties) which places emphasis on making maps of fire risk readily available and reviewed yearly.
    - Use FireWise Programs where applicable.

Management Actions

- Continue planning fuel treatments. Results from the community survey indicate a majority of residents agree with various types of fuel treatments such as prescribed fire, piling, and removal of some trees.
- Consider the full range of fuel treatment actions (e.g., thinning, brush cutting, piling, burning, mowing, herbicides, etc.). This will increase the likelihood of treatment success based on vegetation patterns, location, resource values, and available funding.
- Consider actions that would minimize the risk to historic structures (e.g., old mining structures) around Park City. Home-ignition-zone concepts could be used to determine appropriate actions.
- Visit potential fuel treatment areas prior to implementation. Site-specific information about vegetation and values-at-risk is needed to refine objectives and protect other resources.
    - Site visits can determine the amount of forest mortality and fuel loading in a specific area.
    - Field visits also confirm the level of threat for undesired outcomes during a fire, the threat to firefighter safety. Recreational user safety is also a concern in areas where dead standing trees pose a risk to safety.
- Use data from the avalanche report, stream condition surveys, wildlife habitat mapping, sediment delivery and quantitative wildfire risk aassessment to build site-specific objectives and resource protection plans prior to implementing fuel treatments.
    - The GIS datasets contain locations of high-value wildlife corridors, habitat for sensitive/threatened/endangered/species of concern, avalanche potential release areas, critical infrastructure (lift lines, power lines, gas lines, drinking water supply, etc.) and historical site data to mitigate risks to these resources from treatment activities.

Monitoring

- Monitor previously completed fuel treatments in other places. For example, the treatments in Gambel oak on USFS/Salt Lake County in Parley's Canyon can provide valuable lessons on outcomes of certain fuel treatments.
- Monitor lands for changes and risk factors over time. What may not be viable or high priority now could be different at future times with continued vegetation growth, noxious weed invasions, or forest health decline.

While fuel treatments can work very well in addressing the risk of fire, there are some possible shortcomings that need to be considered in planning (Davis et al., 2001; Collins et al. 2009). This should be included in broader education and outreach so people may understand why actions are taken in one area, but not another.

- Cost and available funding: Fuel treatments can be very expensive and communities often do not have the needed funding to initiate treatments and maintain them.
- Size: Larger treatments have greater potential to reduce fire behavior and slow fire spread.
- Location: adjacency to WUI may mean more issues with traffic, noise, and smoke.
- Resource protection: Wildlife habitat, riparian areas, water supply, infrastructure, historical sites, and other valued resources need protection. This will sometimes alter treatment intensity or prohibit treatments altogether.
- Access and terrain: the topography may be a barrier to widespread treatments.
- Availability of Labor: there may be difficulty in finding operators who can do the work, depending on season and availability.

Recommendations for Park City-Owned Parcels Specific to Zone

Round Valley Zone

- Focus fuel treatments around the WUI. This can be done by creating fuel breaks around homes and businesses in the higher priority treatment parcels identified in key findings and Table 6-12.
- Consider defensible space improvements up to 200 feet around structures adjacent to mature Gambel oak stands.
    - Consider fuel breaks in sagebrush around Trailside/Silver Summit in the northern portion of Round Valley.
- Consider using the full range of fuel treatment actions. These include, but are not limited to: thinning, brush cutting, mowing, prescribed fire in the short- and near-term.
- Analyze the use of herbicides. This is an effective method to control invasive cheatgrass establishment following treatment.
    - Herbicides are currently not used by PCMC.
- Review and update (as needed) the suppression response and strategy for this area.
- Emphasize continued wildfire prevention education and awareness. Areas of high recreational use and WUI density may benefit from improved community outreach.
- Periodically assess some lower-priority areas located close to values and assets. Just because they are not high priority or ready for treatment now, does not mean that will be the case in a few years.

    - Treatments that benefit Silver Creek and protect Ute ladies' tresses among other conservation values.
    - Parcels adjacent to the cemetery.
    - Areas covered by mature Gambel oak in the next five or more years.
- Coordinate with the EPA and Utah DEQ. This is especially true for ongoing management of the Richardson Flat Site.

Deer Valley/Deer Crest Zone

- Fuel treatments would address WUI concerns - protecting homes and businesses. Many parcels in this zone are high priority for treatment (Table 6-9).
    - The area of U.S. Highway 40 (below Rising Star) has a high probability of ignition and is covered with flammable vegetation that could directly affect the surrounding structures. Coordinate with UDOT to ensure active vegetation management in the highway right-of-way.
    - Treatments along Marsac Avenue would protect areas of high historic value and homes situated on the ridge.
- Address the spread of invasive weeds. There are known expanding populations of Dyer's woad along U.S. Highway 40. Invasive weeds can increase the risk of fast-moving wildfires.
- Prioritize treatments that increase defensible space (within 200 feet) around homes and other structures.
    - Aerie, Hidden Meadows, Rossi Hill, Masonic Hill, Daly Canyon, lower Deer Valley; Solamere, Morning Star, Snow Park, upper Deer Valley; American Flag, Bald Eagle, Empire Pass, Silver Lake, Deer Crest, Deer Valley Resort.
- Review evacuation route safety and effectiveness. Promote messaging that the Deer Valley zone could benefit from removal of vegetation along roads.
- While outside of PCMC jurisdiction, in Daly Canyon PCMC should emphasize the need to protect forests and drinking water. Actions taken here could create conditions for a safer evacuation.
- Consider fuel treatments around the transmission lines operated by Rocky Mountain Power. The company is in the process of hardening those lines and additional work on the ground would help reduce the risk of impacts to the power grid during a fire.
- Partner with Deer Valley resort. Doing so will build a larger vision for landscape-scale restoration. Deer Valley administers the land under lease which contains the most conifer and deciduous forest in this zone.
    - Opportunities exist to address multiple goals and objectives of both fuels management while enhancing the skier experience through thinning, limbing and removing fuels to enhance ski terrain.
- Share information about potential fire behavior and risk. Ensuring stakeholders and residents understand how to use this document will strengthen its usefulness.
    - Inform people about primary and secondary evacuation routes.
- Emphasize continued wildfire prevention education and awareness. Areas of high recreational use and WUI density may benefit from enhanced community outreach.
- Initiate actions that maintain the health and resiliency of Silver Creek along Kearns Boulevard and south of PC Hill.
    - This area is vital for a safe evacuation.
    - Treatments may provide benefit to habitat for Ute ladies' tresses orchid.

Bonanza Flat Zone

- Reference the Bonanza Flat Adaptive Management Plan prior to fuel treatment planning to ensure management goals and strategies are met.
- Prioritize treatments around WUI and transmission lines.
    - WUI areas include Brighton Estates and Camp Cloud Rim.
    - The transmission lines are owned and operated by Rocky Mountain Power.
- Treat other areas for ecological benefits:
    - This is the one zone in the project area where low intensity, prescribed fire would largely benefit the aspen that grows here.
    - There is an elevated risk of sediment delivery from Blood's Lake drainage to Provo River.
    - Fuel treatments could focus on maintaining a high level of benefit to this area and its ecosystems, habitat, water supply, and recreational opportunities. Fuel treatments that mimic fire effects could have beneficial effects.
- Examine opportunities to maintain or increase safety of evacuation routes.
    - Remove dead standing trees around Pine Canyon and 224.
    - Plan for future removal of dead trees along road corridors. This will continually reduce fuel loading and maintain public safety over the next 5 to 10 years.
- Treat aspen groves in ways that mimic natural processes that may also stimulate aspen growth.
- Establish good relations and continually meet with operators/owners of Mayflower resort to address forest health issues that could affect PCMC property.
- Evaluate work accomplished on Wasatch State Park. This could be helpful to determine which treatment methods may be best used in Bonanza Flat.

Park City Mountain Zone

- Plan fuel treatments that would protect the city's water supply.
- Address the highest priority parcels.
    - Portions of Iron Mountain and Thaynes Canyon areas have a high potential for post-fire sedimentation.
    - Treatments may be used to stimulate growth and reduce mortality in aspen stands, further increasing fire resistance.
- Look for opportunities to maintain the low fire risk in the parcels along 224. While not a high priority for reducing fire risk now, there is a need to monitor vegetation and stream conditions over time.
- Continue building relationships with Park City Resort managers for potential cross-boundary restoration planning. Prioritize ways to reduce the fuel hazard and address forest health concerns. Park City Resort owns the most area of contiguous conifer and deciduous forests in this zone and is a vital partnership opportunity.
- Find opportunities to address multiple goals and objectives of both fuels management and enhancing the recreational experience. Activities using thinning, limbing, and reduced fuel loading increase the area of enjoyable ski terrain, vistas, and human safety.
- Capitalize on the educational showpiece of the Treasure Hill parcel. There is a lot to learn from the activities that took place there.
    - Since there is a high number of visitors to Treasure Hill, consider using a trail(s) for a self-guided interpretive route concerning forest management, natural resources, fuels reduction and how they affect wildfire risk.

- Emphasize continued wildfire prevention education and awareness. Areas of high recreational use and WUI density may benefit from enhanced community outreach.
- Consider fuel treatments around the transmission lines operated by Rocky Mountain Power. The company is in the process of hardening those lines and additional work on the ground would help reduce the risk of impacts to the power grid during a fire.

Additional Tables and Figures

Table 6-12.

Parcel ID	Location	Parcel Acreage	Treatable acreage	Mean Threat Value (eNVC)	Mean Benefit Value (eNVC)	Cumulative Prioritization Value	Prioritization Category	Project Zone	Priority Ranking
PC-224-B-X	Prospector Ridge	8.6	3.8	-78.0	1.5	79.5	Highest Priority	Deer Valley/Deer Crest	1
PC-364-A	Treasure Hill	60.8	59.2	-76.5	1.9	78.5	Highest Priority	Park City Mountain	2
THILL-5-X	Treasure Hill Subd Phase 1 & Amended	42.6	30.4	-42.9	1.8	44.7	Highest Priority	Park City Mountain	3
MCL-A-X	McLeod Creek Sub.	3.1	1.4	-29.6	1.1	30.7	Highest Priority	Round Valley	4
WLR-A-X	Willow Ranch Sub.	10.3	1.4	-19.5	2.7	22.2	Highest Priority	Round Valley	5
PCA-7-1-A-X	Guardsman Connector	1.5	1.5	-17.6	0.6	18.2	Highest Priority	Deer Valley/Deer Crest	6
PC-S-55-X	Walker and Webster	1.7	1.7	-16.7	1.4	18.1	Highest Priority	Park City Mountain	7
PCA-103-C-X	Willow Ranch/ Meadows Drive	27.5	4.4	-11.6	0.8	12.4	Highest Priority	Round Valley	8
PP-25-C	Thaynes Canyon	139.3	139.3	-8.5	3.4	11.9	Highest Priority	Park City Mountain	9
PP-25-3-X	Iron Mountain	110.0	108.4	-8.7	2.7	11.4	Highest Priority	Park City Mountain	10
PP-25-1-XX	Iron Mountain	39.2	39.2	-6.4	2.5	8.9	Highest Priority	Park City Mountain	11
PP-25-2-X	Iron Mountain	14.7	14.7	-7.0	1.7	8.7	Highest Priority	Park City Mountain	12
PCA-18-B-X	McPolin Farm OS	29.3	1.9	-7.3	1.2	8.5	Highest Priority	Park City Mountain	13
RO-OPEN-X	Royal Oaks Sub. Ph. 1	3.8	2.4	-7.5	0.8	8.3	Highest Priority	Deer Valley/Deer Crest	14
--	Bonanza Flat	1,344.1	1,015.4	-5.0	3.2	8.2	Higher Priority	Bonanza Flats	15
SS-57-2-A	Round Valley	29.1	11.5	-6.1	1.3	7.4	Higher Priority	Round Valley	16
PCA-18-A-X	TEST	22.6	14.0	-5.1	2.1	7.2	Higher Priority	Round Valley	17
PCA-19-A-X	McPolin Farm (East)	128	9.3	-6.3	0.6	7.0	Higher Priority	Round Valley	18
SS-108-A-X	Iron Mountain	65.4	64.2	-4.3	2.6	6.9	Higher Priority	Park City Mountain	19
PCA-S-98-II-X	Montage Water Tank	3.0	1.7	-4.1	1.3	5.5	Higher Priority	Deer Valley/Deer Crest	20
PCA-S-46-98-X	Ontario Mine	23.2	10.4	-4.3	1.1	5.4	Higher Priority	Deer Valley/Deer Crest	21
HM-1-ROS-1-X	Hidden Meadow Sub.	34.8	34.6	-4.9	0.3	5.2	Higher Priority	Deer Valley/Deer Crest	22
PCA-9-95-N-X	Rail Trail	17.2	2.5	-4.8	0.3	5.1	Higher Priority	Deer Valley/Deer Crest	23
SS-57-A-X	Round Valley	368.2	222.7	-3.5	1.2	4.7	Higher Priority	Round Valley	23
EP-IV-A-X	Eagle Pointe Sub. Ph. IV	10.9	1.4	-4.4	0.3	4.6	Higher Priority	Round Valley	25

Parcel ID	Location	Parcel Acreage	Treatable acreage	Mean Threat Value (eNVC)	Mean Benefit Value (eNVC)	Cumulative Prioritization Value	Prioritization Category	Project Zone	Priority Ranking
GILLMOR-4-X	Round Valley	291.4	47.7	-3.9	0.7	4.6	Higher Priority	Round Valley	26
PCA-108-C-X	Rotary Park	28	1.2	-4.3	0.3	4.6	Higher Priority	Park City Mountain	27
PC-S-27-X	Virginia Mining Claim	13.0	11.6	-3.9	0.4	4.3	Higher Priority	Deer Valley/Deer Crest	28
SSC-A-X	Sandstone Cove Sub.	29.6	25.7	-3.6	0.7	4.3	Higher Priority	Round Valley	29
PCA-900-A-X	Huntsman Os	20.2	13.7	-3.3	0.4	3.8	Higher Priority	Round Valley	30
PP-26	Park City Heights	130.2	115.3	-2.2	1.3	3.5	Medium Priority	Deer Valley/Deer Crest	31
SS-61-B-2-X	Round Valley	10.4	10.4	-2.6	0.8	3.4	Medium Priority	Round Valley	32
SS-61-B-4-X	Round Valley	10.3	10.3	-2.5	0.8	3.3	Medium Priority	Round Valley	33
PP-26-A-1	Richardson Flats (South)	44.0	22.6	-1.8	1.3	3.1	Medium Priority	Deer Valley/Deer Crest	34
SS-62-D	Crianbrosk	40.2	25.0	-2.2	0.9	3.1	Medium Priority	Round Valley	35
SS-61-X	McMillian OS	86.1	56.9	-2.4	0.6	3.0	Medium Priority	Round Valley	36
HM-1-ROS-5-X	Hidden Meadow Sub.	6.1	4.9	-2.5	0.4	2.9	Medium Priority	Deer Valley/Deer Crest	37
SS-61-B-12-X	Round Valley	10.4	9.4	-2.1	0.7	2.8	Medium Priority	Round Valley	38
SS-59-X	Florence Fillmor Open Space	213.8	36.2	-2.0	0.9	2.8	Medium Priority	Round Valley	39
SS-121	Park City Heights / Richardson Flats (South)	126.1	64.5	-1.5	1.4	2.8	Medium Priority	Deer Valley/Deer Crest	40
SS-106-A-X	Iron Mountain	83.2	83.2	-1.9	0.9	2.8	Medium Priority	Park City Mountain	41
PCA-19-B-X	McPolin Farm	53.6	17.6	-0.8	1.9	2.7	Medium Priority	Park City Mountain	42
SS-61-B-11-X	Round Valley	10.2	9.8	-1.7	1.0	2.7	Medium Priority	Round Valley	43
SS-62-A-X	Florence Gillmor OS	117.6	91.1	-1.4	1.1	2.5	Medium Priority	Round Valley	44
SS-61-E-X	Round Valley	40.6	27.5	-2.1	0.2	2.3	Medium Priority	Round Valley	45
SS-61-F-X	RV OS	38.7	28.7	-1.8	0.5	2.3	Medium Priority	Round Valley	46
SA-S-35-X	Prospector Pocket Park	112.1	107.4	2.0	0.2	2.2	Medium Priority	Deer Valley/Deer Crest	47
PCA-62-G-X	Round Valley	208.6	135.4	-1.2	1.0	2.2	Lower Priority	Round Valley	48
SS-61-D-X	Round Valley	37.4	22.4	-1.3	0.8	2.1	Lower Priority	Round Valley	49
OOT-HSTONE-OS-X	Overlook at Old Town, The Sub.	10.4	9.5	-1.9	0.1	2.1	Lower Priority	Deer Valley/Deer Crest	50
PCRC-1-X	F. Gillmor (Donate) P.C Recreation Complex Sub	36.4	9.3	-1.2	0.8	2.0	Lower Priority	Round Valley	51
SS-62-B-X	RV OS	40.1	31.1	-0.7	1.2	1.9	Lower Priority	Round Valley	52

Parcel ID	Location	Parcel Acreage	Treatable acreage	Mean Threat Value (eNVC)	Mean Benefit Value (eNVC)	Cumulative Prioritization Value	Prioritization Category	Project Zone	Priority Ranking
PCA-97-A-1-X	ED Gillmor OS	41.0	8.3	-1.3	0.5	1.8	Lower Priority	Round Valley	53
SS-61-B-9-X	Round Valley	10.3	7.8	-0.8	1.0	1.7	Lower Priority	Round Valley	54
SS-62-E-X	Grover	40.0	37.4	-1.1	0.7	1.7	Lower Priority	Round Valley	55
EP-IV-B-X	Eagle Pointe Sub. Ph. IV	21.9	11.7	-1.2	0.4	1.6	Lower Priority	Round Valley	56
SS-62-C-X	RV OS	40.0	9.2	-0.9	0.6	1.6	Lower Priority	Round Valley	57
SS-61-C-X	Round Valley	43.2	20.2	-1.2	0.4	1.6	Lower Priority	Round Valley	58
SS-62-A-1-A-X	McMillian OS	143.4	44.1	-1.0	0.5	1.5	Lower Priority	Round Valley	59
SA-254-BLM-L17-X	Aerie Sub.	18.5	17.4	-1.2	0.2	1.4	Lower Priority	Deer Valley/Deer Crest	60
PCA-110-X	Park City Cemetery	30.4	8.5	-1.2	0.0	1.3	Lower Priority	PC Urban Core	61
PCRC-3-X	Park City Recreation Complex Sub	8.6	0.9	-0.6	0.6	1.2	Lower Priority	Round Valley	62
SS-62-A-1-X	Round Valley	10.6	1.6	-0.6	0.5	1.1	Lowest Priority	Round Valley	63
SA-400-4-X	Aerie/Dsd Open Space	12.2	3.0	-0.9	0.1	1.0	Lowest Priority	Deer Valley/Deer Crest	64
SA-400-B-2-X	April Mountain	12.9	10.7	-0.9	0.1	0.9	Lowest Priority	Deer Valley/Deer Crest	65
SA-254-BLM-L1-X	Aerie Sub.	3.6	3.6	-0.5	0.4	0.8	Lowest Priority	Deer Valley/Deer Crest	66
SA-224-2-X	City Park/Aerie OS	4.9	2.8	-0.7	0.0	0.8	Lowest Priority	Deer Valley/Deer Crest	67
HM-1-ROS-4-X	Hidden Meadow Sub.	86.0	80.3	-0.1	0.4	0.6	Lowest Priority	Deer Valley/Deer Crest	68
PC-551-BLM-X	Solamere (Gambel Oak Cons. Easement)	89.8	69.0	-0.3	0.3	0.5	Lowest Priority	Deer Valley/Deer Crest	69
FHE-REC-X	Fairway Hills Estates Ph. 1	22.7	22.0	-0.3	0.2	0.4	Lowest Priority	Round Valley	70
SA-254-2-F-X	Aerie Sub.	16.2	15.9	-0.1	0.3	0.4	Lowest Priority	Deer Valley/Deer Crest	71
SA-254-1-X	Aerie Open Space 2	93.9	87.4	-0.2	0.2	0.4	Lowest Priority	Deer Valley/Deer Crest	72
SCCS-C-X	Hidden Meadow Sub.	20.0	9.4	-0.3	0.0	0.3	Lowest Priority	PC Urban Core	73
HM-1-ROS-2-X	Hidden Meadow Sub.	8.1	6.2	0.0	0.3	0.3	Lowest Priority	Deer Valley/Deer Crest	74
PCA-98-C-1-X	PC Hill Parcel	73.4	21.9	-0.2	0.1	0.2	Lowest Priority	Round Valley	75
SA-254-1-B-X	Aerie Open Space 1	25.2	24.2	-0.1	0.1	0.2	Lowest Priority	Deer Valley/Deer Crest	76
PCA-3-3000-X	Prospector	15.3	14.2	0.0	0.1	0.2	Lowest Priority	Deer Valley/Deer Crest	77
EP-II-B-X	Eagle Pointe Sub. Ph. 2	7.3	3.0	0.0	0.1	0.1	Lowest Priority	Round Valley	78

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6.2 Implementation Guidelines, A Community Resource

Implementation guidelines are intended to be a community resource to understand best practices around planning, implementing and monitoring forestry projects. There is a growing need for active land management, forest restoration and hazardous fuel reduction to address our communities' exposure to wildfires and other natural occurrences. As part of the Park City Community Wildfire Risk Assessment (CWRA) project, these guidelines were developed to assist land managers, property owners and residents apply a best-practice approach to forestry projects.

Forestry is considered a "practice," meaning that tools and methods are expected to change over time. In that sense, this document could be considered as living and evolving, and information presented here may be subject to changes or modifications. It is imperative to monitor landscapes and forests in order to drive future management decisions. Preserving the long-term quality of the environment and resources around us is largely dependent upon the actions land managers take.

The information included in this report is by no means comprehensive. Rather, the concepts and guidelines presented are intended to kick start project development and spur further analysis, planning and refinement. The material presented is also targeted at the most common resource considerations, fuels and treatment types that would be found in the CWRA project area.

As with many industries or specialties, the world of forestry, natural resources and fuels management carries its own terminology and jargon. Towards the end of this document is a glossary of some commonly used terms, with most definitions coming from the Society of American Foresters Dictionary of Forestry, literature from the US. Forest Service, or subject-matter experts.

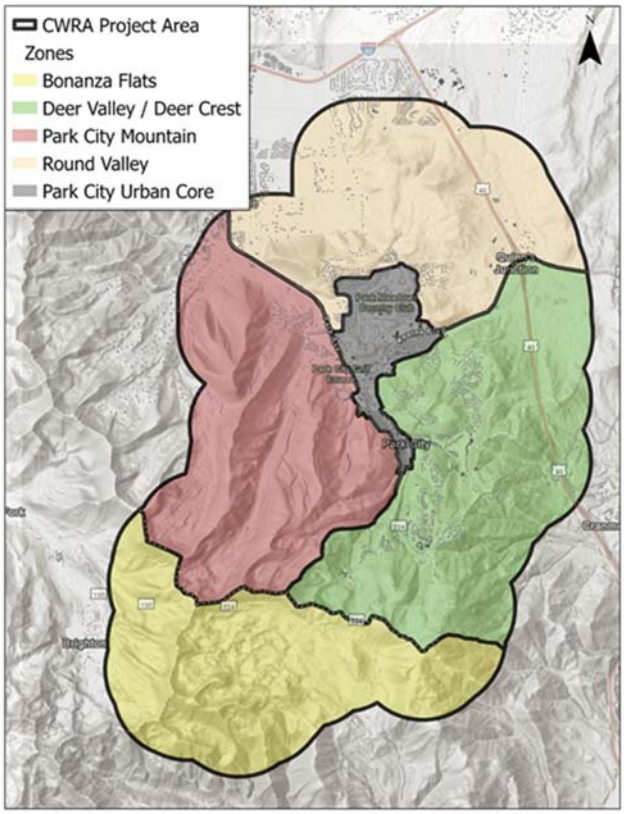

Figure 6-0-14. The CWRA project area with project zones identified.

Project Planning

Planning successful forestry projects can be a challenging task. Desired outcomes must be balanced with land-use objectives, effects to other resources and seasonal constraints, among other factors. Regulations, codes and ordinances may apply and must be followed. This section includes some common planning processes and considerations that are useful. Subject-matter experts in forestry, natural resources, natural hazards or compliance can be beneficial as consultants during the planning process. A sample project

planning template is included at the end of this report, as a tool to prompt a careful and comprehensive approach.

Regulatory Compliance

A handful of federal, state and local regulations may apply to project implementation. Land managers must understand what these are and how to comply before implementing projects. Some common regulations and plans are listed here for consideration, although there are a myriad of project types and requirements which vary by jurisdiction. At the local regulatory level, the PCMC CWRA project area spanned three counties (Summit, Wasatch, Salt Lake) and one incorporated area (Park City), hosting a number of plans and ordinances worth researching during project planning but not included here.

Federal:

- Clean Air Act
- Clean Water Act
- Endangered Species Act
- Migratory Bird Treaty Act

State:

- Land Use, Development, and Management Act (LUDMA)
- Utah Forest Practices Act
- State Smoke Management Plan
- National Historic Preservation Act of 1966 -Section 106, code 90844
- Utah Forest Water Quality Guidelines

Baseline Documentation

It is recommended to create baseline documentation before project work initiates. Information about the current work site, such as its vegetation type, health and distribution, as well as improvements (e.g., structures), should be documented during an initial field survey. This can be further accomplished using basic photography or by aerial methods, such as UAV-derived orthomosaic imagery. Georeferenced images can prove useful as they allow for replication of specific photos or survey plots in the future. Mapping applications such as Gaia or ArcGIS Field Maps can be useful, as well as photography applications like Solocator. This documentation is valuable for the project archive to monitor changes and effectiveness.

Figure 6-0-15. Baseline information about vegetation type, health and distribution will help communities monitor change.

Protection of Natural Resources

Forestry projects may cause unwanted effects to essential and valued natural resources such as soil, wildlife, vegetation and watersheds. Careful evaluation of these resources can help mitigate any potential negative effects. This is a critical element of project planning that should not be overlooked, and often justifies the use of natural resource specialists to make assessments and recommendations. Some common considerations are listed here, although this is not fully comprehensive for every project type and project area.

Table 6-1. Common effects and mitigation considerations when planning forestry projects.

Natural Resource	Potential Effects	Mitigation Strategies	Information
Soil	Compaction from equipment Increased erosion	Use low ground pressure equipment and techniques to limit affected areas. Limit equipment use in steep terrain. Avoid using mechanical equipment during wet soil conditions. Rehabilitate disturbed areas with organic material, native seed and erosion-control structures.	Utah Forest Water Quality Guidelines (Gropp & McAvoy, n.d.)
Water	Reduction in quality	Avoid driving equipment through or working adjacent to streams or wetlands where possible (e.g., use of riparian "buffers").	Utah Forest Water Quality Guidelines (Gropp & McAvoy, n.d.)
Air	Reduction in quality from prescribed fire smoke	Adhere to smoke management best practices for good dispersion.	State Smoke Management Plan (Utah DEQ, 2020)
Wildlife	Altering habitat or behaviors Disrupting breeding and nesting or denning cycles	Identify the wildlife species that use the project area and consider treatment strategies to prevent negative impacts. Identify times of the year where fewer or no activities can be done to protect sensitive time frames for birds and mammals. Consider a site-specific assessment by a certified wildlife or aquatic biologist prior to implementation.	Utah Wildlife Action Plan (2015) Utah Guidelines for Raptor Protection (Romin & Muck, 2002) Endangered Species Act (1973)
Vegetation	Attraction and increased population of forest pests Encouraging advancement of noxious weeds	Limit the amount of slash (branches, stems) on the ground following treatment to reduce insect breeding habitat. Avoid creating green slash during certain times of the year (peak flight). Use pheromone traps to identify insects and disrupt breeding cycles Eradicate weeds on-site prior to project work.	Balsam woolly adelgid facts (Rideout et al., 2023) Fir engraver facts (Utah Division of Forestry, Fire & State Lands, n.d.) MCH pheromone treatment in Douglas fir (Ross et al., 2015)

		Avoid using personnel and equipment during peak seeding periods. Wash incoming equipment prior to use. Reseed disturbed areas with native plant mixes.	Utah Noxious Weed List (Utah Department of Agriculture and Food, 2023) Summit County Cooperative Weed Management Area (2023)

Interacting Hazards

Changes to forest structure from restoration or fuel reduction projects can increase the risk of avalanches and potentially threaten values downslope. In many places around the mountainous environment, the relationship between forest structure and steep terrain influences avalanche behavior. Forest density, canopy cover and ground roughness are all vegetation characteristics that affect snow slab and weak layer formation. During the PCMC CWRA, a comprehensive mapping exercise was completed to identify potential avalanche release areas and avalanche hazard indication within the project area. This generated a robust data set that can be utilized for forestry planning purposes. See chapter 2 of the CWRA for the full Avalanche Terrain Assessment report.

Figure 6-0-16. Avalanching on open slopes where avalanche frequency has prevented the regeneration of adequate "protective forest."

When designing and implementing forestry projects in mountainous terrain where adequate snow supply exists, potential release areas (PRAs) under a variety of forest conditions must be evaluated for the protective effects that the vegetation may provide to that area. Using technical mapping tools, data collection methods, ground analysis, dynamic modeling and expert knowledge, project areas can be assessed for negative avalanche effects. Desired project specifications may need to be changed to avoid altering avalanche behavior in areas where desired treatments and avalanche hazard areas overlap. Based on a path-scale avalanche hazard analysis, adjustments may be recommended in one of three ways:

1. The identified area should be **completely avoided**, as to not change forest structure.
2. The identified area can be included in the project, but with **altered specifications** to manage forest structure changes and subsequent "protective effect."
3. The identified area can be included in the project with **no changes** to the specifications, as changes to vegetation will result in unchanged avalanche hazard.

Monitoring

Monitoring treatment activities ensures objectives are being met and if changes to planned treatments are needed. The monitoring plan should include on-site assessments of project activities during all phases of treatment (before, during and after). Types of things landowners or managers may want to monitor are based on their treatment objectives. A few examples of what could be monitored are:

1. The change (if there is more or less) in surface fuels such as branches and stems,
2. Which tree or plant species remain following treatment, how many there are per acre and how well they are growing,
3. The amount of ground disturbance and the need for soil erosion prevention strategies.

Findings can be documented by using photos, written notes or a combination of methods. It depends on what a landowner decides is necessary to help inform future actions.

The Utah Department of Natural Resources, Division of Forestry, Fire and State Lands, can also assist with monitoring activities as part of their business operations.

Treatment Types and Methods

There are often multiple ways to accomplish forestry work, some better than others for a given area. Factors such as access, vegetation composition, terrain and project objectives usually determine what treatment type would be most effective. Many projects utilize multiple treatment types in conjunction. Other project areas may require more than one treatment over time in a phased approach to accomplish objectives. These subsequent treatments are called entries, and sometimes the initial treatment type is chosen intentionally to set up the project area for a different treatment in the next entry. Discussed here are some common fuel treatment types, along with some best practices associated with a chosen method.

With some overlap, treatment types can be categorized in three ways:

1. Manual treatments - utilizing a workforce with tools to cut and arrange biomass.
2. Mechanical treatments - utilizing equipment to move, arrange, process or remove biomass.
3. Prescribed fire - utilizing managed fire to remove biomass.

Table 6-2. Common fuel treatment types and best practices.

MANUAL TREATMENTS				
Treatment Type	Description	Best Utilized	Best Avoided	Considerations
Lop and Scatter	Material is cut, slashed, and left in place to decompose. Overall fuel loading is not reduced in the short term, but they are rearranged.	In smaller or lightly distributed vegetation.	In larger fuels or heavily loaded areas. In areas where immediate fuel reduction is desired.	Cut material can take years to decompose. The closer it remains to the ground the faster this process takes place. Target cut material to be slashed so it sits no more than 2-3 feet from the ground.
Cut and Haul	Material is cut and hauled away from closest access points to be processed and disposed off site.	In areas of easy access and smaller quantities of vegetation to be removed. In areas of limited options for on-site disposal.	In areas with limited access. In areas with high quantities of vegetation to be removed. In areas of significant distance to biomass processing facilities or landfills.	Dragging cut material by hand is an incredibly labor intensive task. Without dedicated biomass processing facilities, green waste material is destined for landfills which can have detrimental effects.
Cut and Chip	Material is cut and chipped to be hauled away or broadcast chipped on site, from roadsides with tow behind machines or over the landscape with tracked machines.	In roadside areas. In areas with gentle terrain making equipment access viable. In areas of relatively smaller fuels and lighter loading, making it viable to broadcast chips in a light layer.	In areas of large material and heavy fuel loading. In areas with steep or off camber terrain where equipment can't operate.	When broadcast chipping, keep chips well spread and depth no more than 4 inches to decompose quicker and not suffocate soils, grass, and forbs. Rehabilitate any significant ground disturbance from equipment.
Cut and Pile	Material is cut and formed into piles on site to burn at a later time, typically in spring or fall. Piles are situated away from trees and in open breaks in the canopy to minimize heat impacts to	In areas of difficult access for equipment. In fuel types that benefit from fire.	In areas that may be sensitive to the smoke from future burning.	Project managers should pursue the viability of pile burning before committing to piling projects. For clean and efficient burning, proper pile construction techniques should be utilized.

	trees. Piles can be built by hand or machinery, typically hand piles are about 6' x 6' and machine built piles are larger.	In areas of heavy fuel loading to make the greatest impact with the least amount of effort.		This is a technical and regulated process and should be managed by professionals. Consult certified prescribed fire managers for further details.
MECHANICAL TREATMENTS				
Treatment Type	**Description**	**Best Utilized**	**Best Avoided**	**Considerations**
Mulching	Material is cut and ground by machinery, usually by an implement attached to tracked loaders or excavators.	In terrain that is viable with equipment. In areas of light to medium brush density and height. Could be useful in some aspen stands depending on the level of disturbance desired.	In steep or rocky terrain. In areas of heavy fuel loading that would leave thick layers of biomass behind. In the height of fire danger as the metal cutting heads can easily start fires.	Wash machinery before and after work on the project site to reduce the spread of noxious weeds. Monitor the finished product at the work site, biomass should be at ground level and mixed well with dirt for rapid decomposition. Rehabilitate areas of disturbed soil with native seed.
Mowing	Material is cut and ground by an implement pulled behind machinery.	In terrain that is viable with equipment. In grassy areas along roads or trails.	In steep or rocky terrain. In any fuels other than grass with occasional short brush. In the height of fire danger as the metal cutting heads can easily start fires.	Wash machinery before and after work on the project site to reduce the spread of noxious weeds.
Over-the-snow	Material is pulled or winched, dragged, and piled over the snow by sno-cats, resulting in little to no ground disturbance.	In areas around resort ski runs, roads and trails. In the springtime after closures but while the snow coverage is good for machines to ride on and drag material.	When there is too much or too little amounts of snow for efficient operations.	If timed right with site conditions, this method is very effective to minimize ground disturbance during equipment operations. Resort towns in particular have the right equipment and a unique application for this.

Harvesting	Material is felled and moved to access points by forestry equipment such as harvesters, skidders, and forwarders. In general logging equipment is not widely used in fuel reduction projects in this area.	In terrain that is operable and safe for equipment. When the objective is to remove the stems or whole trees. In some restoration work it could be useful to move large amounts of biomass off site or to central locations.	In project areas with no marketable timber resources or mills to take the material.	Wash machinery before and after work on the project site to reduce the spread of noxious weeds Rehabilitate areas of disturbed soil with erosion control and native seed.
PRESCRIBED FIRE (CONTROLLED BURNING)				
Treatment Type	**Description**	**Best Utilized**	**Best Avoided**	**Considerations**
Pile Burning	Burning pre-built piles under conditions that limit the fire spread potential to just the piled fuels.	In areas of heavy fuel loading to reduce large amounts of biomass on site. In areas with limited or no access for equipment	In areas sensitive to the smoke from burning. In areas of relatively short burn windows or lack of qualified resources.	This is a technical and regulated process and should be managed by professionals. Consult certified prescribed fire managers for further details. Pile burned areas can be reseeded to boost recovery.
Broadcast Burning	Burning pre-identified and prepared areas under conditions where you can manage the fire behavior to meet objectives. This is often completed in smaller sections at a time, and could be low or high intensity depending on objectives.	In aspen stands to reduce conifer and shrub encroachment. In conifer stands as a maintenance treatment. In areas that are well fragmented with roads, trails, or ski runs to burn small sections at a time.	In areas sensitive to the smoke from burning. In untreated areas that have heavy fuel loading and ladder fuels.	This is a technical and regulated process and should be managed by professionals. Consult certified prescribed fire managers for further details.
Kiln Burning	Burning cut and staged material in specific areas utilizing metal kilns to produce biochar. Biochar can be a valuable soil amendment for forest,	In areas with good access for equipment and a flat open area for kiln burning. In areas with good biomass options that are an ideal size for kiln burning.	In areas with no good site for biomass processing in kilns. In areas without a water source for quenching kilns.	This is a technical and regulated process and should be managed by professionals. Consult certified prescribed fire managers for further details.

	agriculture lands, compost, or gardens.	In areas where biochar is desired for uses.	In areas with no market or desire for biochar.	This process moves slowly and requires a lot of equipment and planning, thus not typically used as an efficient method to process large amounts of biomass. This procedure must have a good water source close by for the kiln quenching process.

Treatment Prescriptions

Different fuel types and fuel characteristics call for a different methodology and approach to what vegetation is desired to be removed or retained. Guidelines for this are called prescriptions, describing the project specifications, or "specs," are developed to describe the intended process and outcome. This common understanding is important between everyone associated with a project to be on the same page. Landowners, land managers, project managers and contractors typically agree on the specs and use them to judge the performance and success of the project.

In many areas, tree and shrub species intermingle and coexist. When performing fuel reduction or restoration work under these conditions, a survey of the area during the planning phase can determine what may be a priority species to remove or retain. Included here are five basic treatment specifications for the most common fuel types in CWRA project area. These are intended to be a starting point for project planning, but not comprehensive or site specific. Each work area deserves thorough surveys to align project objectives with site conditions.

- Conifer dominated
- Aspen dominated
- Hardwood shrub
- Sage/grass
- Mixed vegetation

Conifer

Description:

This fuel type is dominated by conifer tree species, and typically found on northwest- southeast slopes at mid to upper elevations. Prominent conifer species include white fir, subalpine fir, Douglas-fir and Engelmann spruce. Less common varieties include junipers, ponderosa pines and limber pines. Some aspen may be present in areas, and an assortment of understory shrubs are common as well. These areas are known to have increased tree mortality from recent surges in pests, particularly in true firs from the fir engraver beetle and balsam wooly adelgid. Having not seen natural fire or management activities in many decades, there is often a heavy load of dead and downed woody material on the forest floor or "jackstrawed" within tree canopies, adding to ladder fuels.

Figure 6-0-17. Conifers are typically found on northwest-southeast slopes.

Adjacent to structures:

- Firewise® Home Ignition Zone concepts should be used with few to no trees within 30 feet, and widely spaced trees (>10 feet) from 30-100 feet from the structure.

Away from structures:

- Remove dead and down woody debris to minimize fuel loading:
    - Prioritize the removal of down logs under 10 inches in diameter to reduce fine fuels. Some of these logs may be left for operational feasibility and other resource needs (e.g. soil cover). Larger logs left in place should be bucked to lay flat on the ground.
- Cut dead standing and other identified hazard trees, prioritizing areas near any trails, roads, or other infrastructure for public safety.
    - Hazard tree cleanup would follow specifications for downed woody debris.
    - Retain large (greater than 10 inches in diameter) dead standing trees away from roads, trails, buildings/houses, and other improvements to provide habitat for wildlife.
- Thin conifer regeneration to increase spacing between stems.
    - Retain species by priority (most to least desirable): healthy aspen, Douglas fir, white fir. As a rule, leave the healthiest trees first as exact spacing is not the desired outcome.
- Remove conifer regeneration <5 inches dbh under drip lines of larger trees adding to ladder fuels.
- Limb up the lower bole of live trees 6 feet, leaving a minimum of 30% of live crown ratio.
- Reduce understory hardwood shrubs by clearing around conifer drip lines and targeting ladder fuels.

Aspen

Description:

This fuel type is dominated primarily by aspen trees, and can be found on almost all slopes from low to mid elevations. While this species likes to grow together in communities, they thrive off of periodic disturbances. This was usually accomplished by fires, wind events, or beaver activity. With fewer disturbances in recent times, many aspen stands have become encroached by conifer trees, which then grow to outcompete the aspens and change the composition and resiliency of the forest. Aspen stands can also see the encroachment effects of brush species, which can dominate the forest floor and reduce the stands' ability to nurture young trees. With recent forest health impacts to aspens, there can be a heavy presence of dead standing and dead fallen trees within the stand.

Adjacent to structures:

- Live aspens should be evaluated for root rot, heavy leans or growth structures that could make them hazardous and removed if found.
    - Prioritize retaining younger aspens near structures, as these tend to be less hazardous.

Figure 6-0-18. Before and after aspen restoration treatments (Park City, UT)

Away from structures:

- Cut dead standing and other identified hazard trees within 2 times the tree height around trails, roads, or other infrastructure for public safety.
- Remove 80 percent of dead and downed material to increase the suckering potential of aspen.
    - 20 percent of dead and down aspen can be retained for moisture retention and soil stability.
- Remove all conifer trees growing in the understory and mid-story layers of aspen stands under the drip lines.
- Remove 80 percent of the understory consisting of hardwood shrubs, preserving any aspen regeneration.
- Cutting occasional live aspens can be done, as this can serve to stimulate the stand.

Hardwood Shrub

Description:

This fuel type is dominated by a variety of hardwood shrubs, and can be found on most slopes from low to mid elevations. Species can include a mix of Gambel oak, canyon maple, serviceberry, chokecherry, ninebark, mountain mahogany, snowberry and others in fewer quantities. Older stands can be managed to maintain a canopy overstory, while in other areas the brush may be too young and dense with stems. Most of these varieties resprout vigorously after being cut, leading to the need for retreatments in future years to maintain fuel reduction effects. Some areas have benefited from the use of herbicides to control resprouting. Prioritization of species is common in this fuel type, favoring mature maple, oak, and mahogany, as these typically provide more canopy and have proven to be more resilient.

Adjacent to structures:

- Firewise® Home Ignition Zone concepts should be used with limited brush within 30 feet, and small pockets allowed from 30-100 feet from the structure.

Figure 6-0-19. Pre- and post-hardwood shrub fuel reduction adjacent to a structure (Park City, UT).

Away from structures:

- Brush should be thinned allowing for a few older-growth clumps of 5-10 trees to remain, serving as a shaded fuel break.
    - Clumps should be isolated from other clumps to create canopy gaps.
    - Limb brush clumps to a height of 3-4 feet to raise canopy base height.
- Dead and downed material, understory vegetation and branches serving as ladder fuels should be removed.
- Maintenance treatments will need to be applied every 3 to 5 years at a minimum to address sprouting response.

Sage and Grass

Description:

This fuel type is dominated by varieties of sagebrush and grasses, and is typically found on western-southern-eastern facing slopes at lower, middle and upper elevations. It can be a fairly continuous bed of vegetation or broken up significantly by rock, scree and dirt. Some areas can see sagebrush encroachment by other brush species, such as Gambel oak, which can take over and outcompete the sagebrush. Some areas may actually see some juniper trees interspersed. In general, overall fuel loading is much lighter when compared with other forested or brushy areas. Management options in this fuel type are somewhat limited, with mechanical methods like mulching and mowing being the most common. The presence of invasive and noxious weeds in the area could spread rapidly post treatment and must be considered.

Adjacent to structures:

- Firewise® Home Ignition Zone concepts should be used with limited brush within 30 feet, and small pockets allowed from 30-100 feet from the structure.
    - Grass should be mowed within 30 feet of structures.

In other locations:

- Mulching and mowing along roadways or in mosaic patterns can be performed to reduce overall fuel loading.
    - Reseed disturbed areas with native grass and forbs to reduce undesired weed invasions.
- Thinning of brush is possible in some areas to reduce overall fuel loading, prioritizing to retain healthy sagebrush of all age classes.

Mixed Vegetation

Description:

Some forested areas present as a mixture of the previously mentioned fuel types, in which case guiding principles from the specifications above can be implemented. Through the study of forests, wildfires and the ecological processes of the local area we can begin to understand fire behavior, health trends, drought tolerance and other factors. These concepts serve to drive the prioritization of species to remove or retain when conducting fuel treatments. Listed below are some prioritization strategies that could be used.

Figure 6-0-20. Fuel reduction treatments applied to mixed vegetation fuel types containing aspen, other hardwood shrub, and conifer (Park City, UT).

In all areas:

- Retain healthy aspens and create room for them within the stand overstory and understory.
    - Reduce encroachment in and around pockets of aspens, over individual aspen trees that are spread out.

In all conifer areas:

- Retain Douglas-fir over every other conifer. Retain white fir or Engelmann spruce over subalpine fir.
- In general, retain larger and healthier conifers over smaller and suppressed.

In areas of hardwoods and brush:

- Retain canyon maple, sagebrush and mountain mahogany over other species.

- In general, retain taller overstory vegetation that is providing shade in clumps, and thinning by removing understory and ladder fuels.

Resources

Utah Department of Natural Resources, Forestry, Fire, and State Lands: The Utah Department of Natural Resources is one of the state's largest agencies. It helps ensure the quality of life of Utah residents by managing and protecting the state's natural resources. This site has extensive links to aspects of forestry, wildfire, and key contacts. (ffsl.utah.gov)

Utah State University Forestry Extension: Utah State University Extension provides research-based programs and resources with the goal of improving the lives of individuals, families and communities throughout Utah. USU Extension operates through a cooperative agreement between the United States Department of Agriculture, Utah State University, and county governments. (extension.usu.edu/forestry)

Utah Biomass Resources Group: The mission of the Utah Biomass Resources Group (UBRG) is to assist in building a sustainable biomass utilization industry in Utah. Sustainable biomass industries aid in promoting forest health, watershed protection, renewable resource utilization, and rural job development. (www.usu.edu/ubrg)

Utah Prescribed Fire Council: The mission of the Utah Prescribed Fire Council is to serve as a forum for prescribed fire practitioners at all levels of government, academic institutions, tribes, coalitions, and interested individuals. This Council will work collaboratively to promote, protect, conserve, and expand the responsible use of fire across Utah's landscape to meet both private and public land management objectives. (extension.usu.edu/forestry/utah-prescribed-fire-council/who-we-are)

Utah Smoke Management: This is a portal for Federal and state land managers conducting prescribed fire in Utah to enter the details of their planned burns. Other landowners/managers not covered under agricultural or general burning may also participate. (smokemgt.utah.gov)

Utah State Historic Preservation Office: SHPO is a state agency that is tasked with preserving Utah's archaeological past. They maintain archeological records, ensure compliance with a number of federal and state laws, and oversee historic preservation of structures and sites. (ushpo.utah.gov)

Rocky Mountain Research Station: The Rocky Mountain Research Station (RMRS) is an integral component of USDA Forest Service Research and Development (R&D). RMRS researchers work in a range of biological, physical and social science fields to promote sustainable management of the Nation's diverse forests and rangelands. (www.fs.usda.gov/research/rmrs)

National Fire Protection Association Firewise® USA program: The national Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. (www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA)

Fire Adapted Learning Network: This organization exists to support and connect people and communities working on wildfire resilience. It offers community-based leaders resources, tools and connections to reduce their wildfire risk and increase community resilience. (fireadaptednetwork.org)

Glossary of Terminology

Canopy cover - The proportion of ground or water covered by a vertical projection of the outermost perimeter of the natural spread of foliage or plants, including small openings within the canopy. Total canopy cover can exceed 100 percent because of layering of different vegetation layers or strata.

Canopy gaps - The space occurring in forest stands. Can be created by tree mortality, blowdown or fuel treatment activities.

Clumps - A group of generally dense trees.

Communities (vegetation) - An assemblage of plants living together and occupying a given area.

Diameter - The diameter (circumference usually expressed in inches) of the stem of a tree measured at 4.5 feet from the ground.

Disturbance (fire, insects, pathogens, wind, etc.) - Any relatively discrete event in time that disrupts ecosystem, community or population structure and changes resources, substrate availability or the physical environment.

Dripline - The line extending vertically from the exterior edge of a tree's live crown to the ground.

Encroachment (e.g., by conifers) - Commonly refers to the gradual ingrowth of conifer (evergreen) trees that are able to grow in aspen stands, meadows or other areas without conifers due to the lack of disturbance such as fire.

Entry - A specific time period in which vegetation treatment activities take place by manual or mechanical methods. There may be multiple, separate periods in which treatment activities are initiated.

Forest density - The size of a population in relation to some unit of space, e.g., the number of trees per acre.

Forest health - The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease and resilience to disturbance. These perceptions are influenced by individual and cultural viewpoints, land management objectives, spatial and temporal scales, and the relative health of the forest at a certain point in time.

Fuels reduction - The removal of wildland fuels to reduce the likelihood of ignition and spread, potential resource damage and/or resistance to control. Includes terms such as thinning, pruning or limbing, lopping, chipping, crushing, piling and burning.

Forest restoration - The process of returning ecosystems or habitats to their original structure and species composition.

Forest structure - The horizontal and vertical distribution of components of a forest stand including the height, diameter, crown layers and stems of trees, shrubs, herbaceous understory, songs and down woody debris.

Fuel type - An identifiable association of wildland fuel elements of distinctive species, form, size, arrangement or other characteristics that lead to a projected rate of spread and/or resistance to control

under specified weather conditions; can be divided into activity levels generated by management versus natural fuels, fine versus heavy (coarse) fuels and whether they are aerial, ground, ladder or surface fuels.

Live crown ratio - The ratio of crown length to total tree height.

Ladder fuel - Combustible materials that provide vertical continuity between surface fuels and vegetation above. This allows fire to climb into the crowns of trees or shrubs with relative ease.

Limbing - The removal of live or dead branches on the lower stem of the tree.

Georeferenced images - When an image is tied to a known coordinate, allowing for spatial calculations to determine geo-locations of objects within the image to known points on Earth.

Ground roughness - A measure of ruggedness, or surface irregularity, across a digital surface model representing real world conditions; often increased by the rocky terrain or robust ground vegetation.

Hazard tree - Trees that are identified as a potential risk, for failure that would cause injury to a person or damage property.

Interacting hazards - When the possibility of multiple natural hazards exists and the occurrence of a primary natural hazard may trigger and/or affect the frequency or magnitude of another secondary hazard.

Land use/landowner/land manager (management) objectives - A concise, time-specific statement of measurable planned results that correspond to pre-established goals in achieving a desired outcome. It commonly includes information on resources to be used, forms the basis for further planning to define the precise steps to be taken and the resources to be used and assigned responsibility in achieving the identified goals.

Maintenance treatment (related to “entry”) - Treatments that are planned after initial treatments are completed in order to maintain some desired vegetation condition.

Potential release areas (PRAs) - Spatially continuous areas of a slope where terrain characteristics, vegetation and snow supply all combine to allow for the release of snow avalanches (i.e., the full possible spatial extent of an avalanche path “start zone”).

Prescription - A document that describes how vegetation will be changed to meet resource or fuels management objectives. This includes specifications on what will be removed or retained.

Project activities - The description of management objectives, actions and projects to implement decisions of the resource management plan or other planning documents. An activity plan is usually prepared for one or more resources in a specific area.

Regeneration - The established progeny (offspring) from a parent plant e.g., seedlings and saplings.

Runout zones - The area of an avalanche path where debris from large (relative) avalanches will begin to decelerate and be deposited.

Snag - A standing dead tree.

Sprouting response - Generally, when shoots arise from the base of a woody plant.

Thinning - A treatment that reduces the density of trees.

Treatment type or method - How fuel treatment objectives are achieved by activities such as, but not limited to: thinning, burning, mowing or brush cutting, among others.

UAV orthomosaic imagery - Aerial imagery derived from the use of unmanned aerial vehicles (UAV) by assembling a number of georeferenced photographs into a single, composite orthoimage.

Vegetation distribution - The patterns of where plant species grow.

Vegetation type - A category of forest and non-forest (e.g., grasses, shrubs) areas usually defined by its vegetation, particularly its dominant vegetation. It is based on the percentage of cover of trees, shrubs or grasses.

Project Planning Template

See sample project planning template below.

Example Work Plan for Fuel Treatments

Project Name:

Year:

General Information Include relevant information about who is involved in planning and implementation and who needs to know about it.	
Project Manager:	
Project Manager Contact:	
Land Ownership(s):	
Landowner(s) Contact:	
Project Partners:	
Public Outreach:	
Project Information Provide an overview of the project. Describe when and where work will take place.	
Project Summary:	
Location(s):	
Objective(s):	
Total Acres:	
Project Timeline:	
Resource Considerations Determine the animal, plant, and other natural resources that need protection and require mitigation activities.	
Endangered, Threatened, or Sensitive Animal or Plant Species:	

Limited Operating Periods:	
Water Resources:	
Soils:	
Avalanche Potential Release Areas:	
Cultural / Historical:	
Scenery/Aesthetics	
Noxious Weeds:	
Other	
Vegetation Describe the types of vegetation within the project area, and how they will be treated to meet landowner objectives.	
Vegetation Type(s):	
Elevation:	
Aspect:	
Slope:	
Treatment Method(s):	
Equipment and Labor Needs:	
Treatment Specifications:	
Other	
Operational Plan Strategize how the work will be completed following laws, property lines, and safety considerations.	
Operation Summary:	

Boundary Marking:	
Road or Trail Closures:	
Notifications:	
Permitting:	
Laws/Ordinances:	
Wildfire Response:	
Other	
Project Maps Visual representations of where work will be done, the resources to be protected, and logistics for equipment.	
Vegetation	
Resources	
Treatment Areas	
Operations	
Other	
Author / Contributor / Reviewer	
Completed By:	
Reviewed By:	

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MEMORANDUM

LICENSED PROFESSIONAL ENGINEER
NO. 295699
RYAN R. HALES
03/15/2021
STATE OF UTAH

Date: March 15, 2021

To: Washington School House, LLC

From: Hales Engineering

Subject: Washington School House Inn Parking Study

UT21-1830

This memorandum discusses the parking study completed for the Washington School House Inn in Park City, Utah. The study identifies the parking supply included in the site plan, the parking supply rates required by the City and parking demand rates identified by the Institute of Transportation Engineers (ITE). A discussion of the anticipated parking demand for special events on the property is also included.

Project Description

The Washington School House is located at 543 Park Avenue. A vicinity map of the project site is shown in Figure 1, and a full site plan is found in Appendix A. The Washington School House operates as a boutique bed and breakfast. It serves a limited number of guests that seek a small, private, and exclusive destination. The Washington School House has been recognized in the media, including Travel + Leisure, as a destination draw for Park City.

The owners of the property applied for a conditional use permit to change the Washington School House's current operations as a Bed and Breakfast Inn to a Hotel Minor land use under Park City code. The hotel will have 12 rooms. The property site plan identifies a total of 12 stalls (11 stalls located in a lot across Park Avenue and authorized by easement and 1 parking stall planned for the west end of the property on Woodside Avenue). A driveway on the property offers 2 additional stalls that do not meet the City's off-street parking dimensions.

Figure 1: Site vicinity map of the project in Park City, Utah

Park City Parking Code

The Park City code specifies parking rates for various land use types. According to section 15-3-6B of the code, the City requires "1 space per room or suite, and one space per 200 sf of separately leasable commercial space." This property doesn't include any separately leasable commercial space. Based on these requirements, the Washington School House is required to provide a total of 12 off-street parking spaces. This requirement will be met with the 11 current off-street parking spaces and the 1 proposed parking space.

ITE Parking Demand Rates

While the planned usage of the Washington School House is unique and smaller than a typical hotel, it is comparable to the Institute of Transportation Engineers (ITE), *Parking Generation*, 5th Edition, 2019, business hotel land use. The average parking demand rate for a business hotel (ITE land use 312 is 0.72 parking stalls per hotel room, with an 85th percentile demand rate of 0.83 stalls per room and a maximum observed rate of 0.85 parking stalls per room. This is based on 11 study sites across the United States since the year 1980, with an average parking supply of 1.1 spaces per room. The number of stalls needed based on each of these rates for the proposed project is shown in Table 1.

Table 1: ITE Parking Generation

Park City - Washington School House Inn ITE Parking Generation (LU 312)		
Rate Type	Rate (stalls/dwelling unit)	Stalls
Average	0.72	9
85th Percentile	0.83	10
Maximum	0.85	11

ITE Parking Generation, 5th Edition, 2019

Source: Hales Engineering, February 2021

It is typically recommended that the parking demand be increased by 10% to provide an adequate parking supply for the property. If the 85th percentile parking demand of 10 stalls is used, then a parking supply of 11 stalls is advisable. A summary of the parking rates from the existing site plan, the Park City code, and ITE data can be found in Table 2.

Table 2: Parking Rate Comparison

Park City - Washington School House Inn Parking Rate Comparison		
Source	Rate (stalls / room)	# of Stalls
Park City Parking Code	1.00	12
ITE 85th Percentile Parking Demand	0.83	10
Existing Site Parking (off-street)	1.00	12

ITE Parking Generation, 5th Edition, 2019

1. Two driveway parking spaces exist and have not been included in these numbers

Source: Hales Engineering, February 2021

The proposed site plan, which includes 12 off-street parking spaces, exceeds the recommended ITE parking supply. Moreover, the property owner reports, based on experience with the bed and breakfast, that only about 25% of guests require parking during their stay. This results in use of about 3 of the available parking spaces. The remaining guests arrive via transit, ridesharing services, or private transportation services and use these same services during their stay. Guests using transportation services are picked up and dropped off in a pull out located in front of the Washington School House.

Special Events

The Hotel (Minor) land use would allow the Washington School House to host small, private events. These special events are anticipated to include small corporate retreats, and small, private celebrations for weddings or other milestone events.

The property owners have indicated that no more than 60 guests would be permitted on the property for special events. This is due to the private, exclusive nature of the property and the small nature of the gathering spaces. This number includes up to 34 overnight guests (which is the Washington School House's full occupancy, based on sleeping areas available in the 12 guest rooms). The balance of special event guests would arrive from offsite.

As described above, the property owner stated that most overnight guests utilize ridesharing services for transportation to and from the Washington School House. Approximately 25% of overnight guests bring their own vehicles and require parking. If 25% of the overnight guests use parking spaces, then only 3 of the 12 spaces on the property are being used by these guests. That leaves more than adequate parking capacity for non-overnight, special event guests (estimated at 26 for special events when the Washington School House is completely rented out), the majority of which will also likely use ridesharing or other transportation services. Guests arriving by rideshare, or other transportation service, will be picked up and dropped off in the pull out in front of the Washington School House. The Washington School House will manage parking during special events through use of a valet service.

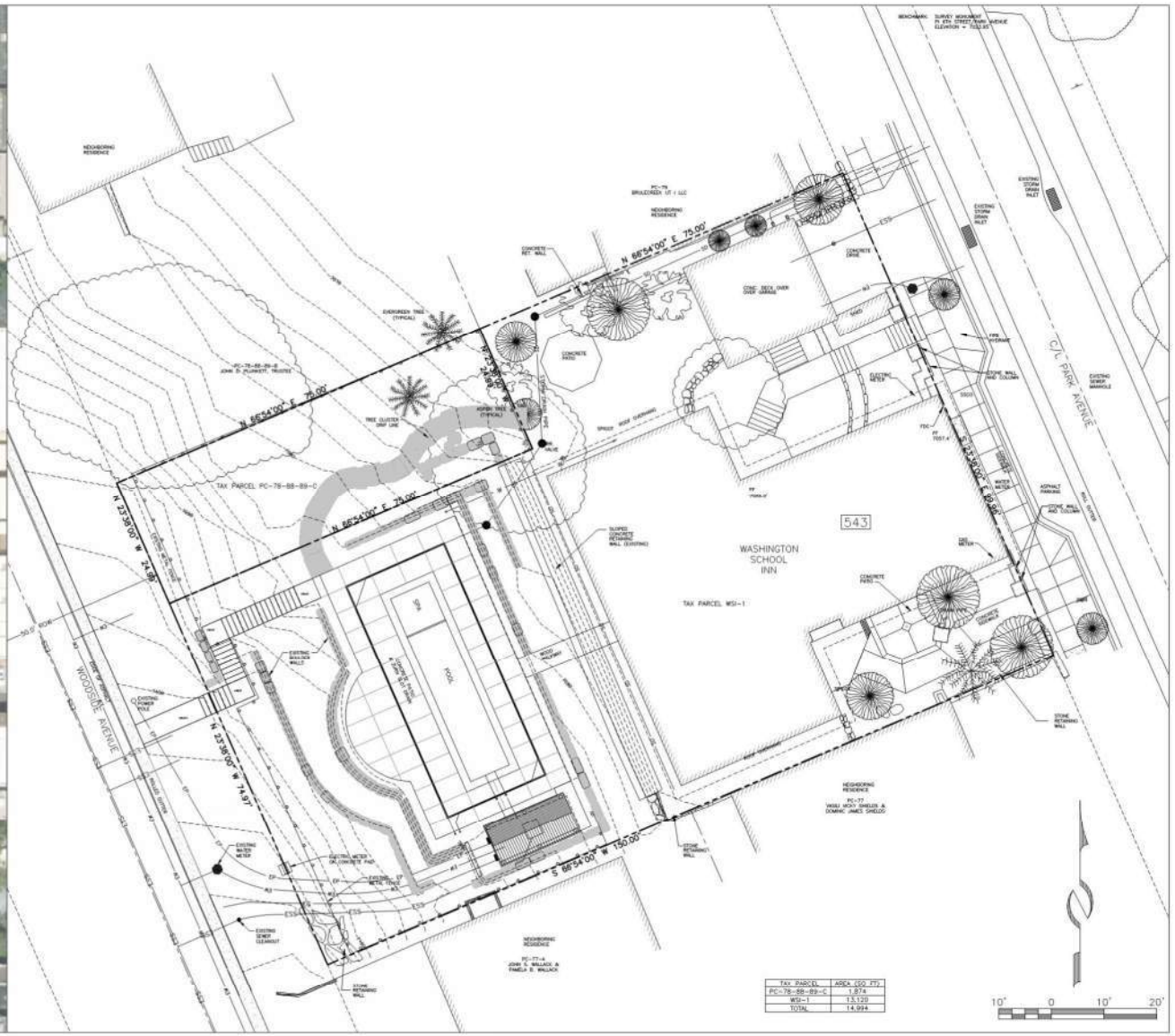
Conclusions and Recommendations

Hales Engineering makes the following conclusions for parking at the proposed Washington School House Hotel in Park City, Utah:

- The proposed site plan for the Washington School House Hotel identifies a total of 12 off-street parking spaces, with 2 additional spaces available in the driveway at the property. This equals a parking supply of 1 parking space per room.
- Section 15-3-6B of the Park City code would require 12 parking spaces for the Washington School House property under the "Hotel (minor)" land use. This translates to a parking supply rate of 1.0 parking space per room.
- The ITE 85th percentile parking demand rate for a business hotel is 0.83 parking stalls per room, translating to 10 parking stalls. With a 10% increase to parking demand, a parking supply of 11 parking stalls is recommended.
    - <u>The current site plan meets the number of parking spaces required in the Park City code and exceeds the number recommended by the ITE data.</u>
    - <u>Based on past parking usage at the property, overnight guests will only use approximately 3 of the 12 available spots.</u>
- The Washington School House is a small, private, exclusive destination that is meant to provide a high level of service to a limited number of guests. It may host small, private, special events under the new "Hotel (minor)" land use.
    - The events will largely cater to overnight guests, with a limited number of additional special event guests who are not staying at the Hotel.
    - Based on past experience, most guests at the Hotel will use ridesharing services and do not require on-site parking. <u>It is not anticipated that parking demand will exceed the 12 supplied parking spaces during special events.</u>

APPENDIX A

Site Plan



TAX PARCEL	AREA (SQ. FT.)
PC-78-88-89-C	1,874
WSI-1	13,120
TOTAL	14,994

(435) 649-9467

CONSULTING ENGINEERS · LAND PLANNERS · SURVEYORS

STAFF: MICHAEL DEMKOWICZ, RYAN BETZ

DATE: 2/12/20

2020 EXISTING CONDITIONS & VICINITY
543 PARK AVENUE
WASHINGTON SCHOOL INN

FOR: TRIP BENNETT
JOB NO.: 20-7-17
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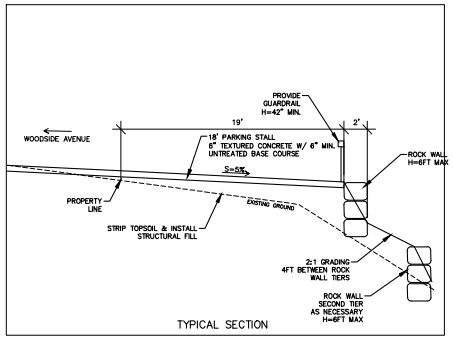
SHEET 1 OF 2



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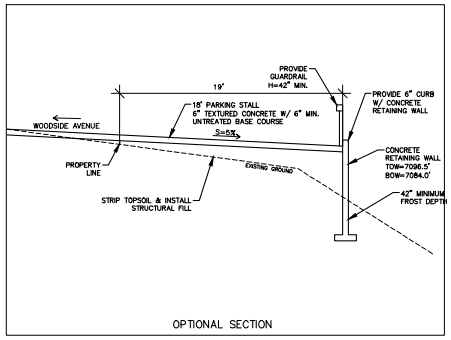

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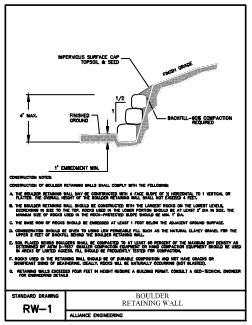
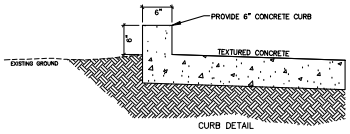
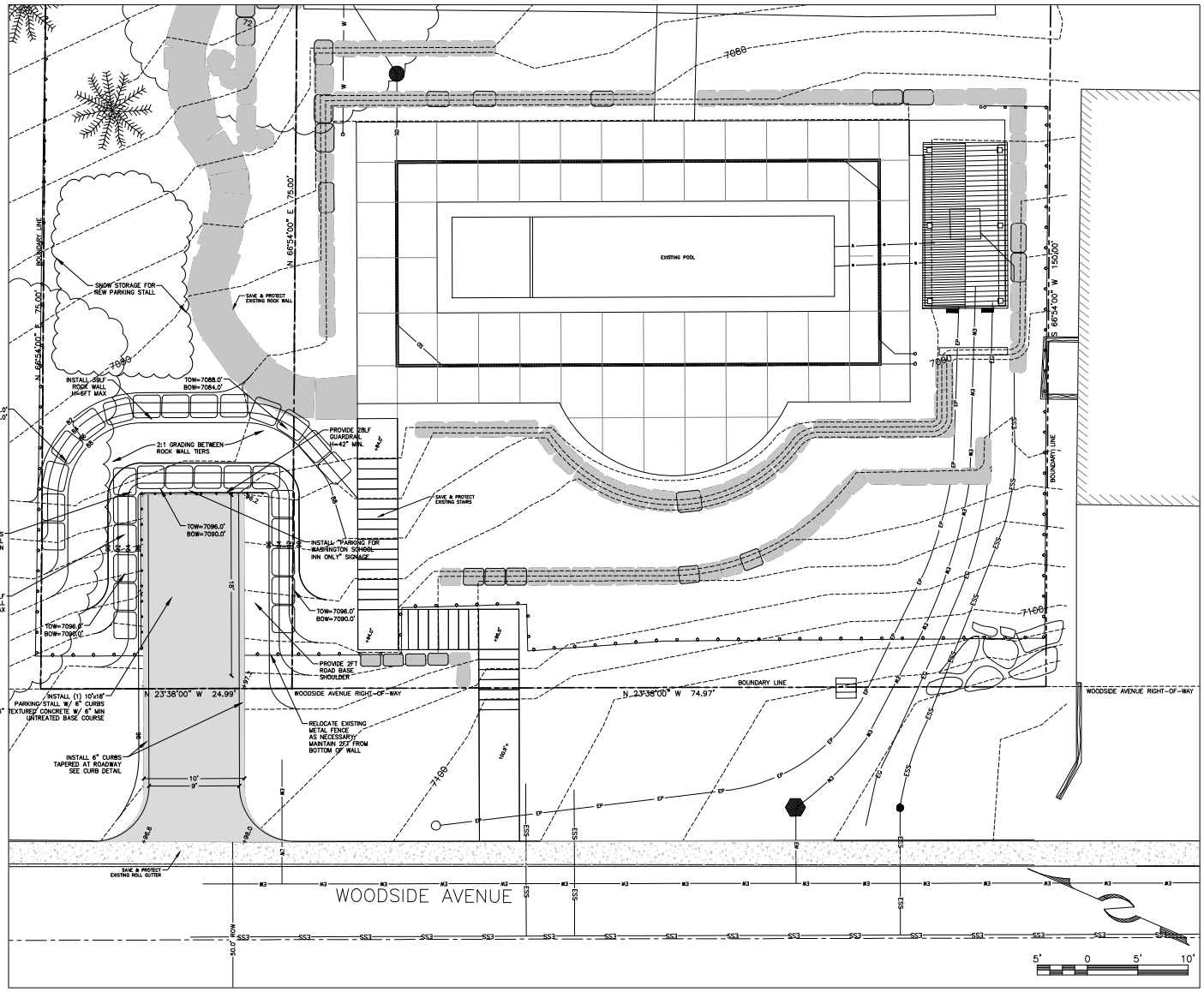




CURB DETAIL

DETAILS



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Alliance Engineering Inc

CONSULTING ENGINEERS LAND PLANNERS SURVEYORS

323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

STAFF:
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RYAN BETZ

DATE: 2/12/20

2020 IMPROVEMENTS
543 PARK AVENUE
WASHINGTON SCHOOL INN

FOR: TRIP BENNETT
JOB NO.: 20-7-17
FILE: X:\ParkCitySurvey\dwg\7-4-10\2017 improvements\WSI-civil.dwg

SHEET 2 OF 2