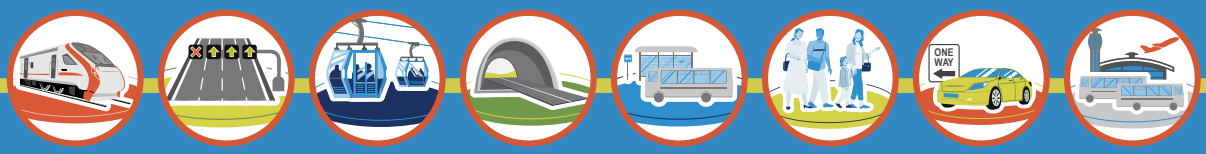
EMERGING DISRUPTORS:
Future Of Transportation



PARK CITY, UTAH

PARK CITY 1884

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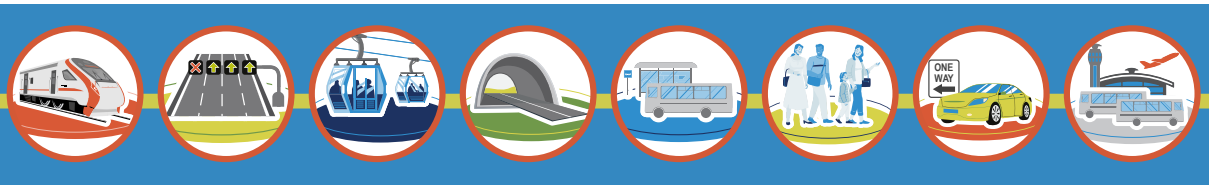

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Expect More. Experience Better.

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EXECUTIVE SUMMARY

The Park City Emerging Disruptors Study assesses and screens transformative transportation solutions through the assistance of a Stakeholder Committee.

At the March 31, 2022, City Council meeting, an initial "disruptive ideas list" was presented in response to growing community calls for innovation in our transportation systems and infrastructure.

In May 2023, Mayor Worel convened a Stakeholder Committee to assess and screen the transformative transportation solutions. This report contains background information, recommendations, and direction for future evaluation.

The Stakeholders ranked and selected eight topics from a list of seventeen to hold individual workshops. **Table E-1** summarizes the Stakeholder Committee recommendations and proposed next steps to advance the potential concepts.

Table E1 – Emerging Disruptors Recommendations and Next Steps Summary

DISRUPTOR	STAKEHOLDER COMMITTEE RECOMMENDATION	NEXT STEPS
PRIORITY TRANSPORTATION TOPICS		
SLC AIRPORT CONNECTION 	***Supported***, if strategic partners are included and there is a plan for first/last mile connections	» Park City-led effort to engage airport and airlines to gauge interest
AERIAL GONDOLA 	***Supported***, if reduces travel time over vehicles and provides new entry points into town	» Park City-led review of potential locations and routes with a competitive advantage over existing travel corridors
UNDERGROUND TRANSPORTATION TUNNELS 	***Supported***, pending feasibility studies	» The Boring Company (TBC) or other provider conducts feasibility analysis with a social equity parameter » Discussion with communities that have a tunnel system
COORDINATION WITH REGIONAL PARTNERS		
DEDICATED BUS LANES 	***Supported***, if existing lanes are repurposed and minimal ROW acquisition or roadway expansion is required	» Engage regional partners (UDOT/HVT) to explore opportunities to repurpose travel lanes to transit-only lanes/shoulders
REVERSIBLE FLEX LANES 	***Supported***, if analysis shows increased capacity and reduced congestion; and if it does not require roadway expansion or new ROW	» Engage regional partners (UDOT) to conduct a feasibility study of potential corridor(s)
PASSENGER RAIL 	***Conditionally Supported***, as a regional Wasatch Back service with UDOT, MPOs, and HVT/UTA leadership. ***Not supported*** as an internal-only rail system	» Support coordinated regional efforts to evaluate interest, conduct preliminary screening analysis (logical termini and ridership evaluation)
LOWER TRANSPORTATION PRIORITIES		
VEHICLE-FREE ZONES 	***Supported***, as an economic development/ placemaking project	» Support Park City departments to conduct feasibility and concept study of Main Street; determine if infrastructure changes are needed; Assess applicability to other locations
ONE-WAY LOOP 	***Not Supported***	» Consider elements or pilot in winter temporary operations, but do not support year-round implementation

1. INTRODUCTION

1. INTRODUCTION

Park City has a rich history of exploration and innovation. Its history spans the mining boom of the nineteenth century, the subsequent decline in the mid-twentieth century, and its transformation into a premier year-round recreation destination. In the early 2000s, the city experienced substantial growth, particularly catalyzed by the success of the 2002 Winter Olympics. Today, Park City is home to more than 8,500 residents who cherish its small-town charm and historic character. Simultaneously, it exists as a premier travel destination, drawing over 3 million annual visitors who enjoy snow sports in the winter, cool mountain ambiance in the summer, and a vibrant cultural scene throughout the year.

The Park City General Plan accurately describes Park City's success as based on "both its geographic gifts and its inventive population; a people that know that the natural gifts present in and around this town are its most valuable resource."

While Park City's growth has resulted in economic success, it has also brought urban-style problems and issues – particularly heavy congestion during peak winter season. Previous planning efforts have recognized that business as usual will no longer work. Park City Forward-A Transportation Blueprint, the city's long-range transportation plan, recognized that travel to Park City has created unique challenges for the local transportation system. To address this, new, bold, and innovative solutions will be essential. Park City Forward established six guiding principles to improve transportation mobility to, from, and around Park City:

- Develop a Park Once community
- Collaborate with regional partners on long-range transportation solutions
- Identify, manage, and mitigate traffic during peak conditions
- Expand our world class biking and walking infrastructure
- **Proactively review and analyze disruptive transportation and transit ideas and innovation**
- Continue to develop and improve the internal Park City Transit system

Building upon Park City Forward, Park City Municipal Corporation Transportation Planning Department initiated the Emerging Disruptors: Future of Transportation Study to identify and screen a set of transportation investments, "disruptors," that, if implemented, would alter the way people travel to and around Park City. The study followed the process as illustrated in **Figure 1.**

Figure 1 – Project Process

1.1. Emerging Disruptors

Emerging Disruptors are project concepts that are expensive and controversial and require local and regional collaboration and partnership to implement. Disruptors are beyond the typical projects that would be considered by Park City through annual capital planning or within a cost-constrained long-range transportation plan.

1.2. Purpose

The purposes the *Emerging Disruptors: Future of Transportation Study* are:

- Identify future and emerging "disruptor" technologies (5-10+ years) with the potential to reduce congestion.
- Identify opportunities, challenges, gaps, constraints, costs, and right-of-way (ROW) needs related to the disruptors.
- Recommend next steps to guide Park City's preparation to implement the disruptors.

1.3. Objectives

The objectives of the emerging disruptors study includes:

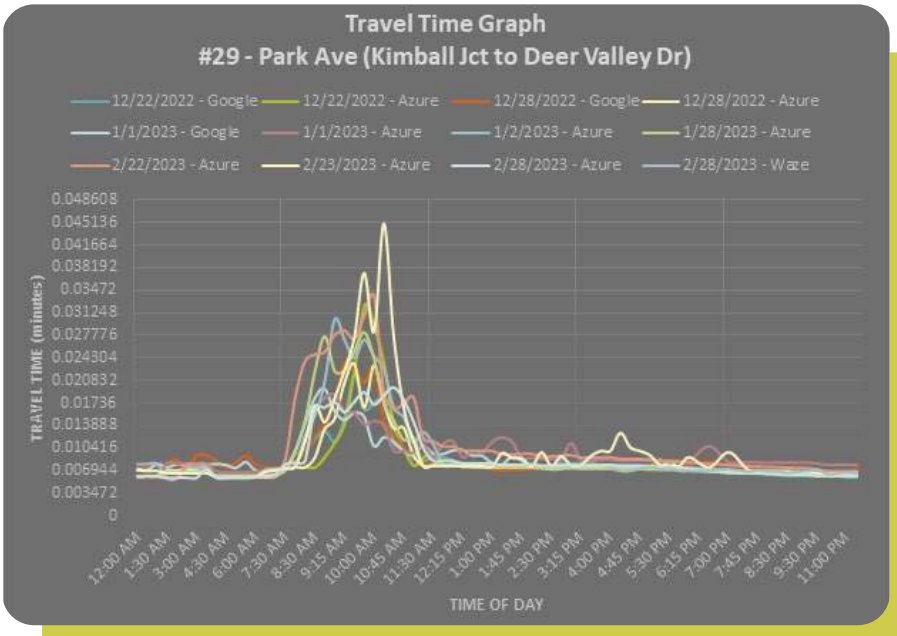
- Summarize existing transportation system needs that could be served by emerging technologies.
- Screen strategies that have the potential to improve mobility, reduce single-occupancy vehicle utilization, and enhance transit.
- Identify opportunities or contexts in which the disruptors could be implemented.
- Assess challenges and constraints, land use, and ROW needs.
- Propose recommendations for Park City to support emerging transportation disruptors.
- Identify barriers marginalized communities may experience that prevent their ability to benefit from technology-based solutions.

1.4. Current Conditions

Park City's growth and economic success has brought heavy congestion during peak winter season. This congestion is experienced by residents, daily commuters, and visitors.

Previous analysis have shown that over 70% of year-round employees in Park City live outside of the city. Studies identified that over 4,300 people commute from the Wasatch Front to Park City each day, while 2,500 persons per day commute from Kimball Junction/ Snyderville to Park City. During the peak winter season, annually, Park City area resorts accommodated nearly 2 million ski-days, an increase from 1.3 million in the year 2000.[1] Park City accounts for over 40% of the ski industry mark share within Utah. Those traveling to and from Park City, including from the Wasatch Front, are reliant on I-80 and SR 224. On a typical day, the trip from Kimball Junction to Deer Valley Drive takes about 15 minutes. However, on peak snow days, this same trip can take over an hour as shown in **Figure 2**.

Figure 2 – Top-10 Days with Longest Travel Time, Kimball Junction to Old Town, November 2022-December 2023



Source: Traction Travel, November 1 2022 to March 1, 2023

[1] *Ski Utah and Park City Chamber Bureau, https://assets.simpleviewinc.com/simpleview/image/upload/v1/clients/parkcity/ECONOMIC_PROFILE_Tourism_2018_FINAL_updated8_18_2019_30b61d60-41e3-41f4-b522-be4697882623.pdf*

The primary purpose of the Emerging Disruptors Study is to identify concepts that encourage use of alternative transportation modes to travel to and from Park City and reduce the frequency of high-travel time days particularly during the peak winter season.

1.5. Stakeholder Committee

In May 2023, Mayor Worel convened a Stakeholder Committee to assess and screen the transformative transportation solutions. Stakeholder committee members represented diverse industry experience, including those with careers in transit, tourism, technology, airlines, and logistics. This report contains background information, recommendations, and direction for future evaluation.

Stakeholder Committee member were:

- Caroline Rodriguez, High Valley Transit
- Casey Christ, Park City Resident
- Christine Hesse, Park City Resident
- Henry Sigg, Park City Planning Commission
- Herve Lavenant, Park City Resident
- Josh Finken, Park City Resident
- Peter Tomai, Park City Resident
- Steven Yevoli, Park City Resident
- Tarra McDonald, Park City Mountain
- Victoria Schlaepfer, Deer Valley

Stakeholders was supported by Park City staff:

- Hannah Pack, Project Manager, Park City Transportation Planning
- Alex Roy, Park City Transportation Planning
- Sarah Pearce, Park City Deputy City Manager

2. EMERGING TRANSPORTATION DISRUPTORS

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Concepts evaluated as Emerging Transportation Disruptors were identified from three sources:

- City Council Discussion of Transportation Critical Priorities, March 31, 2022
- Park City Forward – A Comprehensive Transportation Blueprint, September 2022
- Park City Transportation Planning Department Staff

2.1. City Council, Discussion of Critical Priorities

On March 31, 2022, the Transportation Department presented an initial list of emerging transportation disruptors to City Council as part of a discussion of Council priorities.

The initial list contained 16 potential "disruptive ideas."[2]

1. SR 248 jurisdictional transfer (from UDOT), reversible lanes, widening
2. New/additional in-town parking garage
3. Pedestrianize Main Street
4. Gordo as a Park & Ride
5. Use of Alternative Access points – Guardsman and Deer Crest
6. One-way Loop - Bonanza, 248, Park Ave, Deer Valley Drive
7. Staggered start times for work, school, and play
8. Required parking reservations for event and resort visitors
9. Paid parking for events and resorts
10. Rail Trail expansion for transit or aerial
11. Airport lounge partnership with the business community – transportation to Park City
12. Tesla tunnel & autonomous vehicle to aerial
13. Regional public transportation solutions between Wasatch Front and Park City
14. Drone deliveries
15. Construction vehicle and delivery restrictions
16. Congestion pricing – toll roads at peak times

City Council recommended Transportation pursue these ideas and determine if they could help achieve the City's transportation goals.

[2] https://d3n9y02raazwpg.cloudfront.net/parkcity/2d805d1d-41a6-11ec-a798-0050569183fa-01133467-6d34-44a8-a801-0746aa501208-1648510245.pdf

2.2. Park City Forward, A Comprehensive Transportation Blueprint

Park City Forward, completed in 2022, is the City's long-range transportation plan. Park City Forward presents a vision for improved transportation and mobility for a 30-year planning horizon. Recommendations are organized into the following categories:

- Phase 1 Priority Projects – fiscally-constrained, near-term action
- Big Concept Projects – transformative projects that are actively developing or planned to seriously pursue in the near-term
- Vision Projects – long-term package of investments to guide decision-makers and staff moving forward

The Emerging Disruptors Study included Park City Forward's "Big Concept Projects" (**Table 1**) among concepts evaluated and considered by the Stakeholder Committee.

Table 1 – Projects from Park City Forward (2022) Long-Range Transportation Plan

PROJECT ID	NAME	DESCRIPTION
BIG CONCEPT PROJECTS PREVIOUS PLAN OR STUDY		
R02	SR-248 Corridor Mobility Improvement Project	In cooperation with UDOT, evaluate alternatives and needs, develop solutions, and design and construct multimodal improvements for the SR-248 Corridor from approximately US-40 to SR-224 to enhance gateway corridor access by all travel modes. Initial transit improvements are funded as part of the SR-248 Corridor Improvements project.
T04	PC-SLC Connect	Work with High Valley Transit and UTA to improve the PC-SLC Connect Service. Potential improvements include: » Direct connections from SLC Airport to Park City » Limited stops in SLC for faster service from downtown and/or transit » Public-private partnerships for shared implementation, branding, and marketing » Running service into Old Town Transit Center » Expanded service span and frequency
T08	Aerial Connections	Conduct a detailed feasibility study of aerial connections to key activity nodes that compares bus transit to aerial transit. Key planning considerations include: » Technology systems and rider capacity » Regulatory requirements and thresholds » Alignments, easements/ROW, and neighborhood impacts; and connectivity to transit system Possible nodes/alignments include: » Bonanza District, Lower Park Avenue, PCMR, and Old Town » Bonanza to Aerie Hill area » Bonanza to Park City Mountain » Quinn's Junction to Bonanza » Bonanza, Flagpole, Deer Valley
T16	Flex Transit Lanes	Explore flexible transit-only lanes on local corridors that serve key destinations and/or connect transit hubs, such as Bonanza Dr. and Empire Ave./Silver King Dr. integrate with SR-224 and SR-248 transit lanes, ensuring necessary easements or additional ROW procurement. Test and learn with pilot projects for peak events and/or peak-time flex transit lanes while pursuing long-term dedicated lane solutions

2.3. Transportation Planning Department Refinement

Park City Transportation Planning refined the initial City Council list to 17 disruptors that would be introduced to the Stakeholder Committee. **Table 2** lists the disruptor, provides a brief description, and describes what the Stakeholder Committee would consider during subsequent workshops.

Table 2 – Emerging Transportation Disruptors

#	TRANSPORTATION DISRUPTOR	DESCRIPTION
1	**Smart Corridors/ Connected Vehicles**	Use advanced technologies such as sensors, radar, and communication systems to collect and transfer data between vehicles and roadside infrastructure. Within a smart corridor, vehicles wirelessly share critical information about their position, speed, and brake system status. Roadside infrastructure processes the information and communicates to the vehicle, providing motorists with full awareness of the driving environment. Potential benefits include improved safety and mobility, and more efficient use of transportation assets. **Workshop Focus:** Explore infrastructure needs (detection, communication), deployment requirements on City streets, and potential benefits from V2I deployment on City streets. Initial deployment would likely be limited to City vehicles and transit.
2	**Intelligent Transportation Systems**	Using intelligent transportation systems (ITS) technologies, transportation professionals manage corridors and make operational decisions based on real-time data and information. **Workshop Focus:** Explore how SR 248 and SR 224 can be managed using ITS and coordinated operations by UDOT, Park City, Park City Transit, and High Valley Transit. This requires coordination between agencies, implementation of multi-agency management strategies, and communication links between agencies.
3	**Mobility on Demand**	Develop and encourage use of smartphone Apps that enable users to request, pay for, and receive transportation services such as taxi and bus, as well as bike-sharing, car-sharing, parking, and ride-hailing services. The App provides multi-modal routing, cost, travel time and fare payment. The app would make non-driving modes easy to access and incentivize shifts from personal vehicles to other modes. The app would track decisions from users and ridership/usage of major services. **Workshop Focus:** Should Park City plan, purchase, and deploy an Integrated Mobility Management Platform app with parking, congestion, transit, bike share, carshare, and other transportation options.
4	**Curbside Management**	Develop plans, policies, procedures, and systems to inventory, optimize, allocate, and manage the curb space to maximize mobility, safety, and access for the wide variety of curb demands including ride-hailing, electric vehicle charging, transit, freight, active transportation, and special events. **Workshop Focus:** Explore needs and best practices to manage curb space for accessibility, delivery access, pedestrians, active transportation, micro-mobility, and parking.
5	**Congestion Pricing and Tolling**	Implement congestion pricing and tolling on gateway corridors to manage vehicle demand (discourage demand). Revenue would be used to maintain and improve infrastructure. **Workshop Focus:** Consider real-time dynamic pricing (tolls) adjusted to main free-flowing traffic. Prices increase when the tolled lane(s) approaches capacity and decreases when there is available capacity. The system would be implemented on major corridors such as SR 224 or SR 248.
6	**Active Parking Management**	Implement dynamic management of parking facilities to optimize utilization of those facilities while influencing travel behavior at various stages along the trip making process: i.e., from origin to destination. Dynamically managing parking can affect travel demand by influencing trip timing choices, mode choice, as well as parking facility choice at the end of the trip. **Workshop Focus:** Explore opportunities to positively impact traffic flow in Park City by providing real-time parking information to users, ensuring availability of spaces to reduce circling around parking facilities. Strategies could include required parking reservations for event and resort visitors.
7	**Regional Transit Enhancements**	Improve convenience, comfort, and effectiveness of local and regional transit. Local enhancements may include advanced technology to collect, manage, and monitor transit data. **Workshop Focus:** Engage local and regional transit agencies in a discussion of need/demand, opportunities, challenges, and costs of enhanced regional transit connections to Salt Lake City.
8	**Salt Lake City International Airport Connection**	Establish direct and integrated transit connections between Park City and Salt Lake City International Airport. **Workshop Focus:** Brainstorm ideas to provide a seamless connection. This could include partnerships with airlines to provide a seamless connection to Park City.

#	TRANSPORTATION DISRUPTOR	DESCRIPTION
9	Land Use Policy	Establish land use policies such as increased density and less parking to reduce reliance on single-occupancy vehicles, and increased utilization of walking, bicycling, and transit. **Workshop Focus:** Discuss best practices from other resort communities to integrated land use planning to transportation impacts. Resultant policies could include reassessment of parking minimum requirements for Travel Demand Management elements for new development.
10	E-Bike and EV Public Charging	Strategically deploy EV charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability, to help City achieve sustainability goals. **Workshop Focus:** Explore need for, and opportunities to expand curbside charging opportunities to incentivize vehicle owners and private companies to switch to electric modes of transportation. Identify need for electric bike and electric vehicle charging.
11	Vehicle-Free Zones	Establish pedestrian zones or districts where vehicle access is restricted. **Workshop Focus:** Explore opportunities to implement car-free zones, in which private vehicles are restricted. The zones would be focused around downtown or other areas. Zones would be re-designed to prioritize people walking and bicycling. Walking would serve as the primary transportation mode.
12	One-way Loop	Create a one-way loop (Bonanza, Kearns Blvd., Park Ave., Deer Valley Dr.) to improve traffic flow. **Workshop Focus:** Consider implementation options, benefits, and trade-offs of a one-way loop system in Park City to improve traffic flow. Loop may consist of Bonanza, Kearns Blvd., Park Ave., Deer Valley Dr.).
13	Tunnels	Underground network of tunnels in which electric vehicles or transit travel at higher speeds between stations or entry points. The tunnels are sized to fit an electric vehicle or bus at speeds of approximately 40 mph. The tunnels are one-way and intended to reduce travel time between destinations. The tunnel in Las Vegas, NV was constructed by “The Boring Company”. **Workshop Focus:** Illustrate examples (Las Vegas) of a network of tunnels connecting key destinations in Park City, such as Kimball Junction, Park City Mountain Resort, downtown, and Deer Valley.
14	Passenger Rail	Construct a rail-based transit system, options include light rail, streetcar, commuter rail, automated people movers, or monorail. **Workshop Focus:** Explore opportunities and appetite for rail-based transit in Park City, connecting potions such as Kimball Junction to destinations. Workshop would highlight potential cross-sections and associated ROW impacts.
15	Aerial Gondola	Construct an aerial gondola or tramway, connecting park and ride lots to destinations in Park City. **Workshop Focus:** Explore opportunities, need, and appetite for an aerial gondola in Park City, connecting areas such as Kimball Junction to destinations. Workshop would explore effectiveness, potential route, and impact considerations (e.g., ROW, height).
16	Dedicated Bus Lane	Construct segments of transit-only lanes on major corridors such as SR 224, from Kimball Junction to downtown Park City. System would consist of dedicated bus lanes. **Workshop Focus:** Explore opportunities to implement dedicated bus lanes to expedite travel time through congested segments. Note that dedicated bus lanes will be incorporated into Bus Rapid Transit under design for SR 224.
17	Reversible Flex Lanes	Construct a reversible lane on SR 224 or SR 248 in which traffic may flow in either direction: inbound during the morning on a “snow day”, outbound in the afternoon, and a two-way left turn lane during off-peak hours. Control is provided through signage, or overhead signals. When applied, left turn movements to adjacent driveways would be restricted. **Workshop Focus:** Explore the viability of reversable reversible flex lanes to improve Park City’s thru-put and traffic flow during peak hours. Examples of other communities could be shared, and a summary of impacts and potential benefits.

2.4. Stakeholder Committee Disruptors Identification

During the June 16, 2023 workshop, the Stakeholder Committee recommended that the following eight disruptors be explored during Stakeholder Committee workshops:

The Stakeholder Committee also endorsed several disruptor topics without requiring further consideration by the Stakeholder Committee and recommended no further action for several of the disruptors, as identified in **Table 3**.

Table 3 – Topics Not Selected For Workshops

TOPIC	DECISION FACTORS
Advance to Action without Committee Exploration	
Local and Regional Transit Enhancements	City should support regional transit partners
Intelligent Transportation Systems (ITS)	City should support UDOT and other partners to implement
Land Use Policy	Planning to advance transportation goals in land use policies and regulation
Active Parking Management	City should advance current parking policy
Mobility on Demand	City should advance as technology matures and advances
E-Bike and EV Public Charging	City should advance as technology matures and advances
Committee Recommends No Further Action	
Smart Corridors: Connected Vehicles	Technology advancements are continuous and will be implemented as technology matures
Dynamic Pricing (Congestion Pricing) and Tolling	While the City may collaborate with UDOT to explore options, Committee noted concerns about equity
Curbside Management	Not likely to influence City-wide mobility

From July 2023 to September 2023, Committee members participated a set of workshops, each focused on a disruptor topic area. Stakeholders were provided with background information on each topic, including case studies and best practices, prior to each workshop. The workshops themselves were attended by Stakeholder Committee members, the project team, Kimley-Horn subject matter experts, and Park City Municipal subject matter experts.

The next eight chapters summarize each of the emerging disruptor workshops held with the Stakeholder Committee.

Workshop summary materials and resulting notes from each workshop meeting are provided in **Appendix A** for each emerging disruptor.

3. DEDICATED BUS LANES

3. DEDICATED BUS LANES

3.1. Concept

Introduce new transit-only lanes in Park City and extending the SR-224 bus rapid transit (BRT) dedicated bus lanes to the Old Town Transit Center. Day visitors and commuters would be diverted to conveniently located capture and intercept lots near freeway exits, and the BRT would provide convenient access points for residents.

3.2. Background Information

Bus-only lanes are a portion of the street designated by signs or pavement markings for exclusive use of transit vehicles. Using these lanes, buses avoid congested general purpose lanes. Avoiding congestion increases bus speed, punctuality, reliability, and encourages utilization by residents and visitors.[3] BRT systems provide high-frequency, bus-based transit that often utilizes dedicated transit lanes and signal priority to achieve fast and efficient service.

SR 224 Bus Rapid Transit Project

High Valley Transit in partnership with Park City and UDOT[4] completed the environmental clearance of a BRT system on SR 224 and are preparing to move into the design phase. The project will extend for 7.1 miles from Kimball Junction to Old Town Transit Center, as shown in **Figure 3**. The SR 224 BRT will enable the existing Route 10 White Electric Xpress bus service to operate as a BRT system by providing frequent, fast, and reliable transit service.

- From Kimball Junction Transit Center, the BRT route will head south in mixed-flow traffic on Landmark Dr. to Olympic Pkwy, and east on Olympic Pkwy to SR 224.
- On SR 224, the route will operate in side-running dedicated transit lanes to Canyons Resort Dr., where the bus will detour to the Canyons Transit hub.
- Once back on SR 224, the BRT will again travel in side-running dedicated transit lanes to the SR 224 and Kearns Boulevard intersection, where the BRT will transition into mixed-flow traffic to the Old Town Transit Center.

A proposed cross-section for the dedicated transit lanes is shown in **Figure 4**.

[3] https://nacto.org/publication/transit-street-design-guide/transit-lanes-transitways/transit-lanes/
[4] https://sr224brt.com

Figure 3 – Proposed SR 224 BRT Alignment

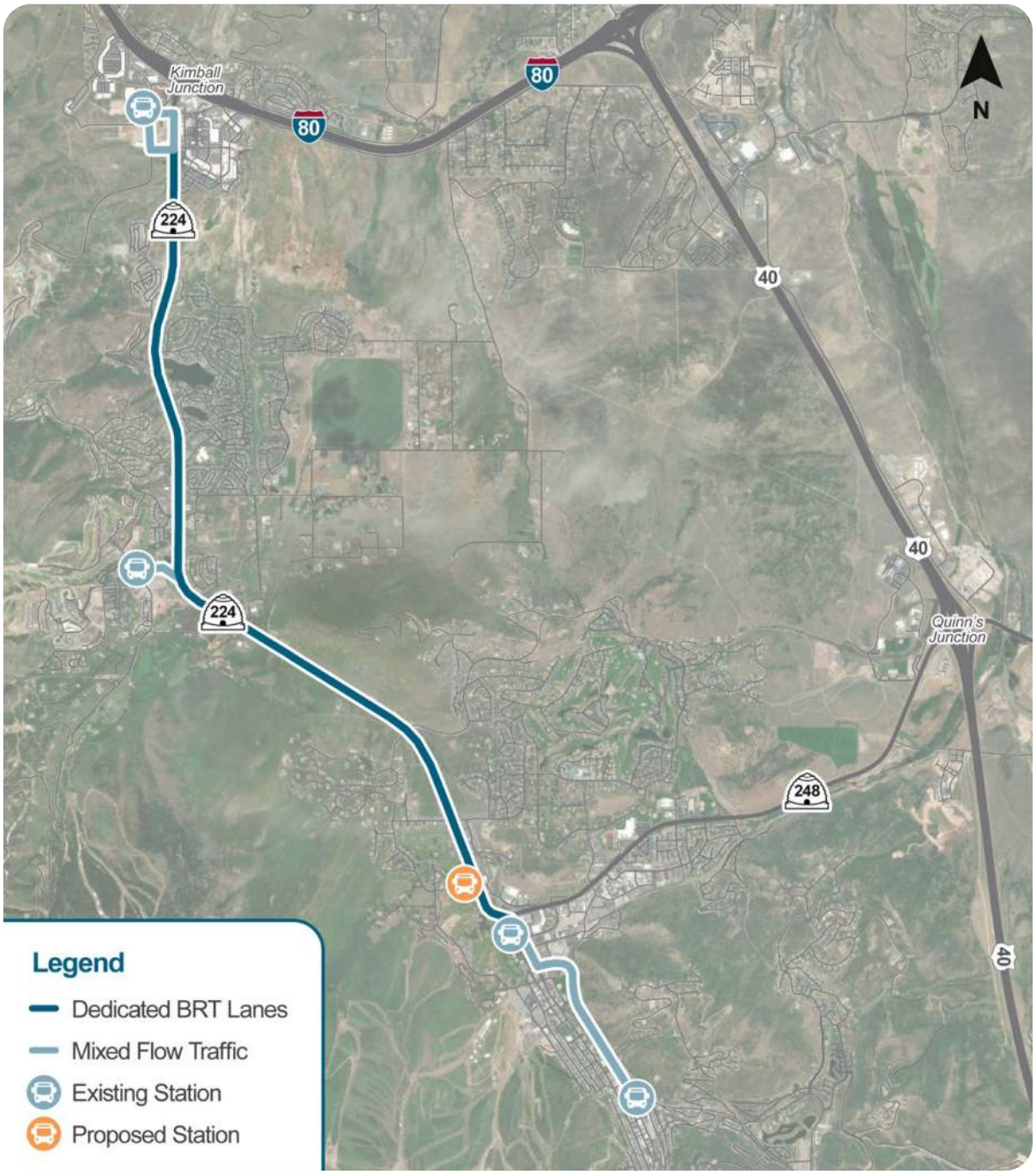
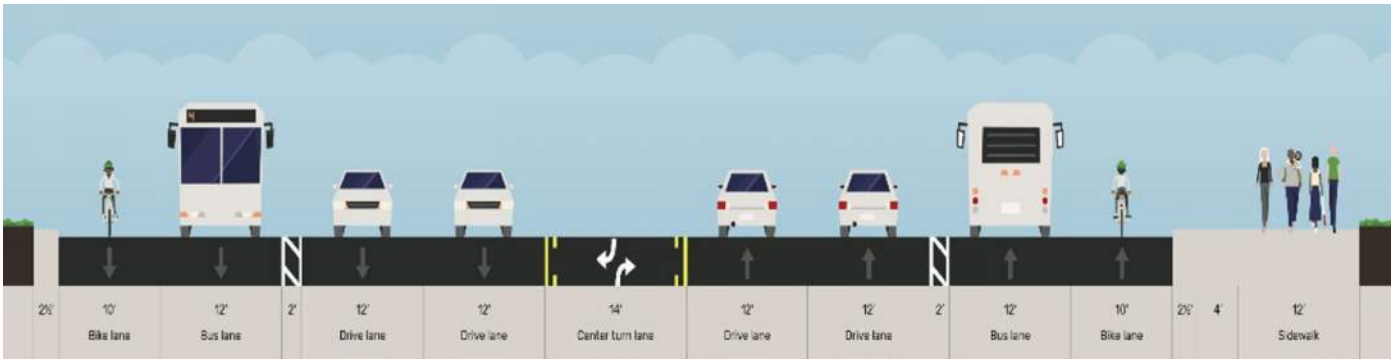


Figure 4 – Proposed SR 224 BRT Roadway Cross-Section



3.3. Best Practices and Case Studies

Mountain Line – Route 10, Flagstaff, Arizona

Mountain Line, Flagstaff, Arizona, offers nine fixed-route bus services, paratransit, vanpool, and an express bus to Arizona's Snowbowl during the winter months. In 2011, the agency opened Route 10, a BRT line. Today, the route is 6.8 miles long, has 18 stations, and runs through the central part of Flagstaff. The route through Northern Arizona University (NAU) campus is on dedicated bus lanes, closed to other vehicles. When NAU is in session, Route 10 runs on 10–20-minute headways. On weekends and when NAU is not in session, buses arrive every 20 minutes. During NAU's summer break, buses arrive every 40 minutes.

Brook Street BRT, Missoula, Montana

Mountain Line is the transit agency in Missoula, Montana. Mountain Line is in the early stages of planning the Brooks Street BRT route. Currently, Brooks Street is a state highway running through the heart of Missoula. However, it is estimated that this street will reach its motor vehicle capacity within the near future. Therefore, city officials expressed their interest in transforming Brooks Street from a highway commercial strip into a complete street with a center-running BRT transit line and improved active transportation infrastructure.

VelociRFTA, Roaring Fork Valley, Colorado

VelociRFTA[5] is a BRT line serving the Roaring Fork Valley, Colorado. This service, – which opened in 2013 as the first rural BRT line in the nation – takes commuters from Glenwood Springs and surrounding communities to Aspen, about 40 miles away. The service combines travel in mixed traffic with designated bus lanes and traffic signals timed to improve efficiency. A dedicated lane on US 36 only allows buses and vehicles with three or more occupants on for free — while setting a toll for two or fewer occupant vehicles. Buses are allowed to use the outside shoulder to keep moving if traffic in the two regular lanes decreases to less than 35 mph.[6]

NACTO Guidance

National Association of City Transportation Officials (NACTO) provides guidance for peak-only bus lanes, dedicated median bus lanes, and dedicated curbside bus lanes, among others. A peak-only bus lane allows transit to take precedence over parking and curbside access at peak hours when it most benefits bus operations. A peak-only bus lane operates as a dedicated bus lane during peak travel periods. In off-peak periods, the lane accommodates other uses such as right turning vehicles or parking.

Photo: NACTO

3.4. Stakeholder Workshop Summary

Stakeholders carefully considered the potential users of the prospective BRT system. They questioned whether expanding the BRT would enhance mobility for the target audience traveling to and from Park City. Stakeholders stressed the importance of ensuring that this idea benefits a diverse range of user groups, not solely focusing on winter tourists.

Stakeholders underscored the importance of ensuring that the BRT is designed and operated to compete effectively with the travel time of personal vehicles. This is achieved by providing dedicated lanes for the BRT, thereby avoiding congested travel lanes. Certain stakeholders pointed out that separating buses from mixed-flow traffic would substantially enhance travel times for the BRT, leading to a potential increase in ridership.

[5] https://www.rfta.com/routes/velocirfta-brt/
[6] https://www.dailycamera.com/2013/11/16/the-future-of-bus-rapid-transit-on-us-36-lessons-from-roaring-fork-valley/

Stakeholders also discussed if the BRT line should extend directly to both Deer Valley and Park City Mountain Resort.

Stakeholders observed that if the transit-only lanes are opened to high-occupancy vehicles (HOV), use should be restricted to cars carrying three or more persons. Stakeholders deliberated on HOV lanes, expressing concerns regarding issues of fairness, enforcement, and potential adverse effects on residents.

Stakeholders reached a consensus that the BRT should utilize existing lanes or ROW, and construction should not necessitate significant ROW acquisition or the expansion of roadways.

The Stakeholder Committee concurred that it might be preferable to wait for the planned operational launch of the SR 224 BRT before initiating plans for an extension.

Stakeholders briefly discussed separate dedicated high-occupancy vehicle (HOV) lanes and stated concerns with equity, enforcement, and potential negative impacts for residents.

Table 4 – Dedicated Bus Lanes Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
Separating buses from mixed-flow traffic would improve bus travel times, leading to a potential increase in ridership.	Dedicated bus lanes may not enhance mobility for visitors traveling to and from Park City.
Dedicated transit lanes/BRT can achieve high passenger capacity and throughput, especially during peak hours.	Heavy utilization during peak hours could lead to overcrowded buses and stations, reducing the overall effectiveness and comfort of the system.
Signal priority at intersections can contribute to reduced travel times and increased efficiency compared to traditional bus service.	Dedicated bus lanes may require removal of one or more vehicle travel lanes, leading to increased congestion if vehicle trips do not see a corresponding reduction.
BRT can promote use of public transportation, reducing individual car use, and lowering emissions.	Buses may still experience delay due to traffic signals, pedestrian crossings, and other factors.
Familiarity of buses and the ability to leverage existing road infrastructure can make BRT systems more palatable to the community.	

3.5. Potential Impacts Summary

Table 5 summarizes potential impacts associated with the dedicated bus lane disruptor.

Table 5 – Dedicated Bus Lanes, Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Existing lanes would be repurposed, requiring limited ROW expansion.	Expands transit network available to labor force to reach further into Old Town.	Some ROW may be required for transit stops and stations. High density nodes could be focused at stations.	Existing travel lanes be repurposed, and the system could lead to few vehicles on the road.

Negative *Minor Negative* *Neutral* *Minor Positive* *Positive*

3.6. Stakeholder Committee Recommendation

Stakeholders recommended advancing transit-only lanes, only if feasible without significant right-of-way expansion, and is focused on repurposing existing travel lanes. Some Stakeholders felt that reversible flex lanes provide the most practical opportunity for near-term transit-only lanes. Stakeholders seeks additional information on the potential time savings that transit-only lanes would provide, given several pinch-points at key intersections. Stakeholders expressed that the BRT should provide time savings as compared to personal vehicle.

3.7. Recommended Next Steps

City Council Direction

City Council supported working with HVT and UDOT to evaluate potential non-ROW expansion implementation on entry corridors

Collaborate with regional partners, including Utah Department of Transportation (UDOT) and Utah Transit Authority (UTA) to initiate a feasibility study assessing:

- **Project Goals and Objectives:** Clearly define the goals and objectives of the dedicated bus lane project. This may include improving public transportation efficiency, reducing traffic congestion, promoting sustainable transportation options, and enhancing overall mobility in Park City.
- **Suitable Corridors:** Identify potential corridors where dedicated bus lanes can be implemented. Consider factors such as existing right-of-way and traffic patterns considering peak hours, intersections, and impacts to on-street parking.
- **Potential benefits:** Assess benefits including improved travel time from extending dedicated transit lanes to and beyond the Old Town Transit Center.
- **Public and stakeholder input:** Engaged elected officials and community members.

Consider delaying the feasibility study until the planned SR 224 BRT project is completed, dedicated bus lanes are operational, and their effectiveness monitored, and feedback gathered from bus operators and the community. The evaluation should assess impact on travel times, ridership, and overall transportation efficiency.

4. ONE-WAY LOOP

4. ONE-WAY LOOP

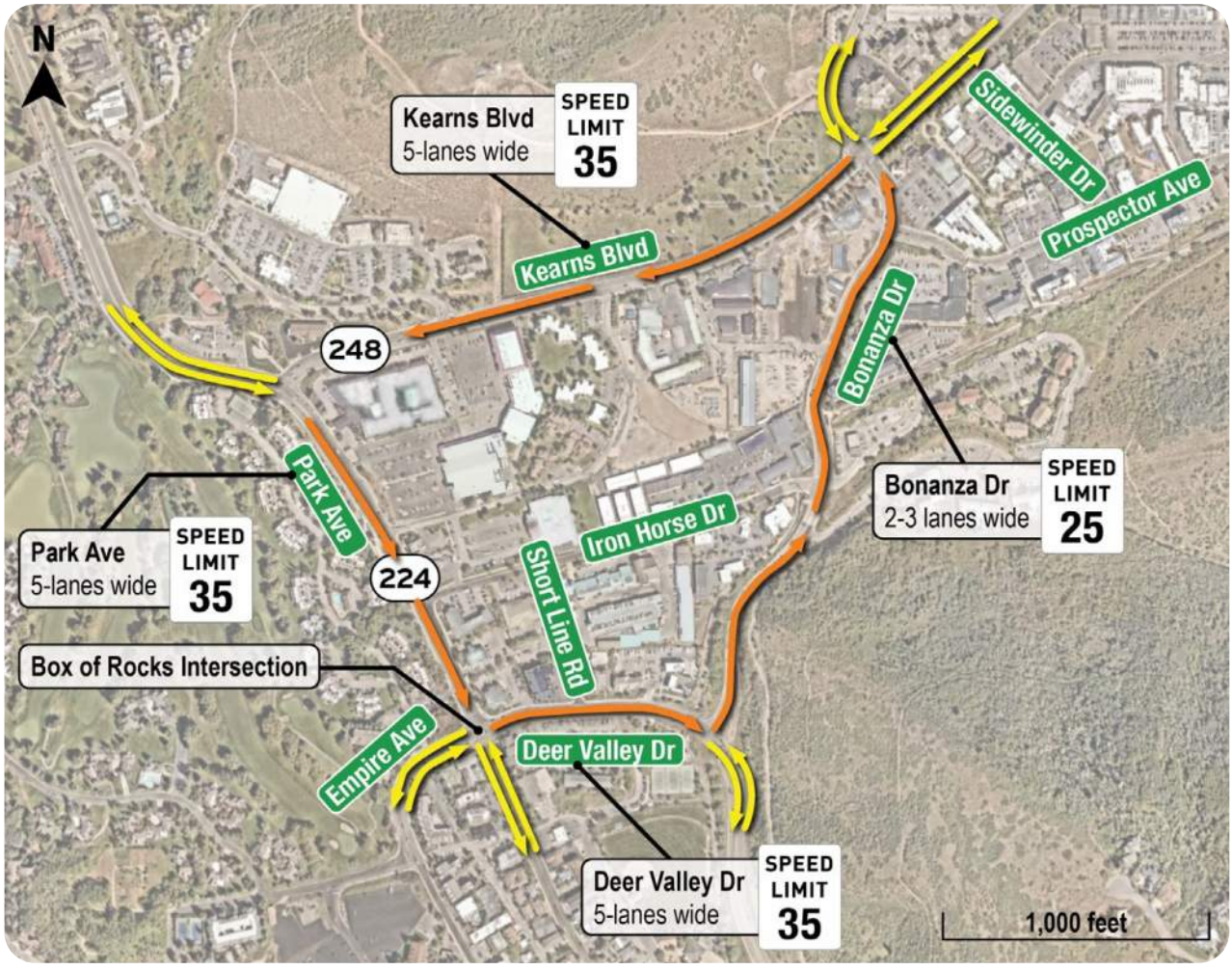
4.1. Concept

The Stakeholders discussed a major one-way loop concept, or a counter-clockwise traffic pattern, which would convert Kearns Boulevard, SR-224, and Bonanza Drive into a large one-way traffic loop. This concept could improve traffic flows on Park City's primary corridors and most congested intersections, and potentially provide transit-only lanes. It would also drastically change existing travel patterns, and impact residents and businesses.

4.2. Background Information

Park City staff has previously investigated the possibility of implementing a one-way loop within the city. **Figure 5** illustrates a concept outlining a 1.4-mile loop that incorporates Kearns Boulevard, Park Avenue, Bonanza Drive, and Deer Valley Drive. The arrows in **Figure 5** indicate the proposed direction of travel.

Figure 5 – Potential One-Way Alignment



4.3. Stakeholder Workshop Summary

Stakeholder Committee deliberation encompassed congestion relief, necessary adjustments to traffic signals and intersections, potential effects on businesses, safety considerations for pedestrians and vehicles, and the anticipated public response.

Stakeholders supported simplification of traffic signal phasing, adding directional roadway capacity, and reducing congestion at the

SR 224 and Kearns Boulevard intersection. The concept could also accommodate dedicated transit lanes without ROW expansion.

Stakeholders acknowledged that the project introduces the potential of constructing a dedicated transit lane within the loop.

Stakeholders agreed that the one-way loop would change regional traffic patterns by diverting traffic away from Kimball Junction and towards US-40.

The prospect of enhanced service levels at congested intersections and improved transit travel times to crucial destinations, particularly during peak congestion periods, was appealing.

Given current efforts on the Bonanza Park Small Area Plan, future studies of the one-way loop should consider potential land use and travel pattern changes.

Table 6 summarizes the advantages and disadvantages of this concept as discussed in the workshop.

Table 6 – One Way Loop Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
One way loop could enable a dedicated transit lane on most of the loop (Deer Valley Drive/SR 224 would be general purpose/ transit lane)	Would require a second eastbound lane on SR 248 to achieve full benefits.
Improves vehicle Level of Service (LOS) at intersections	May increase Vehicle Miles Traveled (VMT) for cars.
Improves safety at unsignalized intersections by reducing cross-traffic movements (e.g., Snow Creek/Holiday Village)	Benefits are primary focused on seasonal winter and conditions while negative impacts would be felt year-round offering minimal daily benefits to residents.
Improves afternoon travel time from Park City Mountain Resort and Deer Valley Resort to SR 248	Will negatively impact business and residential access.
A low cost test pilot could be implemented; the test would be limited to several weeks to gather information on effectiveness and public reception	May result in higher vehicle speeds and decreased levels of driver attention.
	May be more confusing for downtown visitors; visitors driving in a two-way network can approach their destination from either direction.
	Potential increased travel time to the hospital for some residents.
	Residents may seek alternative routes and avoid the loop, displacing congestion to other areas.
	Reduce prioritization of transit and bicycling
	Could face opposition from residents who would strongly object to such a significant change
	Does not reduce, and may increase, the number of cars entering Park City

4.4. Potential Impacts Summary

Table 7 summarizes potential impacts associated with the one-way loop disruptor.

Table 7 – One-Way Loop Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Widening on SR 248 would require an additional receiving lane; other loop areas would utilize existing ROW.	Vehicle-focused concept may increase travel distance and time for those using Park City buses; may increase travel time to hospital. May provide a dedicated transit lane.	Concept may increase difficulty accessing local businesses including a grocery store and pharmacy.	Concept increases vehicle miles traveled. May result in fewer vehicle emissions.

Negative | *Negative Minor* | *Neutral* | *Positive Minor* | *Positive*

4.5. Stakeholder Committee Recommendation

While the Stakeholder Committee recognized the potential benefits during peak traffic periods, they did not believe it would be compelling enough to warrant year-round implementation. Stakeholders acknowledges that this concept would significantly impact multiple critical intersections in Park City.

Some Committee members supported a two-week pilot program. However, given the amount of infrastructure adjustments, education, and coordination, most did not support a pilot program.

Given the potential impact to businesses in the loop, potential increase in vehicle miles traveled, and need to widen SR-248 to see full benefits, the Stakeholder Committee did not support furthering this topic.

4.6. Recommended Next Steps

Park City Transportation and Engineering will determine if further exploration of a one-way loop is warranted.

If considered, Stakeholders recommends focusing on smaller loops as a test (Main Street Park Avenue, Swede Alley, etc.)

5. AERIAL GONDOLA

5. AERIAL GONDOLA

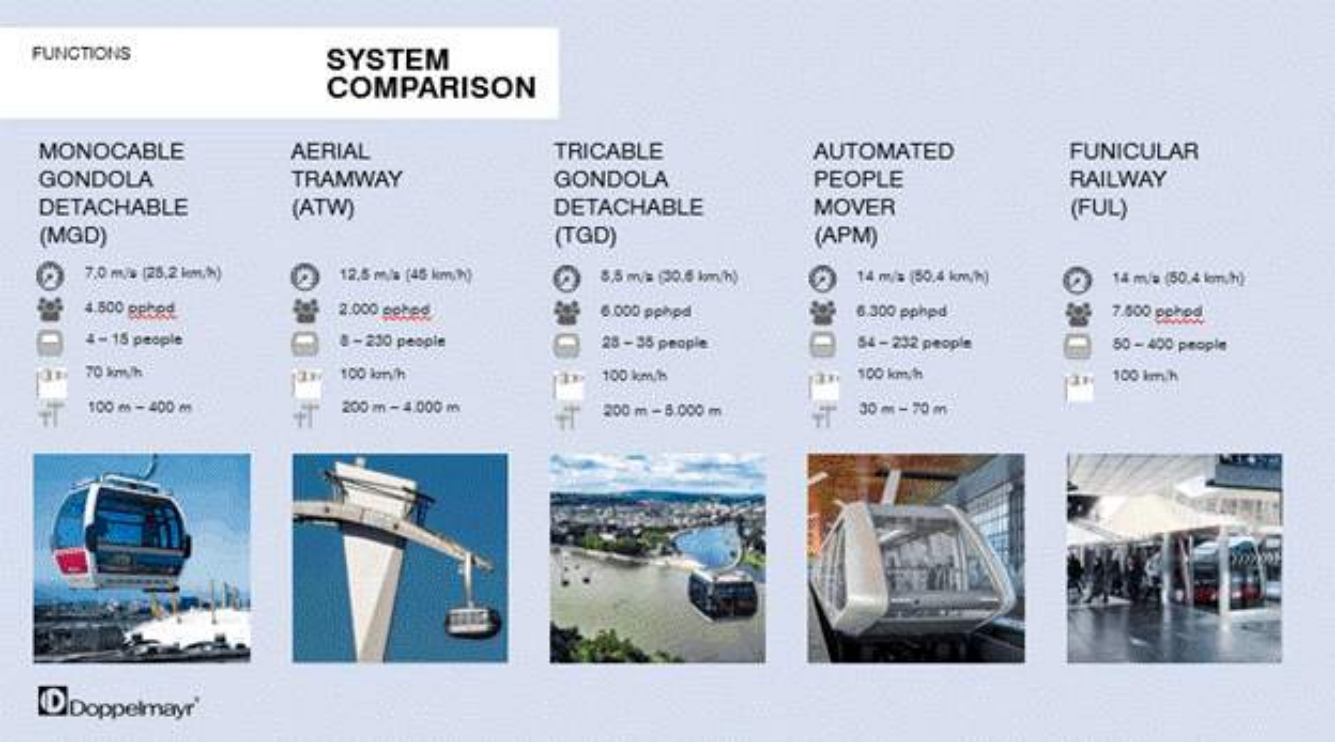
5.1. Concept

Construct aerial gondolas to connect regional destinations such as park and ride lots, located in the perimeter of Park City, to key destinations within Park City.

5.2. Background Information

Figure 6 illustrates different gondola configurations. Monocable Gondola - Detachable (MGD) is considered the most feasible application for Park City. MGD can move up to 4,500 people per hour per direction. The typical spacing between tower structures is 300-1300 ft.

Figure 6 – Aerial Systems Comparison



Source: Doppelmayr

Park City has previously analyzed the feasibility of an aerial system in Park City, as summarized below.

Transit Gondola Feasibility Study (2020)

In 2020, SE Group prepared the "Transit Gondola Feasibility Study for the Park City Municipal Corporation". The analysis concluded that while there are significant barriers, development uncertainties, and additional infrastructure requirements, an aerial gondola system is a feasible transportation option between major commercial and resort centers within Park City. The analysis concluded that economic incentives combined with transit options could motivate people arriving at Park City via Kimball Junction or Quinn's Junction to park in outlying lots (i.e., Ecker Hill Park and Ride, Richardson Flat Park and Ride, and other future satellite parking developments). From there, travelers would take public transportation to an aerial terminal, providing access to the gondola system within town.

The analysis emphasizes the importance of safe and accessible satellite parking options, served by high-frequency transit, coupled with strong in-town parking policies. Within this concept, the existing Park City bus system would be reconfigured as a "feeder" for the gondola trunk line.

Comparison of Gondola to Bus Rapid Transit (BRT) (December 2022)

SE Group and Fehr & Peers compared trade-offs of a gondola to BRT. The analysis found:

- The gondola would not decrease travel times during typical conditions but could provide greater dependability in travel times during peak traffic conditions.
- The gondola would provide additional non-auto mobility capacity that could address the travel demands of future development, particularly at gondola terminals.
- The gondola must be part of a comprehensive land use/mobility strategy.

5.3. Case Studies

Portland, Oregon

The Oregon Health and Science University (OHSU) is the largest employer in Portland, OR. Facilities are concentrated on a campus in the south of the city. When expansion was needed, there was no room directly on campus. A reversible aerial tramway was constructed connecting main campus and its expansion. The Portland Aerial Tramway (ATW) incorporates two stations, one tower and two cabins. The cabins accommodate 78 passengers and can be used to transport hospital beds. The Tram is a five-minute ride each way, rising 500 vertical feet and traveling 3,300 feet in distance. The tramway connects to the streetcar at the South Waterfront Station, better integrating OHSU into the city.

Telluride, Colorado

Telluride's gondola system provides free transportation between the Town of Mountain Village and the Town of Telluride. Opened in in 1996, what was once an eight-mile drive between the two towns, the gondola provides a more direct three-mile route over the mountains. Each cabin travels at 11 mph, and the ride takes approximately 13 minutes. The initial purpose of the gondola was to improve air quality and reduce traffic impacts. Over 2.5 million terminal exits are counted each year. The gondola has three primary stations for boarding and unloading. The gondola is operated and funded by the Telluride Mountain Village Owners Association (TMVOA), through the collection of Real Estate Transfer Assessments and Annual Real Estate Assessments.

5.4. Stakeholder Workshop Summary

Stakeholders emphasized the need to reduce rather than just the redistribute, traffic in Park City. Concerns were raised that previous gondola concepts would operate at slower speeds than vehicles, and as such, would not attract sufficient riders to leave their vehicles behind.

To be an appealing alternative to personal vehicles, a gondola would need to offer direct access to major destinations instead of following existing roadways.

Stakeholders concluded that an aerial system or gondola would need to bypass roads to be effective — going up and over the mountain for a direct route to the destination, for instance. It may need to be located off existing roadway alignments. If the system doesn't result in reduced travel time or congestion, it is likely to see limited utilization. The gondola must be convenient and efficient to draw people out of vehicles.

Stakeholders acknowledged that gondola alignment options are constrained by existing buildings and structures. Nevertheless, the verticality of gondolas provides an advantage, allowing for inventive routing solutions.

Stakeholders appreciated the favorable environmental effects of gondolas compared to automobiles and stressed that gondolas would complement the existing transit system. Gondolas might also be more appealing to visitors from out of town than buses.

Stakeholders questioned whether investment in gondolas for in-town travel is effective, given that in-town travel is not the primary traffic source.

Table 8 – Gondola Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
Offers high capacity unaffected by congestion; can alleviate ground-level traffic congestion if gondola trips replace vehicle trips.	Alignment options constrained by existing buildings, structures, and required locations of support towers.
Less affected by adverse weather conditions such as rain or snow compared to some ground-based transportation modes.	Gondola routes cannot be easily adjusted or to accommodate changes in demand or city planning.
Use of electric power, produces fewer emissions than traditional vehicles	Boarding and alighting may be more difficult for individuals with disabilities compared to ground-based transit options.
Requires minimal ground space for support structures and stations, allows for the creation of transportation corridors without consuming valuable ground space.	The visual impact of gondola support towers and cables can be a concern for residents. Finding suitable locations for alignment, stations and towers will be challenged by need to minimize visual impact.
Can be implemented relatively quickly compared to traditional ground-based transportation infrastructure.	May not be effective to reduce congestion unless connects to new entry points to Park City.
Verticality allows for inventive routing solutions, and to traverse challenging terrain.	
Can be integrated into pedestrian zones, providing a unique and efficient mode of transportation in dense urban contexts.	

5.5. Potential Impacts Summary

Table 9 summarizes potential impacts associated with the aerial gondola disruptor.

Table 9 – Aerial Gondola Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Stakeholder Committee recommends that new alignments be located away from existing roadway corridors, which would require new ROW corridors.	Cost of ridership may be a barrier to wide-spread utilization by disadvantaged communities; entry points located at park and ride lots may focus use by those arriving by personal vehicle.	Establishes new entry points to the region which may lead to additional commercial nodes development.	Concept requires new corridors be identified away from developed residential areas. May result in fewer vehicle emissions.

Negative *Negative Minor* *Neutral* *Positive Minor* *Positive*

5.6. Stakeholder Committee Recommendation

Stakeholders recommends exploring gondola alignments that connect major nodes, are competitive to automobile travel times, and create new entry points to Park City. Exploring routes outside of existing transportation corridors should take advantage of vertical terrain, and minimize impacts on existing structures, including homes.

Stakeholders recommends exploring funding gondolas through public-private partnerships. Some committee members expressed concern that direct access could be an economic disadvantage to other areas of town, and future consideration must integrate gondolas within a larger transit network and with multiple access points.

Stakeholders does not support an aerial gondola if relied upon as the primary transit mode and along existing transportation corridors to move people in and out of Park City.

5.7. Recommended Next Steps

Park City lead a concept feasibility study that addresses the following:

- **Project Objectives:** Define goals and objectives of the gondola system; may include reducing traffic congestion, promoting sustainable transportation options, and enhancing overall mobility in Park City.
- **Market Research:** Evaluate demand for a gondola system including potential ridership by tourists and residents.
- **Alternatives Development:** Identify logical termini (beginning/ending of system); consider existing right-of-way, terrain, environmental conditions, and engineering requirements for stations and towers; evaluate constructability; prepare cost estimate.
- **Alternatives Evaluation:** Evaluate environmental impacts including potential effects on the landscape, wildlife, and local ecosystem, and zoning restrictions.
- **Assess Operations:** Evaluate operational aspects of the gondola system, including scheduling, capacity, safety, and maintenance. Consider the integration of the gondola system with existing transportation networks and infrastructure.
- **Public and stakeholder input:** Engage elected officials and community members.

City Council Direction

City Council recognizes the potential benefits and significant challenges that would need to be overcome to implement a Gondola, and expressed skepticism that a consensus alternative can be identified.

6. PASSENGER RAIL

6. PASSENGER RAIL

6.1. Concept

Consider the potential impacts and feasibility of bringing passenger rail to Park City, including different modes such as light rail, streetcar, elevated rail, and commuter (heavy) rail.

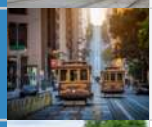
6.2. Background Information

Passenger rail connections are an energy-efficient travel mode. Communities with passenger rail often realize an overall benefit from ridership, as well as economic development associated with Transit-Oriented Development (TOD). Capital costs of passenger rail are typically higher than other transit modes and require a significant travel market to be a viable investment.

In the 1880s, a railway connected Kimball Junction area to Park City to support mining.[7] Two sections of abandoned track still exist today in Park City and Snyderville.

Figure 7 details different characteristics of various rail modes.

Figure 7 – Rail Modes Comparison

MODE	PEAK FREQUENCY How often does the vehicle typically arrive at stop during the peak period?	RUNNINGWAY Does a typical train, streetcar, or APM travel in mixed traffic or its own, dedicated lane?		SYSTEM LENGTH From end-to-end, how far does a typical train, streetcar, or APM travel?	CAPITAL COSTS What is the relative cost to construct this mode?	STATION SPACING What is the average mileage between each station for this mode?
		MIXED TRAFFIC	DEDICATED LANE			
LIGHT RAIL 	Every **10** minutes	✓	✓	**10–20**/ **50** miles	$$$$$	**1** mile
STREETCAR 	Every **10** minutes	✓	✓	**10–20**/ **50** miles	$$$–$$$$	**1/8–1/4** mile
COMMUTER RAIL 	Every **10–30+** minutes		✓	**20–50**/ **50** miles	$$$	**7** miles or longer
AUTOMATED PEOPLE MOVER (APM) 	Every **2–5** minutes		✓	**1–5**/ **50** miles	$$$–$$$$$	**1/8–1/2** mile
MONORAIL 	Every **3–10** minutes		✓	**1–15**/ **50** miles	$$$$$	**1/4–1** mile

Previous Studies

The Valley to Mountain Alternatives Analysis Study[8], 2018, which ultimately recommended BRT be installed on SR 224, also considered Light Rail Transit (LRT), Monorail, and High-Speed rail as technology alternatives. The automated guideway transit, monorail, and high-speed rail options were screened out based on vehicle speed, travel time, station spacing requirements, cost, funding ability, aesthetics, study area and corridor context, sustainability, and public opinion. In addition, the analysis identified that potential environmental impacts from these technologies would be greater than BRT, since these technologies couldn't easily fit in the space within or near the SR 224 ROW and would require off-corridor alignments. During Level 2 screening, BRT was identified as the preferred alternative. BRT screened higher than LRT because of higher capital costs associated with LRT and the dedicated ROW required. BRT optimizes the existing Route 10, White Electric Xpress bus service into high-capacity transit by allowing it to operate exclusively in a dedicated busway on SR 224. The BRT will serve the Kimball Junction Transit Center and connect to the Old Town Transit Center.

[7] UtahRails.net
[8] *Alternatives Analysis Report, Valley to Mountain Alternatives Analysis Study, May 2018*

6.3. Best Practices and Case Studies

Winter Park Express – California Zephyr, Winter Park, CO

The Winter Park Express, operated by Amtrak, connects Winter Park Ski Resort to Denver's Union Station (~65 miles). The train is seasonal, running from mid-January through mid-March on Fridays, Saturdays, and Sundays departing from Union Station once daily in the morning and from Winter Park Resort once daily in the afternoon.

Photo: Amtrak

6.4. Stakeholder Workshop Summary

Stakeholders deliberated on the merits and challenges of both elevated rail and ground-based rail. Concerns were raised regarding environmental impacts and the necessary acquisition of ROW for both solutions.

Stakeholders expressed the view that the feasibility of an in-town rail concept is highly correlated with the City's growth trajectory and land-use objectives. Rail investments often serve as catalysts for economic and population growth. Stakeholders emphasized that strategic placement of rail stations may support growth-oriented goals. Stakeholders expressed skepticism that a Park City internal-only rail system would be effective to reduce congestion. Stakeholders saw more benefit as a regional system connecting to UTA high capacity rail systems.

Stakeholders recommended that passenger rail should be approached as a regional endeavor, and a rail system confined solely to Park City was deemed undesirable. Any rail-based solution should be approached regionally and should focus on connecting commuters and visitors from Salt Lake City to exterior entry points in Park City.

Table 10 – Passenger Rail Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
Passenger rail could provide affordable transportation for workers commuting to Park City daily.	Regional passenger rail is a large capital investment that would require federal funding.
Passenger rail would provide Park City and the Snyderville Basin area with a sustainably managed transportation solution as the region continues to grow.	Regional passenger rail requires high number of passengers commuting between two points; additional analysis is required to determine if a sufficient demand exists between Park City and the Wasatch Front.
Regional passenger rail connecting to the airport would provide a comfortable option for visitors to forgo renting a car to travel to Park City.	Regional passenger rail would require feasibility and environmental studies that would take multiple years to complete.
Passenger rail can be electrified, producing significantly fewer greenhouse gas emissions per passenger mile compared to vehicles.	Passenger rail may require new right-of-way outside of existing transportation corridors.
Passenger rail stations can support economic development and high density housing.	
Passenger rail stations can serve as multimodal hubs, connecting to local transit service.	
Passenger rail is less impacted by weather conditions than highway vehicle travel	
Passenger rail requires continued investment in operations and maintenance.	

6.5. Potential Impacts Summary

Table 11 summarizes potential impacts associated with the passenger rail disruptor.

Table 11 – Passenger Rail Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Concept requires expansion or new alignments outside of existing ROWs.	Concept provides alternative mode of transportation for those commuting to Park City from long distances.	New transit stops focus high density development into nodes and activity centers rather than distributed low density development.	Concept removes vehicle trips from the network which improves air quality.

Negative | *Minor Negative* | *Neutral* | *Minor Positive* | *Positive*

6.6. Stakeholder Committee Recommendation

Stakeholders recognizes the regional benefits of passenger rail connections. An investment of this scale requires regional and state leadership. Stakeholders recommends advancing conversations with regional partners to bring regional rail to the perimeter of Park City to integrate with Park City's transit network. Regional rail would connect to high-capacity BRT service at Kimball Junction or Quinn's Junction.

Stakeholders does not support rail service internal only to Park City (Kimball Junction to Old Town). Investments in rail are often facilitators of economic and population growth. Any in-town concepts should carefully consider the City's desired growth trajectory and land use goals. However, given the expected growth in Park City and Summit County, investment in rail may provide additional advantages to prepare for the future.

Stakeholders emphasized a need for a transportation network beyond cars, including rail, but had concerns about price, ROW impacts, community compatibility, and seamless connections.

6.7. Recommended Next Steps

Engage regional partners in preliminary discussions to evaluate interest. Conduct preliminary screening analysis with regional partners:

- **Market Analysis:** Assess existing and potential demand for passenger rail service between Salt Lake City and Park City. This includes analyzing population demographics, travel patterns, commuting behavior, tourism trends, and projected growth in the region.
- **Route Analysis:** Evaluate potential route options for the passenger rail. Consider factors such as distance, terrain, existing transportation infrastructure, land availability, and potential impacts on communities and the environment.
- **Ridership Forecasting:** Estimate the expected ridership on the passenger rail line based on the market analysis and route analysis. This involves considering factors such as trip origins and destinations, travel times, fare pricing, and competition from other modes of transportation.
- **Financial Analysis:** Assess the financial viability of the passenger rail line. This includes estimating the capital costs of construction, station development, rolling stock acquisition, and ongoing operating and maintenance expenses. Evaluate potential revenue sources, such as fares and grants, as well as on-going funding for operations and maintenance.

7. SALT LAKE CITY INTERNATIONAL AIRPORT CONNECTION

7. SALT LAKE CITY INTERNATIONAL AIRPORT CONNECTION

7.1. Concept

Explore models to provide direct and integration connection from Park City to the Salt Lake City International Airport (SLC Airport). Stakeholders explored how systems in Colorado ski towns, including the Landline and United Airlines partnership and the Epic Mountain Express, might work in Park City.

Due to ongoing regional transit coordination between High Valley Transit (HVT) and UTA, general-purpose transit connections between Salt Lake County and Park City were not discussed in this workshop.

7.2. Background Information

Existing Transit Options

Currently, visitors to Park City, who desire to use transit from Salt Lake City International Airport to Park City, are required to utilize one of the following:

- UTA/High Valley Transit:
  - The UTA TRAX Green Line provides 15-minute frequency service between Salt Lake City International Airport and Salt Lake Central Station.
  - High Valley Transit provides service from Salt Lake Central Station to Kimball Junction Transit Center. High Valley Transit replaced UTA's discontinued SLC – PC 902 Connect Route.
  - Bus Route 101 connects Kimball Junction and Old town Transit Center.
- Personal and Shared Limousine Service
  - There are currently approximately 15 personal and shared limousine services that run between Salt Lake City International Airport and Park City. Services typically operate using 8-seat Suburban's, or 12-seat vans.
- Hotel Shuttles
  - Several hotel shuttles provide service between the Salt Lake City International Airport and Park City hotels

Valley to Mountain Alternatives Analysis (2018)

The Valley to Mountain Alternatives Analysis, completed in 2018, included a high-level evaluation of potential new bus service between the Salt Lake City International Airport and Summit County. The service would have terminated at the Kimball Junction Transit Center and/or at the Park City Transit Center.

The study also considered an operating plan for the PC-SLC Connect that would work most effectively with bus transit service on SR-224. The study team identified potential operating plans from SR 224 via I-80 to the Salt Lake City International Airport, downtown Salt Lake City, and other locations.

Table 12, drawn from the 2018 study, shows a potential operating plan options and cost for bus service between Salt Lake City International Airport and Summit County. Cost estimates were based on the cost per revenue-mile ($7.36) identified in UTA's Comprehensive Annual Financial Report (UTA 2016).[9]

[9] https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:5e81a1e2-dc80-323b-bc25-cd43d8c281b5

Table 12 – Salt Lake City to Park City Transit Options Evaluation

OPTION	MILES	TRIPS	COST PER MILE	DAYS	OPERATING COST
1A – SLC Airport – Kimball Junction TC	32.0	68	$7.36	300	$4,804,608
1B – SLC Airport – Kimball Junction TC	32.0	48	$7.36	300	$3,391,488
2A – SLC Airport – Kimball Junction TC – Bonanza TC	38.0	68	$7.36	300	$5,705,472
2B – SLC Airport – Kimball Junction TC – Bonanza TC	38.0	48	$7.36	300	$4,072,392

Source: Valley to Mountain Alternatives Analysis, 2018

7.3. Best Practices and Case Studies

American Airlines Landline Partnership

American Airlines customers traveling on Landline-operated motorcoaches from Allentown/Bethlehem, Pennsylvania (ABE), and Atlantic City, New Jersey (ACY), to Philadelphia International Airport (PHL) can seamlessly travel with the Transportation Security Administration's (TSA) approval of airside-to-airside motorcoach operations.

> *"Program streamlines the passenger experience and enables travelers to seamlessly travel out of a large international airport conveniently by going through our security screening process from a smaller international airport," said Gerardo Spero, TSA's Federal Security Director for Philadelphia International Airport.*

Customers can arrive at ABE or ACY, check-in with American Airlines, clear security at their local airport like any other flight, and then board their coach on the secure side of the terminal. Customers will then arrive airside at PHL and proceed straight to their connecting flight without having to go back through security screening.[10]

For Park City to implement a similar system, an agreement with TSA, a facility, and TSA screening equipment would be required.

Landline Partnership with United Airlines, Fort Collins, Colorado

United Airlines provides bus services to and from Denver International Airport and Fort Collins, CO. Landline offers premium airport shuttle service and offers affordable travel with first class amenities. Buses are equipped with Wi-Fi, A/C, and seats with legroom.[11] To travel, one must:

- If planning on traveling to Fort Collins, book on united.com or the United app:
  - Choose Fort Collins (FNL) as your destination, with a "connection" at Denver International Airport
  - Check in for flight and Landline trip at the same time
  - Once flight arrives in Denver, United Airlines will transfer checked bags to Landline
  - All service leaves from Gate B87, and seating is assigned
  - Passengers board back to front just like on a United flight

[10] https://www.phl.org/newsroom/AA-Landline
[11] https://landline.com/how-it-works

- If traveling from Fort Collins to Denver for a flight, book on united.com or the United app:
  - Choose Fort Collins (FNL) as the origin, and when you continue your search, you'll see your trip has a connection at Denver International Airport
  - Check in for flight and Landline trip at the same time
  - Once bus arrives in Denver, United Airlines will transfer checked bags to Airline
  - When arriving in Denver, United will unload bags and check them to their final destination[12]

- If traveling to Breckenridge:
  - Breckenridge service runs seasonally
  - Nonstop airport shuttle service to/from Breckenridge (QKB) and Denver International Airport (DEN)
  - Travel available Mon, Thu, Fri, Sat, and Sun[13]
  - Board shuttle at Gate A78 in Denver International Airport
  - United will transfer bags from their planes to the Landline buses for them
  - The drop-off point in Breckenridge, 319 N. Main St., is about 100 yards away from the gondola for Breckenridge Ski Resort[14]

Epic Mountain Express Denver Airport Shuttle, Denver, Colorado

Epic Mountain Express, formerly Colorado Mountain Express (CME) provides airport shuttle ground transportation service from Denver International Airport (DIA) and Eagle County International Airport (Vail) Airport. Epic Mountain Express serves locations including:

- Vail, Beaver Creek, Bachelor Gulch, Edwards, Avon, Breckenridge, Keystone, Frisco, Dillon, Silverthorne and most surrounding communities of the areas listed above.

Epic Mountain Express offers door-to-door and transfer center services. Door-to-door shared ride shuttle service picks up or drops off at homes, condos, hotels and resorts.

This transportation service operates ticket service counters at both Denver International Airport (DEN) and Eagle County Regional Airport (EGE), offering hourly departures to and from Denver International Airport, specifically during the winter season. They also provide shuttles aligned with arrival of flights at Eagle County Regional Airport (EGE). Passengers are allowed up to two bags and a personal item to be transported at no cost.[15]

Urban Air Mobility

Urban Air Mobility (UAM) is a subset of the broader Advanced Air Mobility concept. UAM is defined as low altitude aircraft for passengers and cargo in urban and suburban areas. UAM has existed for many years through the form of traditional helicopters. The upcoming wave of Vertical Takeoff and Landing (VTOL) aircraft has the potential to revolutionize on-demand urban air transportation. There are more than 100 different UAM vehicles in various stages of development around the globe. These vehicles may be powered by electricity (eVTOL), hydrogen fuel, or both. These new VTOL vehicles promise to be quieter and more cost effective to operate than traditional helicopters, making UAM attainable by a larger spectrum of people.

A UAM service between Salt Lake City International Airport and Park City would require infrastructure at both ends of the journey such as a vertiport (helipad), passenger facilities, and connectivity to the local transportation system. Several UAM concepts are being explored by a variety of companies that would be like a Salt Lake City/Park City connection. An air taxi service, such as discussed in Chicago by United and Archer,[16] would have the ability to remove cars off the road, reduce greenhouse gas emissions, and reduce travel time.

[12] https://www.united.com/en-us/landline
[13] https://landline.com/breckenridge
[14] https://breckenridge.skyrun.com/plan-your-vacation/united-airlines-landline-bus-service
[15] https://www.epicmountainexpress.com/airport-shuttle-services
[16] https://www.engadget.com/united-and-archer-will-open-an-air-taxi-route-to-chicagos-ohare-airport-in-2025-191352804.html

7.4. Stakeholder Workshop Summary

Stakeholders noted that visitors rent cars to journey from the airport to Park City. Other visitors utilize hotel or private vehicles, which Stakeholders noted are not as environmentally friendly as higher-capacity vehicles.

Stakeholders support establishing direct transit connections between Salt Lake City International Airport and Park City destinations. This transportation concept could:

- Transport passengers via a high-capacity shuttle system to a mobility hub in Park City
- Provide hotel shuttles or Park City Transit for last mile connections to / from mobility hub

Stakeholders recommend frictionless transfers without the need for baggage handling, similar to flight transfers. Stakeholders emphasized that Park City residents would also find this system attractive, as it eliminates the need to park their vehicles at the airport or pay expensive private shuttle fees. A high-capacity shuttle service would additionally promote equity by offering a cost-effective transportation option.

Stakeholders suggests that Park City explore public/private partnerships to facilitate final connections. Stakeholders highlighted that while this concept could be implemented with relatively low investment, ensuring schedules and reliability would be crucial to establishing a successful connection and attracting users.

Table 13 – Salt Lake City International Airport Connection Advantages and Disadvantages

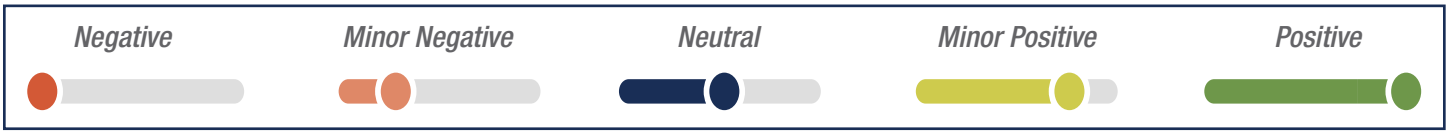
ADVANTAGES	DISADVANTAGES
Airport connection transit eliminates the need for residents to drive to the airport and park their vehicles or pay private shuttle fees.	Airport connection transit may not have a noticeable impact on vehicle congestion in Park City.
Airport connection transit can be implemented relatively easily without requiring costly environmental studies.	Airport connection transit vehicles will be susceptible to the same traffic conditions as private vehicles.
Multiple resorts and hotels currently operate private shuttles; organizing a collaborative effort will reduce costs and for all involved parties.	Market analysis is required to estimate potential ridership of the airport connection.
Provides visitors with a convenient transportation connection between the airport and Park City, reducing need for a personal vehicle.	Airport connection transit will require continued investment in operations and maintenance, to provide convenient and frequent service that will attract riders.

7.5. Potential Impacts Summary

Table 14 summarizes potential impacts associated with the SLC International Airport connection disruptor.

Table 14 – SLC International Airport Connection Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
No impacts.	No impacts.	Service would likely connect at mobility hubs, which provide opportunities for focused areas of higher density.	Service reduces reliance on single vehicle trips, reducing emissions and improving air quality.



7.6. Stakeholder Committee Recommendation

Stakeholders recommend a high-capacity shuttle service from the SLC Airport to a new mobility hub in Park City. Once visitors arrive, hotel shuttles or PC Transit would take guests to their destination.

Stakeholders recommends frictionless vehicle transfers and avoiding bag-handling, much like flight transfers. Stakeholders noted that Park City locals would also find this system attractive as they would not need to park their vehicle at the airport or pay costly private shuttle fees. A high-capacity shuttle service would also be more equitable by providing a low-cost transportation option while making Park City a more attractive destination. This effort should be led by Park City to engage stakeholders including:

- SLC International Airport
- Airport/Airlines
- Resorts, airlines, resorts/hotels
- High Valley Transit
- UTA
- Chamber of Commerce and Visitors Bureau

Stakeholders believes this is a feasible and potentially low-cost investment that would benefit multiple stakeholders, including locals, visitors, airlines, and hotels.

Stakeholders noted that providing safe and secure capture lots with overnight parking and transit access will also be key to making shuttles attractive to Park City residents.

7.7. Recommended Next Steps

Park City to engage stakeholders including SLC International Airport, airlines, resorts/hotels, High Valley Transit, UTA, Park City Chamber of Commerce, and Regional Convening working group to gauge level of support, interest, and funding partnership opportunities. A screening analysis should consider:

- **Market Analysis:** Conduct a market analysis to assess the demand for a shuttle service between Salt Lake City and Park City. Consider factors such number of visitors to Park City, number of out-of-state visitors arriving by air, travel patterns, tourism trends, and other existing transportation options.
- **Scheduling and Frequency:** Consider schedule and frequency that would be attractive to potential riders, and meets the needs of tourists, and other potential users. Consider peak travel times, special events, and other factors that may influence demand.
- Financing: **Consider fare structure for the shuttle service.** Consider factors such as distance traveled, time of day, and discounts or promotions that may be offered. Explore funding options such as public-private partnerships or grants.

City Council Direction

City Council supports advancing this concept. Council discussion directed this should happen as soon as possible and it would greatly benefit residents and visitors.

- **Partnership and Collaboration:** Explore partnerships with local and regional partners. This could include joint marketing efforts, coordination of schedules with other transportation modes, and shared ticketing systems.
- **Operations:** Develop a comprehensive operations plan including staffing, driver training, vehicle maintenance, and ongoing monitoring of service quality.

9. REVERSIBLE FLEX LANE

8. REVERSIBLE ARTERIAL FLEX LANE

8.1. Concept

Consider reversible flex lanes on Park City's corridors, including SR 224 and SR 248, to help improve traffic flow in and out of town. Reversible lanes optimize existing roadway infrastructure during peak traffic conditions by increasing capacity in one direction while reducing it in the other. For example, these lanes might increase capacity into town during morning peak hours and out of town during the evenings. Reversible flex lanes could also be employed to provide a transit only-lane.

According to the UDOT managed lane implementation guide, 'reversible lanes are well suited for corridors with underutilized roadway capacity in one direction of travel. Reversible lanes are especially effective when applied to facilities with heavy directional splits and with parallel routes that can handle "off-peak" direction demand diverted from the reversible lane facility'.[17]

8.2. Background Information

SR 248 Corridor Plan

A corridor plan for SR 248 was prepared for Park City in 2009. The study evaluated reversible lane scenarios on SR 248 from US 40 to Comstock Drive, US 40 to Bonanza Drive, Wyatt Earp Way to Richardson Flat Road (formerly Old Dump Road), and HOV reversible lanes from Wyatt Earp Way to Richardson Flat Road. Alternatives with reversible lanes west of Wyatt Earp Way were expected to fail due to the high number of turning movements on SR 248 into the school zone; these alternatives were not advanced further. The alternatives considered included:[18]

- Alternative 4A: Reversible Lanes from Wyatt Earp Way to Richardson Flat Road
- Alternative 4B: HOV Reversible Lanes from Wyatt Earp Way to Richardson Flat Road

The study showed that typically, demand in the peak direction was sufficiently accommodated through 2020 by the two reversible lane alternatives; however, the off-peak direction wouldn't have been sufficiently served even in 2014.

Analysis showed that Alternative 4B would not function well as a dedicated HOV/bus lane. Alternative 4A was selected for further consideration.

8.3. Best Practices and Case Studies

5400 South Flex Lanes, Taylorsville, Utah

UDOT opened the 5400 South Flex Lanes system in 2012 as a reconfiguration of a seven-lane arterial roadway with three lanes in each direction and a center two-way left-turn-lane. The project installed three reversible lanes on 5400 South. During the AM peak, the roadway operates with four eastbound lanes and two westbound lanes. In the PM peak, the lanes switch to two eastbound lanes and four westbound lanes.[19] The 5400 South Flex Lane system includes lane control signals and pavement markings. UDOT published an Implementation Guide detailing Reversible Lanes.[20]

Photo: Utah Department of Transportation

[17] https://storymaps.arcgis.com/stories/1b578cbb1dfa42e89270237745259c04
[18] https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:59839f5e-2ff7-35b6-baa2-0cb14b02b90e
[19] https://storymaps.arcgis.com/stories/83870f53076d41fc8d3f97663784 0f50
[20] Implementation Guide (arcgis.com)

7th Street Reversible Arterial, Phoenix, Arizona

During morning and afternoon peak traffic hours, the two-way left-turn lane on 7th Street (between McDowell Road to Dunlap Avenue) operates as a reversible lane. Monday through Friday during morning peak traffic hours (6 a.m. to 9 a.m.), the reversible lane provides an additional lane in the southbound direction; and in the afternoon peak hours (4 p.m. to 6 p.m.), it provides an additional lane in the northbound direction.

Left-turn movements are prohibited at arterial and collector street intersections but left-turns are allowed at other non-signalized streets and at driveways for access.

Overhead and roadside signs indicate the reversible lane direction and hours of operation, and signs indicating the prohibition of left-turns are posted frequently throughout the corridors.[21]

Photo: City of Phoenix

SR-9, Roswell, Georgia

The City of Roswell has used reversible lanes on a 1-mile corridor of South Atlanta Street (State Route 9) between Marietta Highway and Riverside Road for over 30 years. This corridor is configured as a three-lane facility with a reversible center lane. State Route 9 is mainly a four-lane arterial facility, except for the reversible lane corridor where several historic places along the road made it difficult to widen the road to four lanes. A reversible lane was implemented as an alternative to widening.

Reversible lanes are implemented with overhead illuminated signs. A sign above each outside lane shows a static arrow, so drivers know it is always available for the direction they are traveling. The center reversible lane shows a red X or a green arrow, depending on the time of day and which direction is using the reversible lane. When the reversible lane changes direction, the system closes the reversible lane for all directions.[22]

Photo: Google Street View

8.4. Stakeholder Workshop Summary

The Stakeholder Committee discussed local street and business access to a flex lane roadway, visual impacts the corridor, and receptiveness of the public.

Stakeholders discussed how reversible lanes may confuse unfamiliar drivers but noted that the lanes might work well given Park City's highly directional and predictable travel patterns. Reversible lanes may make it possible to construct dedicated transit lanes without significant ROW acquisition.

Stakeholders discussed reversible lanes on SR 224 from Canyons Resort to I-80, and from the Deer Valley Roundabout to Richardson Flat. Stakeholders suggested that Deer Valley Drive and Bonanza Drive may also be candidates for stand-alone reversible lanes.

Stakeholders noted that the primary benefit of reversible lanes is directed toward single vehicles. Stakeholders would like to consider how reversible lanes may benefit transit, so that the benefit is not exclusive to single-occupant vehicles.

[21] https://www.phoenix.gov/streets/projects/7th-street-and-7th-avenue-reverse-lanes#:~:text=How%20the%20reverse%20traffic%20lane,operates%20as%20a%20reversible%20lane.
[22] https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/4eb7a2acc16ffe7985257fe00055183e

Table 15 – Reversible Flex Lanes Advantages and DisadvantagesDisadvantages

ADVANTAGES	DISADVANTAGES
Improves vehicle Level of Service (LOS) on primary corridors connecting to Park City.	May negatively impact business and residential access if turn restrictions are required.
Could enable a dedicated transit lane on SR 224 or SR 248.	May result in higher vehicle speeds.
Works well with Park City's highly directional traffic patterns	May be confusing for out of town visitors who are not familiar with the reversible lanes.
	Does not reduce, and may increase, the number of cars entering Park City.

Figure 8 – Rendering of Possible Reversible Flex Lanes on SR 248

8.5. Potential Impacts Summary

Table 16 summarizes potential impacts associated with the reversible flex lane disruptor.

Table 16 – Reversible Flex Lane Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Utilizes existing lanes without acquiring new right-of-way or roadway expansion.	Concept focuses on vehicle travel, may also improve travel time for buses.	Concept may change patterns for accessing businesses.	Concept may reduce delay and congestion, reducing emissions, and improving air quality.

Negative *Minor Negative* *Neutral* *Minor Positive* *Positive*

8.6. Stakeholder Committee Recommendation

Stakeholders recommended advancing reversible arterial flex lanes in Park City if it includes transit improvements and does not require roadway expansion or new right-of-way. Stakeholders recommends traffic modeling to determine if reversible lanes reduce travel times and congestion on different road segments, including Bonanza Drive, SR-248, and SR-224 (Deer Valley Drive). Stakeholders recommends extensive community outreach during project planning and design.

8.7. Recommended Next Steps

Engage UDOT to conduct a Reversible Flex Lanes Feasibility Study of SR 248 or SR 224. The feasibility study should consider:

- **Traffic Analysis:** Determine potential benefits of implementing reversible flex lanes, considering traffic volume, congestion patterns, peak travel times, and future growth projections.
- **Roadway Design:** Evaluate the existing roadway infrastructure on SR 224 or SR 248 to determine if it can accommodate reversible flex lanes. Consider existing intersections, and potential conflicts with other modes of transportation such as pedestrians and cyclists.
- **Safety Measures:** Identify safety measures to ensure the safe operation of the reversible flex lanes. This may include installing signage, pavement markings, and barriers to clearly indicate lane configurations and prevent unauthorized access. Consider additional safety measures such as variable message signs and traffic cameras for real-time monitoring.
- **Operational Procedures:** Develop operational procedures for the reversible flex lanes, including rules for dedicated transit access, lane switching, lane direction, and access points. Consider the use of intelligent transportation systems (ITS) to facilitate lane control and monitoring.

City Council Direction

City Council supports further study of reversable flex lanes with consideration of improved transit service and in-town parking needs.

- **Engagement:** Engage with key stakeholders to gather input and address concerns. Consider public meetings to gather feedback and ensure community buy-in.
- **Education and Outreach:** Develop an education and outreach campaign to inform the public about the benefits and proper use of reversible flex lanes. Consider using various communication channels such as websites, social media, and informational brochures.

9. VEHICLE-FREE ZONE

9. VEHICLE-FREE ZONE

9.1. Concept

Consider vehicle-free streets in Park City. Main Street was specifically discussed, but other streets could also be considered. This concept focuses less on improving travel conditions and more on placemaking, pedestrian safety, and enhancing economic opportunity.

9.2. Background Information

Vehicle free zones are areas closed to or with restricted vehicle traffic, providing pedestrians use of the roadway.

When implemented in a commercial area, businesses are granted use of the sidewalks and portions of the street for expansion of outdoor retail and dining. The pedestrian zone can also be configured to create additional space for trees or recreation areas.

Vehicle free zones can relieve core areas of congestion, providing room for multimodal options including transit, bicycles, and pedestrians.

9.3. Best Practices and Case Studies

Charlottesville, Virginia

In Charlottesville, Virginia, the city's downtown has included an eight-block car-free zone. Opened in 1976, the street is sixty feet wide and laid with brick, extending to storefronts, trees, and seating.

Over time, design changes were made to the Charlottesville Mall.[23] Originally, the mall was encircled by a one-way road that drivers navigated when searching for parking. If drivers could not find parking, they would loop again. In response, the one-way loop was converted to two-way and two cross streets were built on the mall to increase visibility. The east end, once bordered by roadways, was reconstructed into an inviting entrance. Pedestrian crosswalks were installed on blocks outside the mall in each direction.

Photo: Charlottesville Albemarle Convention and Visitors Bureau

Boise, Idaho

During COVID-19, Boise closed 8th Street, also known as "restaurant row" to provide space for restaurants during pandemic related ordinances. Due to the closure's success, in May 2022, Boise City Council approved a concept to redesign 8th Street to keep the street closed to car traffic and allow expanded patio space for businesses while making it safer for disabled and vision-impaired visitors.[24]

Available data shows that 8th Street as a car-free zone may have enhanced business.[25] Data analyzed by Yelp for several cities that shifted to pedestrian-only traffic in 2020, including Boise's 8th Street, found that 8th Street businesses saw a 29 percent increase in consumer activity in comparison to the rest of the city during COVID-19.[26]

Photo: KTVB, Boise, ID

[23] https://www.governing.com/archive/gov-pedestrian-mall-charlottesville.html
[24] https://boisedev.com/news/2022/05/18/boise-8th-pedestrians/
[25] https://www.kivitv.com/rebound/data-suggests-8th-streets-car-free-zone-boosted-business
[26] https://www.bloomberg.com/news/articles/2021-05-11/the-business-case-for-car-free-streets

Car-Free Sundays in Park City

Sunday, June 14, 2020, was Park City's first Car-Free Sunday or "Pedestrian Days" of the summer. Like many cities during the COVID-19 pandemic, Park City closed 0.89 miles of Main Street to vehicles each Sunday from 11 am to 10 pm to support local restaurants and businesses while ensuring residents and visitors felt safe and could be safely distanced from one another.

Restaurants and businesses were able to expand into the streets while people walked or biked up and down Main Street. Pedestrian zones were marked with signs, barricades, and bollards.[27] Car-Free Sundays ended in in 2023.[23]

Park Silly Market

The Park Silly Sunday Market (PSSM) is a non-profit open-air market on Park City's Main Street since 2006. The City is in process of deciding if it will continue in 2024.[24] The closure of Main Street is a shorter distance than that implemented during Car-Free Sundays.

9.4. Stakeholder Workshop Summary

Event closures of Main Street requires significant coordination between Park City Municipal, Park City Fire, and Park City Police Department. Often, when the Main Street closure is implemented, business owners express frustration with staffing, scheduling, parking, and deliveries.

Stakeholders recommends that, if implemented, the closure should be permanent so that business owners can plan and staff appropriately. Consistency will also help reduce visitor confusion.

Stakeholders remarked that the existing sidewalks on Main Street are currently narrow and not wide enough to accommodate heavy pedestrian traffic. Sidewalks and streetscape would need to be improved.

Local business access and parking must be addressed. Implementation will require outreach to the public and business owners. Transit and active transportation access to the vehicle-free zone would need to be improved.

Stakeholders agreed restricting vehicles would likely provide more economic benefit than congestion benefit.

Stakeholders is open to considering other improvements to improve the pedestrian environment, such as removing parking, widening the sidewalks, and converting Main Street to a one-way street.

Stakeholders suggested that parking revenues could be used to pay for improvements.

[27] https://www.deervalleyrealestate.com/park-city-puts-best-foot-forward-with-car-free-sundays/
[28] https://www.parkrecord.com/news/park-city-pedestrian-days-on-main-street-a-pandemic-era-program-eliminated/
[29] https://townlift.com/2023/08/the-future-of-the-park-silly-sunday-market-returns-to-park-city-council-for-discussion-tonight/

Table 17 – Vehicle-Free Zones Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
Vehicle-free zones would provide room to improve safety and comfort of pedestrians in the area.	Vehicle-free zones would not have a significant impact on congestion throughout the City; benefits would be very localized.
Vehicle-free zones may increase consumer interest at restaurants on the pedestrian-friendly streets.	Vehicle-free zones would reduce parking availability which may be of concern to adjacent businesses.
Vehicle-free zones enable stores and restaurants are take advantage of the additional outdoor space.	Temporary vehicle-free zones create uncertainty for business owners.

9.5. Potential Impacts Summary

Table 18 summarizes potential impacts associated with the reversible flex lane disruptor.

Table 18 – Vehicle Free Zones Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Concept reduces required right-of-way for vehicles.	Solution improves multimodal conditions for all users, particularly those who walk or bicycle; however, benefits are focused within high-tourism traffic areas.	Concept improves utilization of right-of-way to highest and best use.	Concept encourages reduced utilization of vehicles, which decreases emissions and improves air quality.

Negative *Minor Negative* *Neutral* *Minor Positive* *Positive*

9.6. Stakeholder Committee Recommendation

Stakeholders recommended advancing pedestrian prioritization concepts on Main Street, coupled with improved transportation options to Main Street, replacing on-street parking with more parking in secondary locations, and considerable community and business district engagement.

If implemented, the restrictions should be permanent rather than tied to or associated with special events.

Stakeholders recommends considering additional pedestrian priority zones throughout town, including near the ski resorts and in the Bonanza Park area

Stakeholders recommends vehicle restrictions to include a safety and circulation plan that accommodates those with mobility disabilities, emergency vehicles, and deliveries.

9.7. Recommended Next Steps

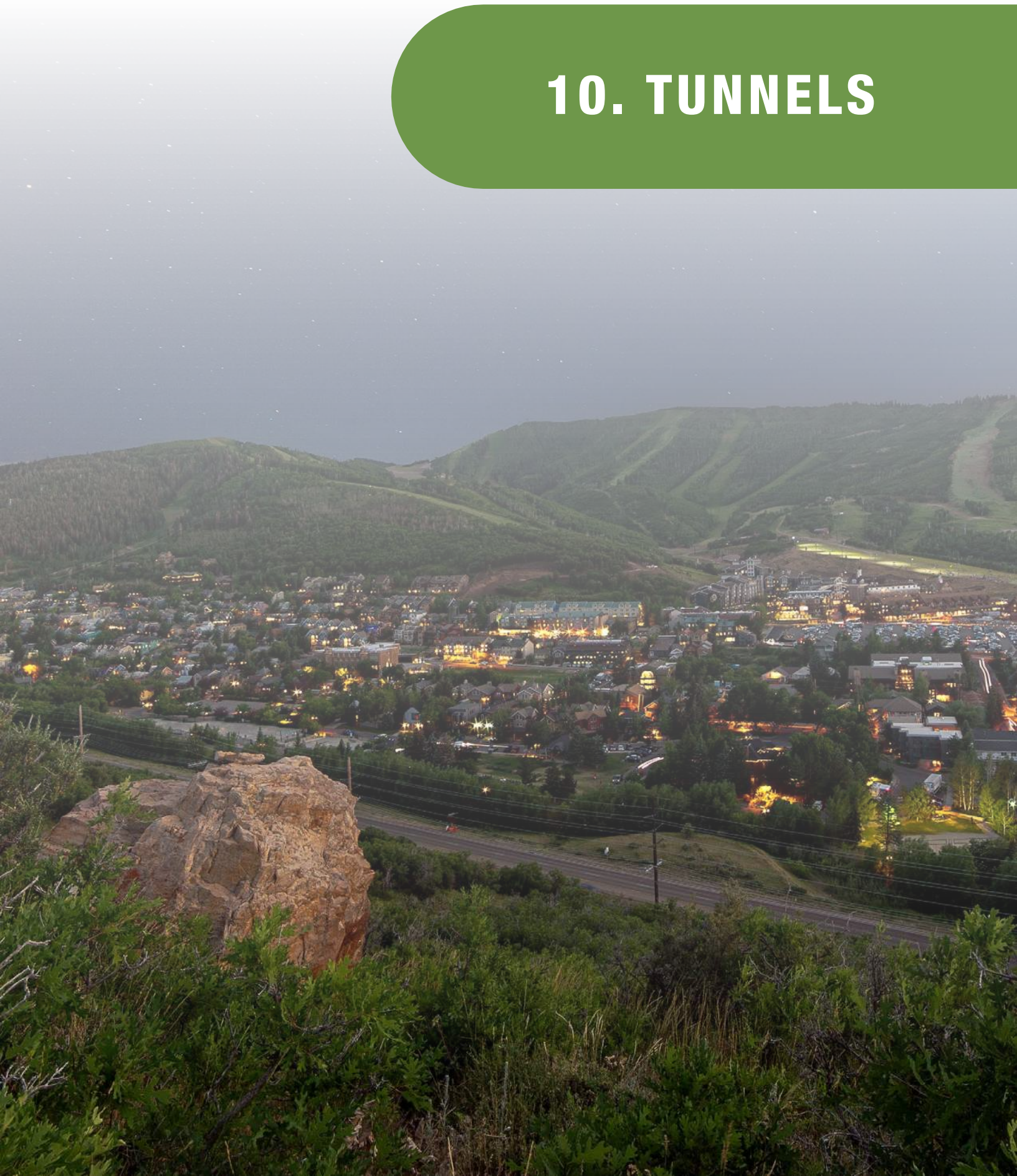
Park City conduct a feasibility and concept study of Main Street as a pedestrian-priority or vehicle-free. The study would consider:

City Council Direction

City Council supports vehicle-free or pedestrian-priority zones as part of broader small area planning and improved transit access. Council expressed concern about impacts to businesses.

- Streets or sections of streets that would be suitable for a pedestrian zone or vehicle-free zone. Consider factors such as pedestrian activity, local businesses, and existing transportation infrastructure. Consider other corridors in addition to Main Street.
- Engage with local businesses, residents, and community organizations, to gather input and address concerns. Hold public meetings or workshops to gather feedback and ensure community buy-in for the proposed pedestrian zone.
- **Traffic Analysis:** Conduct a traffic analysis to assess the impact of closing the street to vehicles. Consider alternative routes, and the potential for increased pedestrian activity. Identify any necessary mitigations or adjustments to nearby roadways.
- **Design and Planning:** Consider elements such as pedestrian walkways, seating areas, landscaping, and lighting. Ensure compliance with Americans with Disabilities Act (ADA) requirements.
- **Temporary Closure or Pilot Program:** Consider a pilot program to evaluate the effectiveness of the pedestrian zone. This allows for adjustments and refinements based on real-world usage and feedback.
- **Communication and Outreach:** Develop a communication and outreach plan to inform the public about the pedestrian zone and its benefits. Use various channels such as websites, social media, signage, and local media to spread the word and ensure public awareness.

10. TUNNELS



10. UNDERGROUND TRANSPORTATION TUNNELS

10.1. Concept

The Boring Company (TBC), known for their work on the Vegas Loop, proposes a network of transportation tunnels to facilitate mobile around Park City. The concept requires deep boring to create underground tunnels with a 12-foot radius. In Las Vegas, TBC operates an underground network of electric vehicles with stations at destinations near the Vegas Convention Center. The privately operated tunnel only allows their vehicles access, thereby bypassing the traffic above ground and providing direct access to their destination. In Park City, the network could connect destinations such as Old Town, Quinn's Junction, Park City Mountain, and Deer Valley Snow Park.

10.2. Background Information

The Boring Company (TBC) manufactured a 12' internal diameter Tunnel Boring Machine (TBM) that can create a tunnel wide enough to accommodate a single vehicle lane. The Boring Company's mission is to construct safe, fast-to-dig, and low-cost public transportation tunnels to eliminate traffic congestion.

Photo: The Boring Company

TBC's first goal is to increase tunneling speed. Prufrock, TBC's third generation Tunnel Boring Machine (TBM) is designed in-house and built in the United States. A typical TBM mines a mile in 8-12 weeks, while Prufrocks's goal is to complete one mile of new tunnel per week. Currently, TBC is able tunnel at a faster pace, approximately one mile per month, than a typical TBM. TBCs second goal is to decrease tunneling costs through vertical integration, standardized tunnel diameters, repurposed dirt, design, and all-electric tunneling equipment. TBC says the industry average cost is $100M+ per mile, while TBC's cost is around $12M-$15M per mile.

In their five-station system in Las Vegas, TBC has demonstrated capacity of 4,400 passengers per hour with a near zero average wait time. During peak times at the Las Vegas Convention Center, they experience a 5-7 minute wait. They have also found that offering express rides (going from stop 1 to stop 5) is more efficient than loading everyone onto a high occupancy vehicle and stopping at stations 2, 3, 4 and 5.

10.3. Stakeholder Workshop Summary

After a presentation from TBC, Stakeholders discussed the feasibility of a tunnel, including if a tunnel could be deep enough to avoid utilities, soil issues, mine shafts, and the ability to bore through mountains notorious for hard rock.

Committee members discussed if a tunnel fits within the environment of Park City, given that an underground tunnel prevents riders from enjoying Park City's views and patronizing local businesses.

Stakeholders expressed concern about funding as the project may not be eligible for the grants that Park City typically receives. TBC proposed funding construction of the tunnels by private investment, and station construction would be funded by owners, either the municipality or private companies. The construction costs of the privately owned and operated tunnels would be recouped through fares or fees priced competitively with taxis and Lyft/Uber.

Fare structure will need to consider compatibility with Park City's "fee-free system". Stakeholders expressed concern with charging fares given Park City's free transit system. Stakeholders expressed concern regarding funding of on-going operations and maintenance.

Stakeholders appreciated the environmental benefits of an all-electric system and the potential to alleviate Park City's traffic issues without ROW expansions.

Stakeholders noted that additional research is required as to how a tunnel could be utilized during off-peak times and for potential other modes of transportation such as freight, active transportation, shuttles, etc.

Stakeholders discussed that that additional capture lots on the perimeter of the town are needed coupled with the construction of above-ground or underground stations.

Stakeholders was excited about the concept, noting that express routes, especially those that deviate from the above-ground ROW, may be more time-efficient than buses.

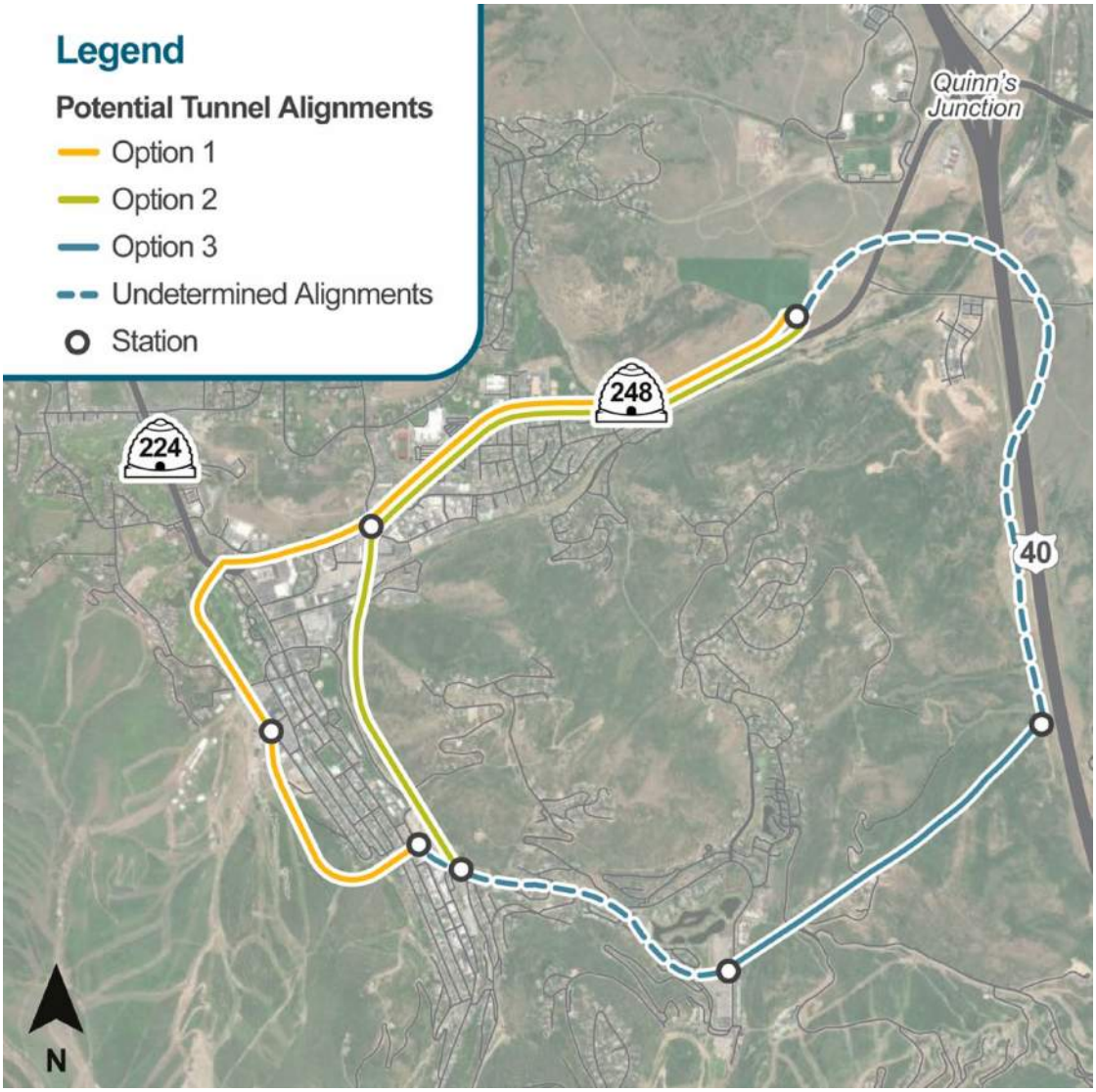
Stakeholders recommends that Park City staff meet with the City of Las Vegas staff to discuss different constraints and lessons learned from their current project.

Figure 9 shows potential tunnel alignments from The Boring Company for Park City.

Table 19 – Vehicle-Free Zones Advantages and Disadvantages

ADVANTAGES	DISADVANTAGES
Network has the potential to reduce congestion without requiring ROW expansion or introducing conflicts with existing transportation system.	Uncertainty if a tunnel could avoid utilities, soil issues, and mine shafts, and go through mountain rock.
Routes could be designed to be shorter than above-ground routes.	Market analysis required to determine potential use of the tunnel and benefits outside of peak seasons.
Underground tunnels may provide a transportation alternative for commuters.	Size of the tunnels does not accommodate all types of vehicles, including buses and semi-trucks.
	System will provide relatively low-capacity with vehicles restricted to three passengers.
	System would serve a relatively small percentage of the community.

Figure 9 – Potential Tunnel Alignments for Park City from The Boring Company



10.4. Potential Impacts Summary

Table 20 summarizes potential impacts associated with the tunnel disruptor.

Table 20 – Tunnels Potential Impacts Summary

POTENTIAL ROW IMPACTS	POTENTIAL IMPACTS TO MARGINALIZED COMMUNITIES	POTENTIAL LAND USE IMPACTS	POTENTIAL ENVIRONMENTAL IMPACTS
Alignments are away from existing ROW or roadways; concept introduces uncertainty as to ownership of underground right-of-way.	Cost of ridership is likely to be above affordable costs for disadvantaged communities.	Concept introduces new entry points to the region; may catalyze higher-density development at nodes.	Concept requires underground boring, introducing significant knowns

Negative *Minor Negative* *Neutral* *Minor Positive* *Positive*

10.5. Stakeholder Committee Recommendation

Stakeholders recommend advancing conversations with TBC, or other providers, to conduct a feasibility study regarding tunnels in mountain terrain with a mining history. Ideally, TBC or another provider would fund the study. Stakeholders recommended exploration of funding strategies and noted that TBC is not the only company constructing similar tunnels.

Stakeholders emphasized that any tunnel concept should include the ability to move significant users during peak seasons and special events, displace parking to areas outside of downtown and at the resorts, and open new access points into the City. Other uses could be explored during off-peak times.

10.6. Recommended Next Steps

Park City to request that TBC or another provider conduct a feasibility study to consider alignment, geotechnical, hydrology, structural, environmental, and financial considerations. The study should include:

City Council Direction

City Council does not support the use of public funds to advance tunnels. Any future study should be funded by proposing party.

- **Market Analysis:** Assess existing and projected demand and utilization. This includes analyzing population demographics, travel patterns, commuting behavior, tourism trends, and projected growth in the region.
- **Route Analysis and Conceptual Design:** Plan a conceptual design that identifies potential alignments, depth, diameter, and entrance/exit points. Consider factors such as geothermal, terrain, mining history, land acquisition, and potential impacts on surrounding properties and the environment.
- **Existing Transportation Networks Evaluation:** Consider factors such as integration with existing transportation infrastructure, potential to reduce traffic, impact to transit ridership, and equitable access.
- **Financing:** The unique proposal from TBC is atypical to the projects Park City typically pursues. Consider financial strategies and funding options including public-private partnerships, as well as equitable fare-structures.

Park City staff should meet with other locations that have similar systems, including the City of Las Vegas, to discuss advantages, disadvantages, and lessons learned from the concept.

11. RECOMMENDATIONS SUMMARY

11. RECOMMENDATIONS SUMMARY

Table 21 summarizes Stakeholder Committee workshops and Committee recommendations for each topic area. The topic areas are represented visually in **Figure 13**.

Table 21 – Emerging Disruptors Summary

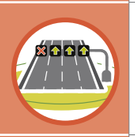
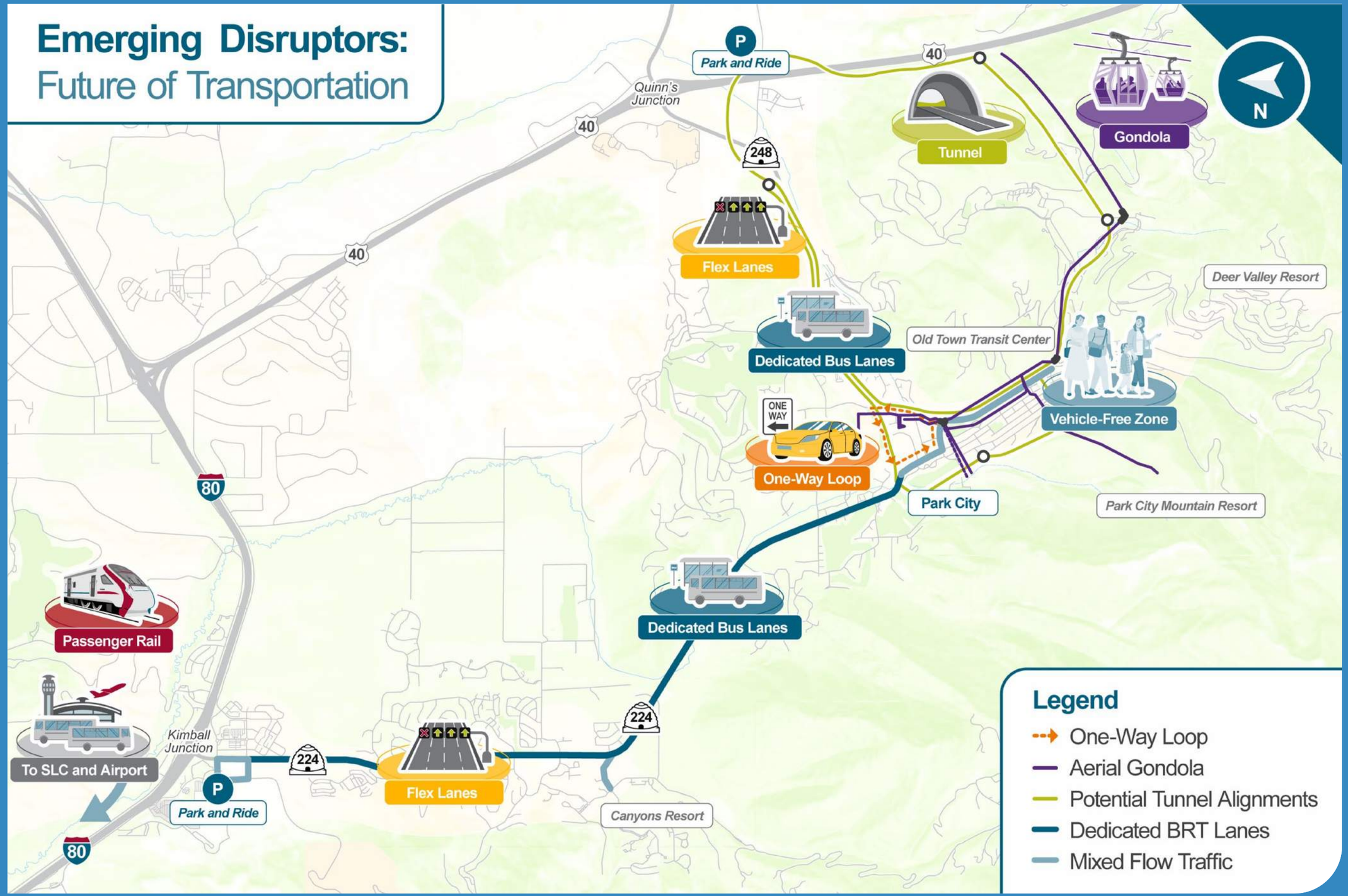
DISRUPTOR	RECOMMENDATION	COST	CHALLENGES	COUNCIL FEEDBACK	NEXT STEPS
PRIORITY TOPICS					
SLC AIRPORT CONNECTION 	**Support** advancing a high-capacity shuttle from the SLC Airport to Park City by engaging with stakeholders and identifying partnerships to implement this low-cost investment that would benefit multiple stakeholders	$	» Strategic partner support » First/last mile connections » Logistics	» Support to advance this topic as quickly as possible	Park City-led effort to engage stakeholders - SLC International Airport, resorts, hotels, airline providers, Chamber of Commerce, Regional Convening working group to gauge interest
AERIAL GONDOLA 	**Support** if efficient alignments directly connect major nodes outside of existing transportation corridors, are competitive with automobile travel times, and minimize impacts on existing structures, including homes.	$$$	» Cost » ROW acquisition » Environmental considerations	» Recognition that this is a significant project with several challenges to overcome, but future study may be warranted	Park City-led review of potential locations and routes, logical termini and ridership demand evaluation
UNDERGROUND TRANSPORTATION TUNNELS 	**Support** advancing conversations with TBC, or other providers, to conduct a feasibility study	$$$	» Cost/Funding » Efficiency/effectiveness » Feasibility	» No public funds should be used to advance this topic.	Private company-initiated feasibility study: geotechnical, environmental, alignment. The Boring Company or another entity would provide these studies. Park City staff to meet with other locations to learn more about successes and challenges.
COORDINATION WITH REGIONAL PARTNERS					
DEDICATED BUS LANES 	**Support** if feasible without significant right-of-way expansion, and if accomplished within existing travel lanes and shoulders.	$$	» ROW acquisition » Roadway expansion	» Identify incentives and disincentives to move more people via transit	Engage regional partners to explore opportunities to repurpose travel lanes to transit-only lanes
REVERSIBLE FLEX LANES 	**Support** if includes transit improvements, demonstrates increased capacity, and does not require roadway expansion or new ROW.	$$	» Extensive community outreach and education (residents, visitors, and business owners)	» Supports advancing and further study; explore possibility of dedicated transit lane	Engage regional partners (UDOT) to conduct feasibility study of potential corridor(s)
PASSENGER RAIL 	**Support** advancing conversations with regional partners to bring regional rail to the perimeter of Park City to integrate with Park City's transit network. Rail is not supported internal to Park City.	$$$	» Cost » ROW acquisition » Environmental considerations » Regional support	» Interest in context-sensitive applications of rail	Support coordinated regional efforts to evaluate interest, conduct preliminary screening analysis (logical termini and ridership evaluation)
LOWER TRANSPORTATION PRIORITY					
VEHICLE-FREE ZONES 	**Support** advancing pedestrian prioritization concepts on Main Street, coupled with improved transportation options to Main Street, replacing on-street parking with more parking in secondary locations, and considerable community and business district engagement	$	» Do not tie to events » Deliveries and emergency management access » Public education and outreach campaign (residents and business owners)	» Support to study concept concurrent with small area plans and enhanced transportation connections	Support Park City departments to conduct feasibility and concept study of Main Street; determine infrastructure changes needed; Consider additional pedestrian priority zones throughout town, including near the ski resorts and in the Bonanza Park area.
ONE-WAY LOOP 	**Do not support** as benefits would not be compelling enough to warrant year-round implementation.	$	» Significant public education campaign (residents and business owners) » UDOT coordination » Roadway expansion	» Concern about need to widen SR-248 in order to achieve full benefits	Consider incorporating elements during winter temporary operations; explore potential for smaller loops in Old Town.

Figure 10 – Emerging Disruptors Summary



APPENDIX

Stakeholder Workshop Notes

Workshop #1 Dedicated Bus Lanes/Transit ways

Date Held: Thursday, July 20, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Sarah Pearce, Deputy Park City Manager
- Alex Roy, Park City Planning
- Anna Maki, Park City Planning
- Caroline Rodriguez, Stakeholder Committee
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Tarra McDonald, Stakeholder Committee
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Peter Tomai, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Henry Sigg, Stakeholder Committee
- Christine Hesse, Stakeholder Committee
- Victoria Schlaepfer, Stakeholder Committee

What are the challenges that a BRT extension seeks to improve?

- Targeting the right constituencies and making sure that it is efficient and benefits multiple user groups, not just the workforce users or visitors.
- Reducing friction on the roads, and potentially lowering VMT and decreasing road density.
- Transferring tourists from roadway travel into Park City, which is only adequate if there is parking off the freeway.
    - Capture lots are needed to broaden ridership.
    - BRT needs to bypass traffic to be effective and reduce travel time.

Who does the BRT extension primarily benefit?

- The BRT would need to benefit more than just workforce commuters coming in and out of Park City.

- Would need to benefit visitors, residents, and workforce.

Is Bus Rapid Transit "sufficiently disruptive" to provide a mobility benefit to Park City residents and visitors?

- Is sufficient if it disrupts local streets
- Needs to reduce friction and decrease road density (e.g., get people out of their SOV's).
- Need to understand the resiliency of ridership.
    - Market to those who are already in the city, those who are trying to get into the city, and those trying to leave the city.
    - Must understand the points of friction during the journey of being in, getting in, and getting out.
- As a user, what would make you use the BRT?
    - High frequency. Bus every 10 minutes?
    - Parking options
        - Easy access to the park and ride locations
    - Keep transit stops short
    - If we had clear capture areas that were areas of interest (people are there anyway)
    - Needs to be efficient
    - Cost and time are big motivators
- Delivering "at the door" is key and an attractor for a lot of people
    - When considering travel time savings, we need to evaluate the entire trip (door to door) instead of just vehicle travel time. Parking and getting to the resort destination (or park and ride lot, commercial destinations, etc.) can take significant time if the drop off location is a distance away.

Recognizing that a BRT system is planned to extend to Old Town Transit Center, what is the appetite to extend the BRT to directly serve PCMR and Deer Valley?

- Travel time appears low for the Deer Valley segment.
- One potential route could be from Gordo, a dedicated bus lane with no or few stops to Deer Valley.

Is there support for roadway widening for the BRT extension (add a lane to the existing roadway)?

- No, the stakeholder committee does not support widening the road to accommodate the BRT extension.
- Stakeholder committee would like to see existing travel lanes repurposed for BRT or dedicated transit, if needed.

What is the appetite for a separate dedicated high-occupancy vehicle (HOV) lane, in addition to

the transit-only lane?

- The stakeholder committee is okay with HOV so long as it is HOV 3+ (4+ is preferred).
- City needs to be diligent in monitoring equity.
- Regarding bus on shoulder allowance, instead of a lane:
    - There are difficulties with merging/diverging into travel lanes and getting into/out of mixed-flow. Also, an operational challenge with snow. (Currently, UDOT has the responsibility to plow shoulders, but they are last on the priority list.
    - Also, a lot of driver error with vehicles pulling into the shoulder.
- If there is no alternative to driving, then this is inequitable.
- HOV requires a high level of enforcement. Need commitment from City and enforcing agencies.

Is this something that we want to advocate is further considered by Park City?

- There is stakeholder committee support for dedicated transit lanes without intrusive infrastructure changes such as widening or major curb or median improvements.
    a. No appetite for this type of improvement if significant ROW acquisition is required.
- Best case scenario: repurpose and existing lane and make it transit (or HOV) only.
- Consider transit only during peak times/congested times.
- Stakeholder committee feels this could be pursued further but stopping at significant infrastructure or ROW requirements. Also, may be beneficial to get the currently planned BRT operational before planning an extension.

Workshop #2 - Dedicated Bus Lanes/Transit ways/HOV Lanes

Date Held: Thursday, July 27, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Sarah Pearce, Deputy Park City Manager
- Alex Roy, Park City Planning
- Anna Maki, Park City Planning
- Gabe Shields, Park City Engineering
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Peter Tomai, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Casey Christ, Stakeholder Committee

Christine Hesse, Stakeholder Committee

What transportation problems in Park City would a One-Way Loop solve?

- Discussion on the benefit of eliminating traffic signals. While the loop does not necessarily eliminate traffic signals, it does simplify the traffic signal phasing required at some locations (less movements that need signalization). Traffic signal timings would change at the existing traffic signals.
- Noted that Kearns Boulevard and Park Avenue (SR 224) intersection often experiences high delay and long-queues.
- With a one-way loop, is there potential for a roundabout at the Deer Valley Drive and Park Avenue intersection?
- If this helps with peak traffic, can it be seasonal? Temporary? Only during certain times of day?
    - Depends on whether physical improvements (adding/removing median, etc.) are included.
    - Would a one-way loop only be beneficial for a month or 3 months of the year?

Who does the One-Way Loop primarily benefit?

- The loop potentially does not benefit businesses and particularly business access along Kearns Boulevard.

- The impacts are felt more by locals. Benefits likely to visitors (decreasing time and congestion into/out of downtown).

Are the trade-offs worth it? Refer to Pros/Cons list below.

- A potential con discussed included travel time, particularly for resorts. Will resorts still support taking guests outside of Main Street if you force them to take a longer route? If they discontinue or decrease the shuttle timing, then the number of rideshares would increase, opposite the goal of reducing congestion and vehicles on the roadway.
- It is likely that locals will learn cut-throughs and "shortcuts." Iron Horse Drive is set up to be a potential cut-through to bypass the loop.
- Safety is a considerable pro. Discussion on the left-turns into/leaving the Fresh Market area on SR 224.
- A con discussed was the potential increased travel time to the hospital, particularly for those who live north of Kearns Boulevard.
- Increased travel time. For those living in Park City and want access to Fresh Market, they would have to traverse most of the loop to get there.
- A potential con to consider – business accesses inside the loop. If the traffic signals are less disruptive and are providing fewer (or shorter) gaps, how bad will the internal accesses get delayed from those trying to leave and join the loop?
- Discussion on this disruptor and the fact it may increase the vehicle miles travelled (VMT) in the area.
- Discussed the potential pro of having one of the lanes of the loop a dedicate bus or transit lane. This is a possibility.

Pros	Cons
• Provides for dedicated transit/BRT lane for most of the loop (Deer Valley Drive/SR 224 would be general purpose/transit lane).	• 2nd eastbound lane on SR 248 required
• Improvement of vehicle Level of Service (LOS) at congested intersections	• Increased travel time (Vehicle Miles Traveled) for cars.
• Improves safety at un-signalized intersections by reducing cross-traffic movements (Snow Creek/Holiday Village)	• Addresses a seasonal condition in Winter vs. greater impacts on typical Summer/off-season travel times.
• Improves PM travel times from PCMR & Deer Valley resorts to SR 248	• Impacts Business/Residential due to changes in access patterns.
	• One-way streets may correlate with higher speeds and decreased levels of driver attention. Pedestrians prefer crossing two-way streets since drivers tend to travel more slowly on them, and vehicular conflicts are more predictable

	• Two-way streets are less confusing for downtown visitors than one-way streets. Visitors driving in a two-way network can approach their destination from either direction.

Is there Stakeholder Committee interest and support to:

a. **Increase capacity on SR 248 east of Bonanza Dr**.
b. Acquire SR 248 from UDOT/nullify the 2019 Council resolution for widening
c. Further investigate a One-Way Loop
- Noted, the previous study by PC did not consider land use changes.
  - Previous study recorded a letter grade LOS improvement in future conditions. Improvements recorded in 2050, less so in the existing and near-term.
- The group acknowledged the density of the uses inside the loop would change.
- A small area plan is currently underway in the area.
- Consensus that more items need to be studied further (land use changes, internal cut-through, business access, how many people affected, how many people experience more/less delay, impacts to other streets by rerouted traffic, etc.)
- What intersection improvements would be required to create the one-way loop? Option to include roundabouts?
- Would like to put up a pilot test run

Is a One-Way Loop "sufficiently" disruptive to provide a mobility benefit to residents and visitors?

- The loop has the potential to change travel patterns. Specifically looking at the larger picture.
  - People leaving PCMR and wanting to get back to Kimball Junction. If they can use SR 248 and the flyovers at US 40 and I-80, do they now re-route that way instead of SR 224 back to Kimball Junction?
- The concept of the one-way loop may not fall into the disruptive technology category since it does not eliminate vehicles from the roadway, and it does not require new or a large amount of technology to implement.
  - However, this may be a concept that could be more easily implementable and not take years to plan, design, and implement – particularly a pop-up pilot test.
- The Stakeholder Committee wants to run a pilot or a test of this concept without a huge capital expense. Potentially try a 10-day or two-week long test run to see how it is received and what could be learned.
  - Evaluate pre-and post-analyses to get an idea of how this concept works in the actual setting.

- How Park City communicates this to the community needs to be strategic because they are likely to be upset and have questions. To run a concept there will need to be education, advertisement, marketing, etc.
- Other considerations
  - Must coordinate closely with UDOT. Will they allow a pilot? And for how long?
  - Without capital investment it would be restriping, temporary signage and cones, officer control, etc.
- Stakeholder committee likes the pilot program, needs to try it out.
- Stakeholder committee is willing to try something within reach. Note, we only have one shot, so it needs to be planned and set up well.
- Stakeholder committee all for a pilot program with minimal capital investment. Do it for an identified period and set expectations for the community.
- Stakeholder committee likes a pilot program. Does not recommend trying this over holidays.
- Stakeholder committee likes the concept, is efficient and moves vehicles. However, five-lanes in one direction is troublesome from a safety standpoint.
- Will have internal meetings to understand the reality of pulling off a pilot program.

Workshop # 3 Aerial Gondola

Date Held: Thursday, August 21, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Sarah Pearce, Deputy Park City Manager
- Alex Roy, Park City Planning
- Caroline Rodriguez, Summit County
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Chris Cushing, SE Group
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Henry Sigg, Stakeholder Committee
- Victoria Schlaepfer, Stakeholder Committee

Gondola Potential and Placement:

- Longer gondola rides during non-congested times.
- Desire to eliminate, rather than shift, traffic.
- Consideration of a public/private partnership for a gondola route from Kimball Junction to Deer Valley to ease visitor traffic.
- Comparisons to European gondolas for directional flexibility. Certain gondolas in Europe transition you from cable to cable and you can go different directions.
- Exploration of potential routes, such as Old Town to Deer Valley, Kimball to Canyons, and crossings over mountains in the area so the alignment is not following an existing road.
- Gondola MUST bypass other forms of ROW. Like going up and over the mountain and going straight to the destination.
- Consideration of ride times and willingness to use gondolas for longer durations.
- Common practice of over-designing for capacity expansion later.
- Challenges of designing capacity, considering cabins, towers, etc.
- Need for capture lots and catchment while reducing parking in town.
- Gondola could decrease traffic on 224 by going over the mountain, there are also very few homes in that area.
- Group discussed gondola following a road would be less impactful vs there being no other way to get there so you need to take the gondola. The gondola must efficient enough and easy enough to get people off the road and out of their cars.

Gondola Logistics and Challenges:

- Challenges of gondola placement in populated areas due to space requirements.
- Corridor dimensions and angle stations for bends.
- Being in a populated area makes it hard for a Gondola, no building can be within 35ft of a residence without a variance.
- Corridor of the gondola is 40ft wide and needs a lot of space.
- Importance of having multiple loading points for guests.
- Debate on gondola impact on following roads and traffic displacement.
- Gondola to activate different access points and spaces on either end of the gondola.
- Expansion of access points to make trips as short as possible.
- Challenges related to building setbacks, corridor width, and angle stations.
- Possibility of resorts having multiple loading points for gondola access.
- Town is going to get more affluent, gondolas are sexy, try to meet expectations of those people.

Gondola as Part of Transit Strategy:

- Highlighting the value of multi-usage gondola systems for reducing pollution.

- Balancing the desire of resorts for visitors with the need for "capture lots" to facilitate gondola access.
- Emphasis on integrating gondola within a larger transit network and creating multiple access points.
- Gondola would not get people out of their cars; demand falls when there is no reason to use it (when cars are a faster option).
- Discussion around the value of a gondola with younger generations in mind. Is a gondola considering the needs/wants of future generations? Are we being forward thinking enough when considering this?
- If gondola is going to be slow, the value proposition is less to younger and future generations.
- Challenges of maintaining demand for gondola rides.
- Need for attractive destinations/nodes for gondola start/end stations.

Gondola and Funding:

- Discussion about challenges associated with public funding for gondola projects.
- Consideration of whether investment in gondolas for in-town travel is effective, given that town traffic is not the main issue.

Gondola as Component of Larger Transit Ecosystem:

- Need for a multi-modal transit transition, where gondolas are part of a larger interconnected system.
- Importance of having "capture lots" to make gondola travel feel like a destination.
- Potential ideas for enhancing certain areas like Richardson Flats.
- Gondolas as part of a distributed transit system from park and ride locations to resorts.
- Gondola's role in inter-town traffic reduction through capture points.

Geographic Constraints and Solutions:

- Debating whether Park City is significantly geographically constrained and how gondolas could provide solutions.
- Park City is not as geographically constrained as places like Telluride where a gondola makes sense.
- A gondola as the main transportation in and out of town is not the preferred choice. But if we can work in gondolas with the rest of the transportation system then the stakeholder group would consider this as a disruptive way to enhance Park City’s transportation network.

Workshop # 4 Passenger Rail

Date Held: Wednesday, August 30, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Alex Roy, Park City Planning
- Caroline Rodriguez, Stakeholder Committee
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Tara Macdonold, Stakeholder Committee
- Peter Tomai, Stakeholder Committee
- Anna Maki, Park City Planning
- Jeresun Atkin, University of Utah Student
- Liz Scanlon, Kimley-Horn
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Henry Sigg, Stakeholder Committee
- Victoria Schlaepfer, Stakeholder Committee

Rail Impact and Configuration

- Rail is more expensive and disturbs more land/ground.
- Consideration of elevated rail vs. ground rail and its impact on land acquisition.
- Operations and maintenance differences between rail and BRT (Bus Rapid Transit).

Differentiating Factors in Rail

- Differences between which type of rail should go where is getting too semantic
- Recognition of differences between public and private passenger rails.

Alternatives and Feasibility

- Discussion of train solutions on a macro scale, potential limitations beyond Quinn's or Kimball Junction, and the idea of a tram.
- Emphasis on the need for a transportation network beyond cars, including light rail, but concerns about price and seamless connections.

- Consideration of public-private partnerships to achieve transportation goals.

Land Use Authority and Transition

- Discussion of land use authority within a 1/3 mile transit zone and its implications.
- Exploration of long-distance solutions outside of PC.
- Lack of support for rail within city limits, and the possibility of transitioning from rail to BRT or light rail.
- Consideration of practicality and alternative solutions like BRT when multiple stops lead to urbanization.
- Debate over the scale of urbanization in the community and the role of capture lots without land use authority.

Economic Viability and Regional Perspective:

- Skepticism about economic viability and concerns about pushing traffic to the boundary if kept local.
- Rail has historically not been a reactionary design mode, been a facilitator for the growth of cities
    - Move people efficiently, drives business and economics
    - If there is resistance to growth, rail is the last thing we should be looking at
    - Makes things efficient
- Advocacy for a regional transportation plan over a local one.
- Historical perspective on rail as a facilitator for city growth and efficiency.
- The role of rail in fostering infrastructure growth and its advantages in navigating the city.
- Consideration of the city's goals, future generations, and land use decisions in the face of expected growth.
- If the idea is to help build and foster infrastructure in Park City, then this is the FIRST thing we should be doing to help foster a growing city
- The ability to navigate in and out of the city is advantageous.
- What is the goal of the city?
    - Future generations are who is going to be using this
    - That is who this will impact
    - Must be prepared with the land use decisions that come with that
    - Growth is COMING, so why not plan for it properly?
    - Can we do buses now with an eye towards rail in the future?

Final Discussions

- This is outside of Park City’s control
- The stakeholder group likes rail within Park City so long as it is also regional, otherwise it does not make a ton of sense.
- Long term, speed is going to equal accessibility and efficiency

- If Olympic funds are used, stakeholder support Park City should investment
- Modes can be scaled. New technologies could help.
- Rail as a standalone is impractical and the stakeholder committee does not support that
- The stakeholder committee feels that if a rail line is regional then it could benefit Park City, but if it is just internal to Park City, there is not support
- The stakeholder committee would support a bigger/higher capacity train on the perimeter of the metro area and a smaller train within the metro area for connectivity purposes.

Workshop #5 Salt Lake City Airport Connection

Date Held: Wednesday, September 6, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Alex Roy, Park City Planning
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Andrew Scanlon, Kimley-Horn
- Tara Macdonold, Stakeholder Committee
- Peter Tomai, Stakeholder Committee
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Scott Burningham, Transit Director
- Carl Miller, Summit County Transportation Director
- Casey Christ, Stakeholder Committee
- Henry Sigg, Stakeholder Committee
- Victoria Schlaepfer, Stakeholder Committee

- We need nonstop transportation from the airport to PC
    - Epic airport shuttle does point to point drop-offs
    - People who are not familiar need to have a comfortable ride and making it easier for them to understand
- We need to make transportation as seamless as possible so there are not cars in Park City
- Incentivizing people from out of town to take other modes of transportation
- Solving friction for people coming into town

    - Shuttle buses need to come down to the transit centers to pick up people who are taking transit to/from the airport
    - Connectivity between resorts is imperative
  - Make it hotels responsibility to take tourists where they want to go, resort to resort
- High traffic patterns are coming from the airport
  - Get people to a distribution center in PC
  - Then replace last mile with a shuttle
  - Locals and tourists benefit from this
- Caveat to drop off at Kimball junction is for residents you need parking vouchers to stay long term
- There are potential capacity issues for the final mile; Suburban's are not the vehicles that should be serving the last mile
- Majority of low occupancy vehicles are locals and regionals
- Other shuttle services (current services) are expensive, but they are reliable
- "Maybe isn't worth the investment because people are going to get here how they want to get here.;" perhaps this is not an effective transportation solution?
- Getting higher occupancy vehicles will benefit environmentally
- Skiing is already expensive, so having an equitable and economic way to get here can be valuable
- Might set Park City apart from other ski resorts
- There are interesting financing models about how to fund this and make it drive utilization
- Go to constituents, there are a lot of stakeholders that could be involved to make this a viable option
- TSA systems over complicates things, we do not need to have the perfect service first try with this… we just need something in place that is better then what is currently available… which is not much.
- The idea of self-tagging bags could be of interest
  - Alaska Airlines has been self-tagging bags for a long time
  - Could have shuttle off load it that way the person does not have to deal with bag check-ins, etc.
- If at the transit center there are delta agents to check your bag, they would just take the bags off at the airport and you would not touch them again
- Delta has a handful of areas they are willing to partner with
- Anything delta can do to stand out they are willing to do
- Delta is struggling to take in bags and store them
- If there were enough support in the community to have free transport that would be game changing, it would incentivize people to take transit
- What is the role of the ski resorts?
  - They are not struggling for people… so what incentive would they have to be a part of this?

    - Vail would like to expand their epic mountain express program; currently is in Colorado only
    - They would welcome the opportunity to work with Park City and expand their program
- "The city and hotels and everyone involved could be working together instead of the city doing an hourly bus for XXX amount of dollars?"
    - Hotels are only a portion of our visitors, so it would not be as effective
    - There are people that do not stay at hotels
    - Marketing tool is to sell park city
    - Need to make this as frictionless as possible
    - Maybe get the chamber involved?
    - In line with the Environmental Bureau tourist plan
- If hotels are going to be a part of this, we need to have representatives of the hotels be a part of this conversation
    - They are critical to support this
    - If people feel like they cannot get around it will ruin retail and the way people perceive this town

- Note: hotel shuttles currently do not go to the airport

Final Discussions

- This is doable
- The investment to make this work is not significant
- This is a win-win for all parties and participants involved
- If we figure out a location for a park and ride this could be successful
- Overnight parking is important
- Capture area needs to be large
- Just because we may not have the parking figured out, does not mean we should stop moving forward with this idea.
- This would be sufficiently disruptive; would this have an impact on reducing traffic?
    - YES
- Committee wants to recommend this idea to city council

Bounds and guidance of the stakeholder committee:

- Must include strategic partners, cannot dump on the users for them to figure out
- They have ability to fund
- Need to have last mile transport
- Challenge is knowing when people are going to show up
- Make it not random
- Low hanging fruit
    - Marketing
    - Outreach to the airports

- Could start an important behavior change
- You want a predictable schedule; frequency may adjust for the congregation of flights coming in at that time
- Minimum level of service, but enhance when you know there are lot of people
- This has legs, we should pursue it
- Even at the highest cost estimate, it is not a huge bar to set

Workshop #6 Arterial Reversible Flex Lanes

Date Held: Tuesday, September 12, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Alex Roy, Park City Planning
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Emily Moser, Kimley-Horn
- Tara Macdonold, Stakeholder Committee
- John Robertson, City Engineer
- Peter Tomai, Stakeholder Committee
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Sarah Pearce, Deputy City Manager

Do we do physical barriers, or signage to guide the reverse lanes?

- Snow and ice would not work well for the zipper machine that other cities use
- Do not want to replicate what they did in Taylorsville, it is not aesthetically pleasing

What push back do we tend to see with reverse lanes?

- Side street considerations
- Making sure people know where to turn
- Do people understand it well?
- Are these in sections where there are the same day to day travelers?
- Could be confusing for tourists, might need explanatory signs and education around how to use them

- Overall potential confusion, and how to mitigate without over signing and cluttering

If we did flex lane on SR 248, where do they go when they get to 248-40?

- Gets clogged
- Could be another receiving lane
- There is certainly a congestion point when you go from more lanes to less
- A lot more issues when you have side streets trying to join the mainline.
- City may have to eliminate lefts, and create more U-turns which will push more traffic internal to the neighborhoods

Highways are successful because there are no entry and exit points

- Left turns would be hard, unless signalized
- Potentially eliminate lefts at Comstock St.
- City is already talking about not allowing left turns on Sidewinder St
- All these considerations might push a lot of U-Turns on 248

We are considering reversible lanes in an area where there would not be 4 lanes…

- Bonanza to Richardson Flat
- Or Comstock to Richardson Flat
- If there was another lane added at Kearns and Sidewinder, that could help the reverse flex lane appeal

Could this be a daily peak hours arrangement?

- Yes, in the wintertime especially during school
- Let people get used to it

Does the stakeholder committee see reverse flex lanes on 224?

- Does get backed up on ski days, but nowhere close to like 248
- Already has 2 lanes into Kearns
- BRT is also going on there
- Great until you get to Park and Kearns
- Only place that could make sense is from Canyons to the freeway
- Lots of avoiding getting on and off at Kimball by going extra miles through neighborhoods and around Kimball junction
- People avoid exiting Kimball Junction and will use Old Ranch Road to cut off SR 224
- From Canyons to freeway would be GREAT for reverse flex lanes
- UDOT has plans to lower SR 224 and have cross streets overpass (grade separated)

Potential flex lanes on Deer Valley Drive

- Potentially do it on Bonanza as well

- City wants a transit flex lane on Deer Valley Dr

What are some tradeoffs? Appetite in community for this?

- The state routes would require state design.
- Those outside the community may benefit though
- Does the community benefit? Meh, not really?
  - If we can flush visitors off roadways in more efficient manners, then it benefits the community
- Might make morning commutes easier
- We might end up creating choke points
  - Roads are narrow and limited
  - Could work with UDOT to change signal times…

How much ability does PC have to deal with Mayflower projects?

- We cannot incentivize Mayflower because its outside of the city jurisdiction
- Because Mayflower has their own parking, they do not think it will affect Deer Valley parking

Are the benefits of this worth exploring more? Or are there too many weird externalities?

- Managing visual impacts will be challenging
- Could be an everyday peak hour situation
- Least expensive
- Could recommend we model it and recommend this only works if all transportation ideas could work together
- Take it from Deer Valley roundabout to Bonanza which would help buses and transit get in/out of transit center
- Reality is there will be more cars on the road
- In America, cars represent freedom, and our systems are built around cars currently
- This could make transit safer and work better
- Make the most use out of the space we have
- The way we frame it to community… better utilization of asphalt we already have
- There IS merit in trying to figure out how to use the pavement better, flex lanes could solve a lot of issues with limited infrastructural changes
- If this was recommended, we need to collaborate with community about ingress onto 248
- Alleviate through longer traffic signal phases or come out at Comstock?
- For people turning left who work at hospital or getting to SLC will be getting better
- Bottleneck is still a concern -- could happen at the roundabout on Deer Valley Dr
- Bringing 3 lanes into the single lane roundabout at Deer Valley will be a congestion pinch point. You get people in there fast, but that will be trouble.
- Ingress will be a mess during peak ski time, but could help egress
- Having additional capacity north of roundabout could help flush capacity

- Once Snowpark starts construction it will create tons of bottleneck

Final Discussion

- Model it and see if it works. Cannot just be reversible on 248, need the dual lefts at the interchange as well. From Bonanza (or even Deer Valley roundabout) all the way to Richardson Flat. Some 224 and 248. (not supported if traffic from PCMR is forced to turn left on park and not go through and then turn left on Bonanza.
- Group is supportive so long as there is conversations with communities and how it would function at turnaround points and roundabouts
- Supportive if has capacity without widening
- City needs to identify how reverse flex lanes can improve transit options so that this idea is not solely for the purpose of SOV's
- Are we incentivizing people not to ride transit and improving capacity? We are not increasing parking, so transit incentive may still be there.

Workshop #7 Vehicle Free Zones

Date Held: Monday, September 18, 2023

***Attendees*:**

- Hannah Pack, Park City Planning
- Alex Roy, Park City Planning
- Brent Crowther, Kimley-Horn
- Makena Gove, Kimley-Horn
- Eric Sweat, Kimley-Horn
- Sam Zimbabwe, Kimley-Horn
- Jeresun Atkin, University of Utah Student
- Caroline Rodriguez, Stakeholder Committee
- Victoria Schlaepfer, Stakeholder Committee
- Peter Tomai, Stakeholder Committee
- Steven Yevoli, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Jonathan Wasden, Park City Parking Manager
- Jenny Diersen, Park City Special Events Coordinator
- Sarah Pearce, Deputy City Manager

Park Silly Sunday Market

- Silly Market has been going on for 17 years
- Been reduced at the request of the community

What parts of the community are less receptive to Silly Market?

- Business owners and residents
- PC has event fatigue
- Business owners are concerned that if there are not parking spaces in front of their businesses that there will be loss in sales
- From the city's standpoint, for vehicle free zones to be successful, there needs to be programming, who manages it and who pays for it?
- Business owners feel like when there is an event like Silly Market (who bring their own vendors) there is competition of business.
- Vehicle free zones need to be separated from events
- Car free zone may have success if you unbundle it from other events…

Challenges and things to consider with Main St as a vehicle free zone

- Wasted opportunity during the pandemic on creating vehicle free zones when people were more accepting of an idea like that
- Is there a way to change the balance between vehicles and pedestrians on Main St?
- On the other side, the capacity on Main Street vs the parking spaces is not significant
- There is not enough sidewalk room on Main St; needs to be flex space on the sidewalk/road

There is a disadvantage to doing vehicle free zones for a limited time…

- Cannot staff someone for 3 days a year type of thing
- Duration of vehicle free zones is important because if businesses can start to take advantage of it… more days the vehicle free zone is in place, the better

Swede Alley has a lot of surface parking, and there could be discussion on that being a vehicle free zone

- Winter could be a challenge for Swede Alley
- How would circulation happen and what would the management look like?

Vehicle free zones could be difficult to execute…

- Limited driving options in PC
- If you force more cars through a small funnel, people may just not go to these vehicle free zones

How do you get to the car free zones?

- Walk or bike from your house or hotel?
- Or go to park and then enter the vehicle free zone
- Prospector could be a place to try a pedestrian friendly/car free concept?
- This concept could be implemented in the small area plan at Bonanza
- Majority of businesses/residents did not want to continue car free Sundays
- Majority voted not to continue car free Sunday. Challenge for businesses to get enough employees to staff their existing store, let alone something outside.
- But was this during COVID, or do these challenges still exist today?
- City cut car free Sunday from 17 times to 11, due to push back from community. Push back from mix of folks, business owners, residents, etc.
- Did not have staff to staff people outside
- Did not want the city to produce this event anymore, and it is the role of the business association
- These may be temporary things, not a permanent closure

Potential Ideas:

- Do not close Main St but widen the sidewalks and get rid of parking; people can still drive through, but not park on it and there would be widened sidewalks
- Pedestrianizing a street and having vehicles on the street would need police sign off
- Potentially making one way traffic flow might help
- PC tried to hay bales to block off a “dining deck;” was a safety hazard and won’t work
- Using other tools to get sidewalk space, instead of a special event permit

Is there a transportation benefit that vehicle free zones provides?

- Infrastructure to get people around would need to be improved (what we have discussed in other workshops)
- There needs to be a network of transit and active transportation
- Everyone has an electric bike now, people like to get around that way but,
- Infrastructure around park city needs to improve first
- Crossing over some main streets can be difficult
- Mapping features allow people to know that the streets are closed, and it will redirect you to where traffic flows. This can help drivers not be clogged right where the vehicle free zones are
- This may be a planning tool, not a transportation tool
- These ideas all stem from an active transportation space rather than a transportation/city wide mobility space
- Still ok though, important to differentiate the two goals of what the city is wanting
- Parking does not matter and can be better utilized (especially on Main Street)

- We need to be cautious though because anything that discourages employees to park will backfire!
- Figuring out ways to help businesses subsize parking for their employees
- Should be free
- Is there anything that prevents flagpole lot from going vertical?

Businesses/Staffing

- The businesses paying rent are saying they are losing business if parking is taken away
- Research shows this is not an accurate statement
- Staffing for a vehicle free zone may be better year round. If this is temporary/random like some special events are, it may be harder for business owners to plan for which may lead to some frustration
- There needs to be some certainty for business owners, residents, and visitors so people have time to get used to this/know what to expect
- There are certain times of the year where this truly makes sense (summertime?) and where it may not make as much sense or will be more difficult to achieve (wintertime).
- Would need to consider winter operations and snowplows… other cities make it work
- We may not have the demand during the day (specifically weekdays) that we are trying to solve for
    - But does there need to be demand? Or can this just be the new normal and leaving it a closed street like our case studies depicted?
    - Sometimes those areas are busy, and sometimes they are not, but overall could be a good thing for the community
- Reducing parking for customers and further incentivizing other modes

How is this funded?

- China bridge comes from transportation funds not the general fund
- China bridge is profitable
- Main street is 80% of daily revenue
- If we increase parking costs, we could use those funds as a subsidy for permanent activations and closures on Main Street or use it for a parking garage which could make a lot of sense
- If parking costs are high there is an incentive to take other modes of transit
- There have been recent comments made that Park City has cheap parking!
- City could make parking free certain times of year (down times) to get people back on Main Street

Community will naturally benefit if a vehicle free zone(s) is permanent

- People want consistency

- Communication about it also needs to be consistent
- If Main Street becomes more communal/there is a place to gather, you will drive a lot more people there

Final Discussion

- Do this permanently
- There will be consistency and businesses on board
- Raise parking fees to use those funds to create activation on Main Street and to subsize other forms of parking facilities
- Account for daily deliveries
- Would incentivize to not limit vehicle free zones to Main Street and create other areas to do it with the same purpose in mind
- Do Main Street, but also consider other areas.
- Is it practical that there will be a delivery period?
- Not closed, but pedestrian oriented for a certain time, currently it is 3am-noon
- There would need to be authorized or emergency vehicle access
- Do not expand special event type closures
- This could leave a positive impact on the community
- Not everyone will see it initially, but it will pay off
- There will be complicated processes to go through, but it is worth the time and energy to try and solve this and make it happen

Workshop #8 Tunnels

Date Held: Tuesday, October 3, 2023

Attendees:

- Hannah Pack, Park City Planning
- Alex Roy, Park City Planning
- Victoria Schlaepfer, Stakeholder Committee
- Steven Yevoli, Stakeholder Committee
- Josh Finken, Stakeholder Committee
- Sarah Pearce, Deputy City Manager
- Henry Sigg, Stakeholder Committee
- Tarra McDonald, Stakeholder Committee
- Casey Christ, Stakeholder Committee
- Herve Lavenant, Stakeholder Committee
- Hunter Brauer, The Boring Company
- Jim Fitzgerald, The Boring Company
- Makena Gove, Kimley-Horn

- Eric Sweat, Kimley-Horn

The Boring Company Presentation

Company wanted to be more efficient in tunneling speed and decrease tunnelling cost ($12-$15M per mile)

Speed goals:

- Currently they are doing 1 mile/per month
- 1 mile/week short term
- 7 miles/day medium term

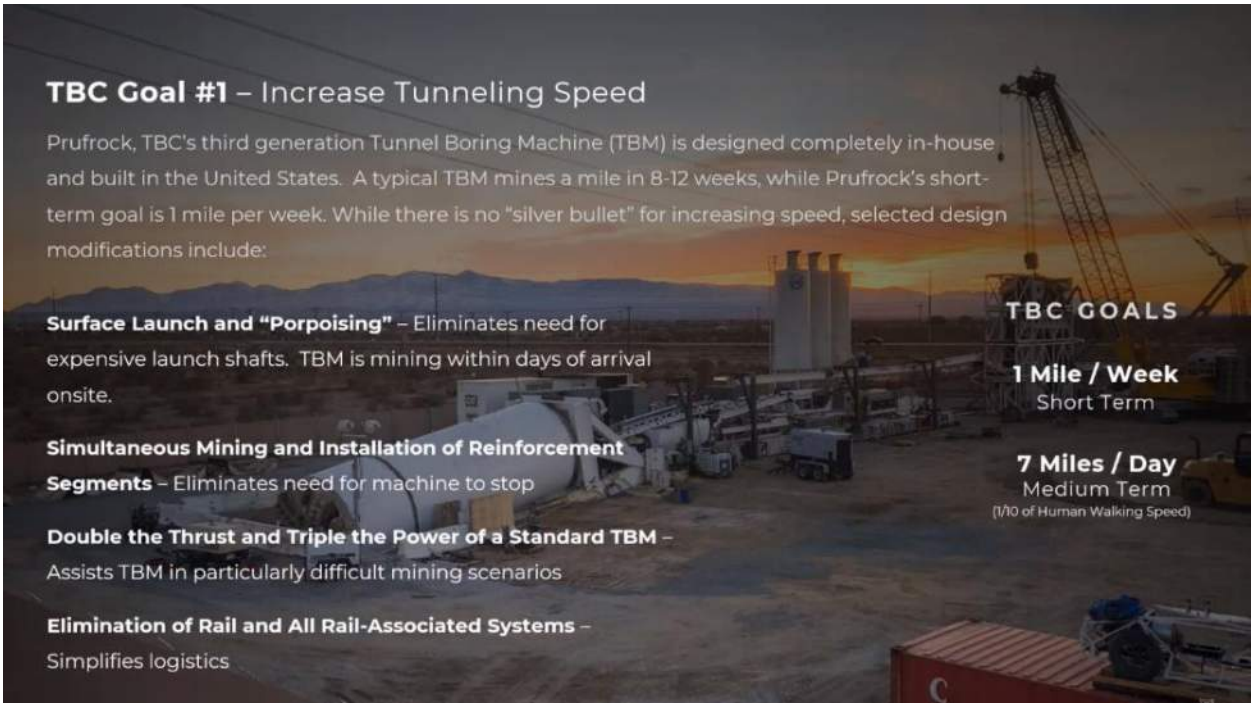
Primary constraint for moving freight is the size of the tunnel and economic viability in how much it will cost.

To what degree can you make a radium curve?

- 600 ft turn radius
- Space constraint comes at the stations themselves
- Currently want the drivers to turn around and go the other way depending on load and demand

High Occupancy Vehicles

- 4400 passengers per hour
- 80-85 vehicles are run in the city at peak times (Las Vegas)
- Offering express rides from station 1 through to 5 is more efficient, then doing something like a train or bus where with stops at stations 1,2,3,4 and 5.
- Continuous flow



Current operations:

- Averages less than 30 second turn over. Note, with ski gear will be a longer time loading/unloading.
- Currently at a 40mph speed limit
- Pricing between $5-$7 per ride

The longer the tunnel, the higher the ridership needs to be to justify.

Autonomy of the vehicles are not a technological constraint, rather a regulations constraint (claims they are 18 months away from that regulation being cleared for them?)

Franchise rights:

- Boring company funds the tunnels
- Owners (municipalities, private developers etc.,) fund the stops
- Recoups their costs through a fair policy

Las Vegas Loop:

- They claim they are over 1.3 million rides given
- They implement safety through their command center

Proposed ideas:

Loading and unloading:

- What to do if gets backed up?
  - There are queuing entry points where cars are on call
  - There is human intervention

What is the turnaround time of community saying yes, to them (TBC) having the capabilities to do it?

- Producing boring machines at a rate of 1 per quarter (every 3-4 months)
- Legal agreements and permitting are the timeline constraints, not machine availability.

Committee Discussion

- This is a no brainer, most environmentally friendly and cost-effective option we have discussed thus far.
- Cheaper than burying power in the Bonanza District!
- Noted that the costs seem low. Would like to vet those costs.
- Cannot see tunnels fitting in with the vibe of the City. In LV, you want to be inside, in the dark. Here in PC, you want to be outside. Want to enjoy nature
- The arrival experience becomes the park and ride. It is a great option to create a new entry point to the City. It moves traffic to somewhere else (and it should be something away from a currently congested point).

- regardless of permitting. Who pays for the feasibility investigation? The Boring Company? If they pay for it, why wouldn't we do that?
- Is it even possible to drill through the mountain? Typically, they are only 50 ft underground. What if you want to go from Mayflower to Park City? Possible?
- What about eventual freight and other stuff? Next step beyond Tesla's?
- How is this different than just adding capacity to existing roadways?
- You are not adding any more traffic or cars at all. Cars will not make it into town.
- We are shifting capacity away. And this capacity will get backfilled. Creating capacity that is quasi invisible.
- This needs to be paired with reduced parking in town.
- Need to consider UDOT roadways. You will create congestion to those touch point loading lots outside of town. What are you doing to our roads?
- Could be a good selling point, that you do not need drivers! (Since drivers are hard to come by right now).
- We want to place people where they are today. Why follow existing system? Just hit the entry/exit points. You do not need a loop to serve the entire city. Just go through the mountain directly and get people to their end points. This reduces overall needed mileage from 10+ to like around 5.
- Need to talk with Las Vegas on lessons learned, hurdles, etc.?
- Frequency and how to manage loading/unloading.
- How do you control the backlog at the loading points? It is not an efficient process.
- In the tunnels everything is controlled (headways, etc.). Cars can be "on-call." Can manage capacity from the command center.

How is this different then adding capacity to existing roadways?

- We are not reducing capacity, we are just shifting it
- Mitigating traffic for a period
- We are not expanding ROW or roadways
- Shifting capacity onto federal and UDOT roads because parking will then be on their roads
- Boring Company have not been successful using federal funds, so what funding mechanisms would be in place?
- Municipal bonds?
- Olympics?

Recommendation:

- Recommendation: This has some validity. Gets away from ROW constraints. Opens new access points. Concerns with feasibility given landscape and environment. Concerns on how to leverage partnerships, uses, etc. on how to pay for it.
- How would we leverage partnership to make it a financially viable project