Teton Pass Corridor Study

Central Federal Lands | Planning, Programming & Environment

Final Report - JANUARY 2024

Central Federal Lands, accessing America's treasures

U.S. Department of Transportation
Federal Highway Administration

DISCLAIMER:

The cost estimates in this study were developed at a very high level. During the next phase of planning, design, or as part of a grant application, these costs will need to be reevaluated and updated based on inflation and other factors influencing the cost of materials and labor.

A Word of Thanks...

This project was funded, in part, by the Wyoming Federal Lands Access Program. The project team would like the thank the Wyoming Programming Decision Committee for selecting this planning study for funding.

Central Federal Lands would like to thank Teton County, Wyoming, the lead agency for the FLAP grant, as well as the Caribou-Targhee and Bridger-Teton National Forests, and the Wyoming Department of Transportation.

Finally, the project team would like to thank the numerous stakeholders and members of the public who participated in this study. Public participation is the foundation of sustainable, equitable, and accountable transportation planning.

The Federal Highway Administration & Federal Lands Highways

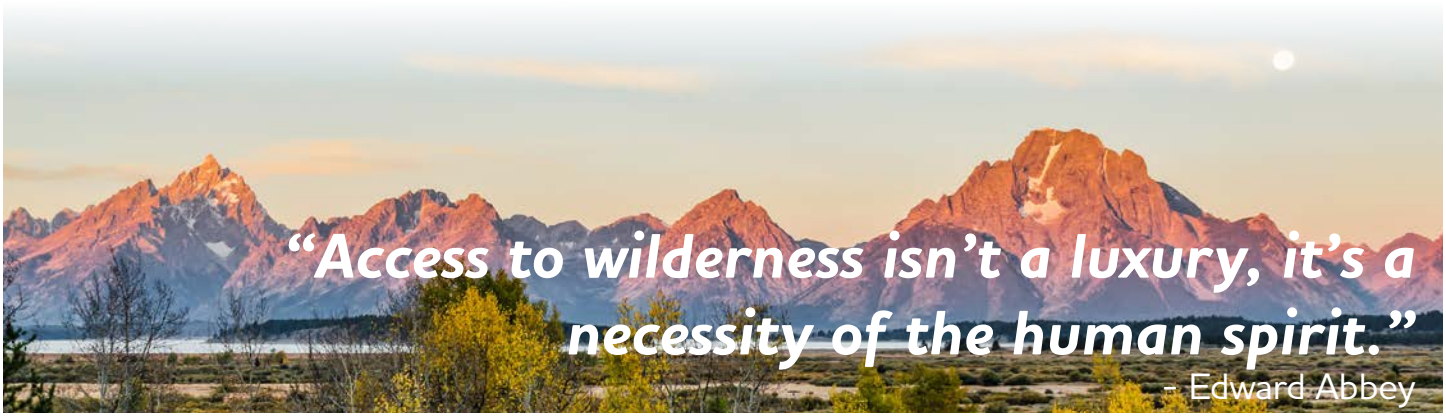
The Federal Highway Administration recognizes the central role transportation plays in the lives of the travelling public. Indeed, transportation influences many aspects of daily life from economic growth to public safety.

Thoughtful, long-term transportation planning is the first step in delivering projects that enhance the wellbeing and quality of life for Americans, residents, and visitors to the United States. Furthermore, multimodal transportation planning, particularly with respect toward non-motorized and active modes, is essential to creating a safe and efficient transportation network.

Federal Lands Highways, a division of the Federal Highway Administration, provides financial resources, planning, transportation engineering, and project delivery for mobility networks that service the transportation needs of US federal and tribal lands partners including the National Park Service, the US Forest Service, the US Fish and Wildlife Service, the Bureau of Indian Affairs and Tribal Governments, the Bureau of Land Management, the Department of Defense, the US Army Corps of Engineers, and the Bureau of Reclamation.

The agency's mission is to deliver effective, efficient, and reliable transportation systems, protect and enhance the Nation's natural resources, and to provide recreational access opportunities for the travelling public. These essential services are provided in all 50 states, the District of Columbia, Puerto Rico, and US Territories through the Headquarters, Eastern, Central, and Western Federal Lands Highway Division offices.

In the federal lands context, non-motorized and active transportation systems are not mere add-ons, but rather central to the outdoor experience and to responsible stewardship of the land. For these and many other reasons, Federal Lands Highways prioritizes the development of transportation infrastructure and services that blend harmoniously into the landscape and elevate the experience of being outdoors.



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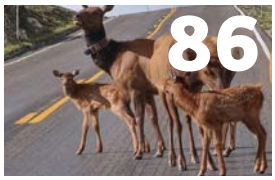
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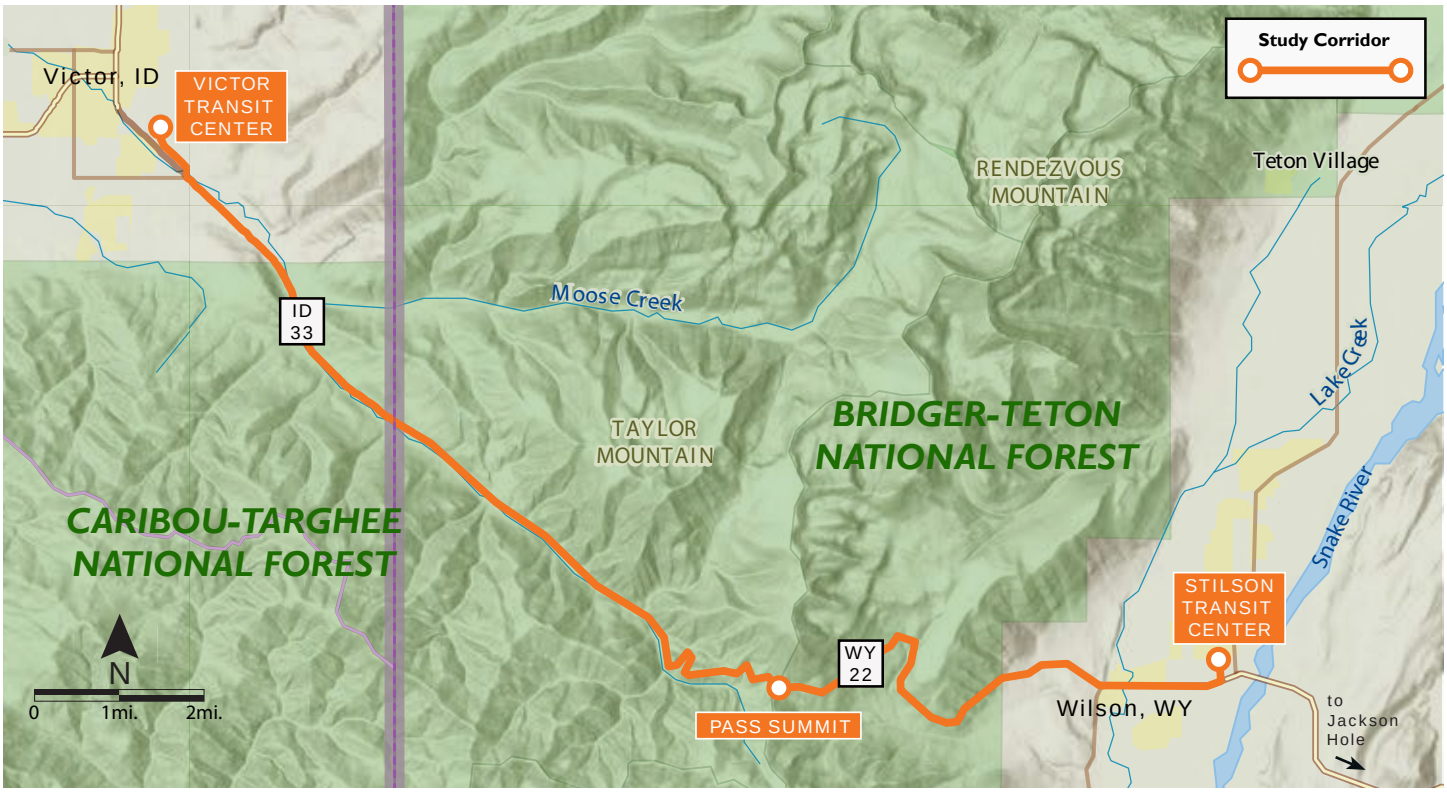
PURPOSE & SCOPE

The Project & the Access Program

Teton County, Wyoming, along with the Wyoming Department of Transportation (WYDOT), and the Caribou-Targhee (CT-NF) and Bridger-Teton (BT-NF) National Forests (herein referred to as the Project Management Team, or PMT) received funding in March 2021 from the Federal Lands Access Program (FLAP) to execute a planning study of the Teton Pass corridor. The Federal Highway Administration's Central Federal Lands Highway Division (CFL) delivered the project as lead agency with support and direction from the PMT.

This study is intended to identify the full range of feasible interventions and improvements (both operational and capital), for eventual implementation by local decision-making bodies. Most identified projects includes planning-level cost estimates as well as safety and environmental impact considerations. Finally, this document can also serve as reference in support of project funding pursuits from either discretionary (grants) or non-discretionary (capital programs) sources. This study does not make any capital or operational recommendations, propose any specific actions, or evaluate alternatives. At the time a project (or package of projects) is proposed for action by local decision-makers, it will be subject to the required level of environmental and public review.



Jackson, Wyoming from Teton Pass

As a Wyoming-funded project, the primary study area includes the segment of WY State Highway-22 between the Idaho state line and the town of Wilson, Wyoming. However, several projects in this study may cause impacts across the Idaho state line along ID State Highway-33. For this reason, a segment of ID-33 is included as part of the study corridor.

The Federal Lands Access Program (FLAP) was established in 23 U.S.C. 204 to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

The Program is designed to provide flexibility for a wide range of transportation projects in the 50 States, the District of Columbia, and the Commonwealth of Puerto Rico. The Access Program is funded by contract authority from the Highway Trust Fund and subject to obligation limitation. Funds are allocated among the States using a statutory formula based on road mileage, number of bridges, land area, and visitation. Projects are selected by a Programming Decision Committee (PDC) established in each State. The PDCs request project applications through a call for projects, the frequency of which is established by the PDCs.

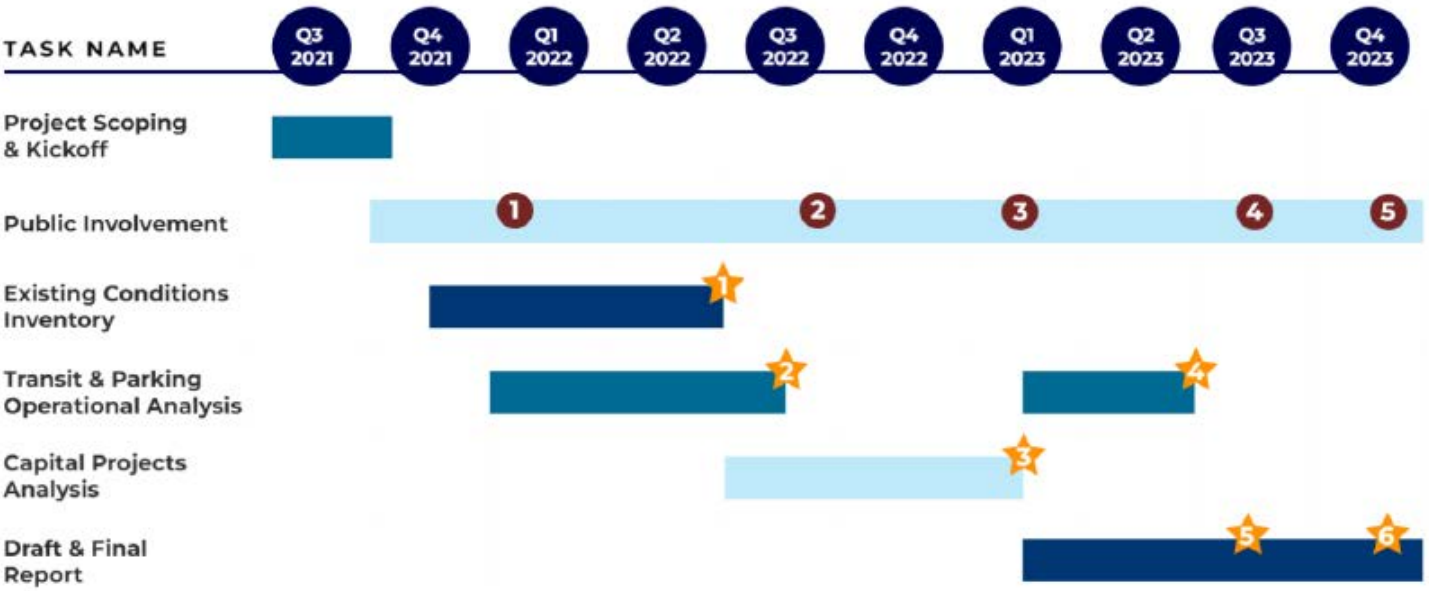
EXECUTIVE SUMMARY

Critical Lifeline, Backcountry Gateway

The Teton Pass corridor, composed of Wyoming State Highway-22 and Idaho State Highway-33, is a critical transportation artery for the residents and visitors of the Teton Valley region. The pass provides access and mobility for people and goods while also functioning as the gateway and portal to varied recreational opportunities.

The towns and communities that support recreation-based tourism must proactively plan for increased visitation and development pressures if they are to preserve the resources and experiential qualities that make the Teton Valley region a worldwide destination. This product is the first step in what will ultimately be a long-term process to implement forward-thinking transportation projects to enhance recreational access while preserving critical mobility needs for residents.

Project Timeline



PUBLIC INVOLVEMENT

1. **January 2022**
   Virtual Public Kickoff Meeting
2. **August 2022**
   In-Person Teton County Public Works Open House Event
3. **February 2023**
   In-Person Public Open House & Stakeholder Meetings
4. **August 2023**
   In-Person Project Closeout Presentation to Teton County WY & ID
5. **September 2023**
   30-Day Public Review & Comment Period

KEY DELIVERABLES

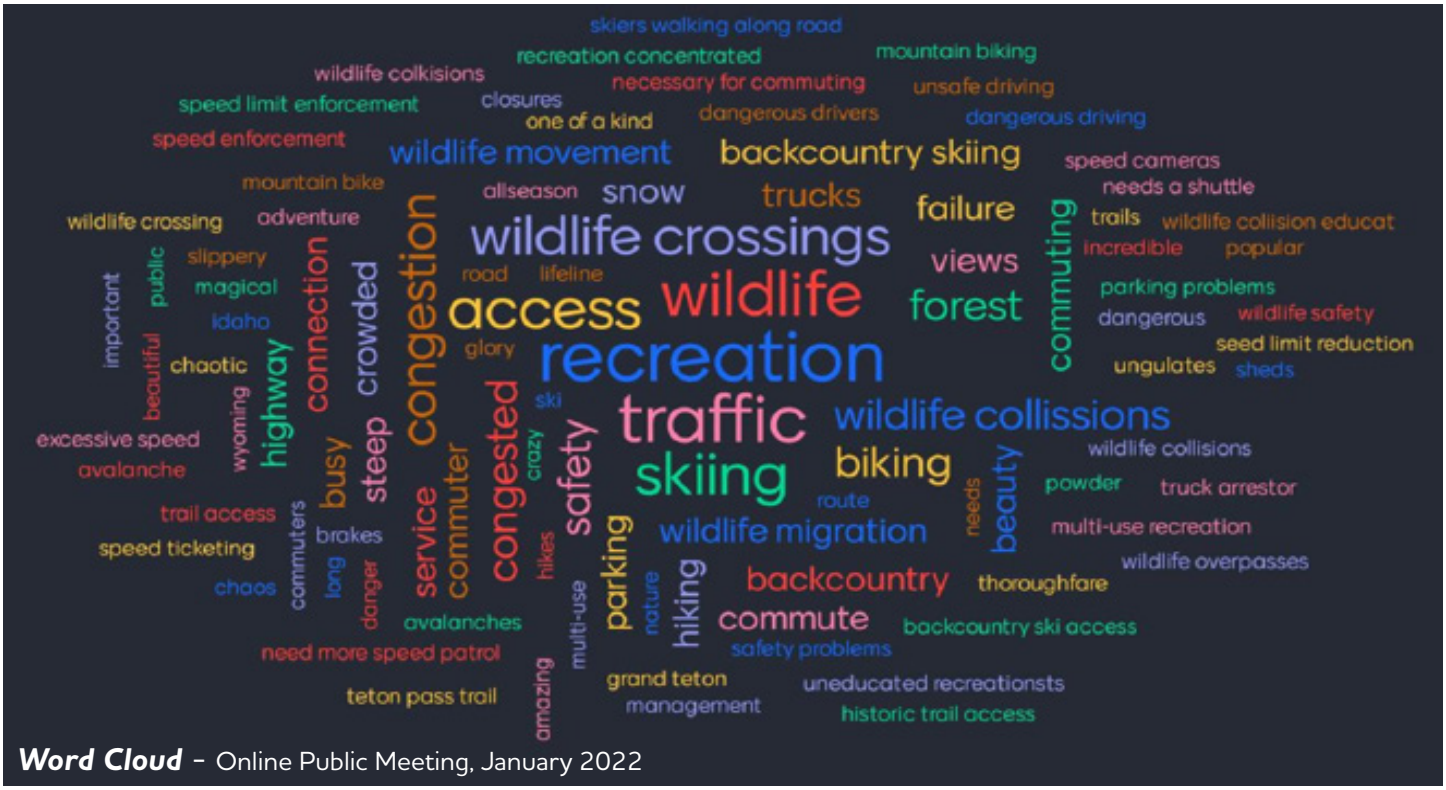
1. **May 2022**
   Existing Conditions Assessment
2. **August 2022**
   Concepts: Transit, Parking, and Capital Projects
3. **January 2023**
   Technical Review Document
4. **May 2023**
   Extend Transit & Parking Analysis
5. **June 2023**
   Final Document: Internal Review Draft
6. **September 2023**
   Final Study Deliverable

The FHWA Central Federal Lands team with support from the PMT kicked off the project in June 2021. The PMT met monthly for the duration of the project to discuss project deliverables, public meetings and other relevant topics. With the PMT's extensive local knowledge of the Teton Pass corridor, meeting monthly and coordination throughout the project timeline was essential to the success of delivering the final report. The figure above shows the project timeline that highlights key milestones for project deliverables and public involvement.

Public & Stakeholder Participation

Public participation is an integral part of the planning process which helps to ensure that any future decisions are made in consideration of and benefit to public needs and preferences. Continuous public involvement brings diverse viewpoints and values into the decision-making process. In brief summary, the PMT and CFL hosted two public meetings at key stages of the planning process, and CFL hosted a project website (with engagement and feedback tools) for the duration of the project.

In January 2022, the project was introduced through a virtual public meeting that served as a forum for gathering initial feedback about the study corridor. The meeting allowed the public to ask questions of the PMT and CFL teams, either during the event or by using an online form. Common themes generally related to matters of safety, recreational access and parking, commercial traffic, wildlife crossings and conflicts, snowsheds, and avalanche dangers. Participants were specifically prompted to provide a brief description of their thoughts about the Teton Pass corridor using 2-3 words.



Word Cloud - Online Public Meeting, January 2022

An in-person public open house in February 2023 presented conceptual capital (infrastructure) and operational (transit and parking management) improvements developed by the CFL team and captured in the technical review document (Teton Pass Corridor Management Concepts: Capital & Operational Options and Scenarios). Both before and after the open house, members of the public were invited to submit feedback related to the technical review document via an online form. Paper forms were also provided at the meeting.

The 'Teton Pass Corridor Study Final Draft' public comment period lasted two months from mid September to mid November 2023 which also included an online form to solicit feedback.

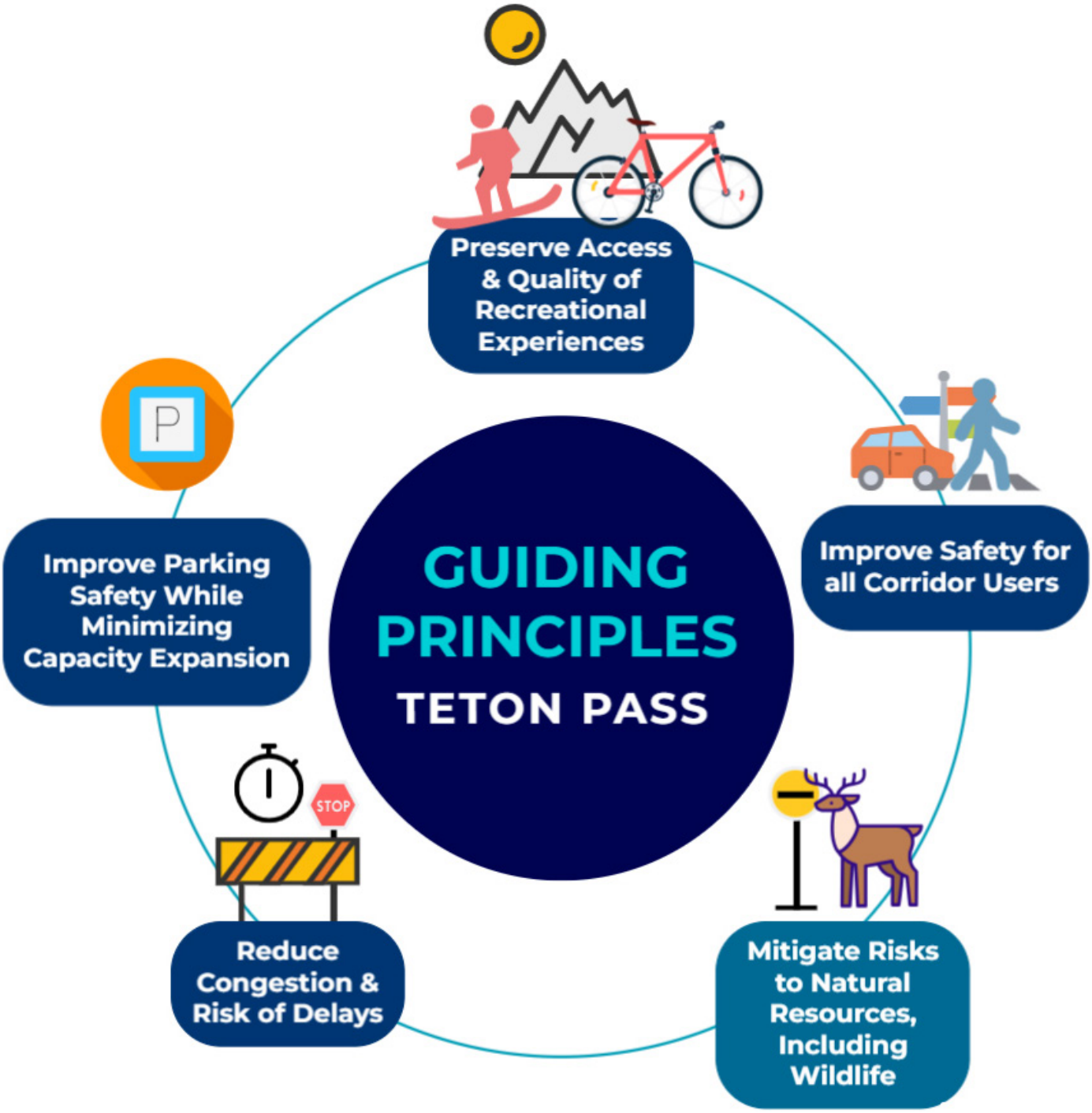
The conceptual improvements offer local decision makers a variety of options for addressing safety, access, congestion, and parking concerns while maintaining the quality of recreational experiences along the corridor. All these concepts are presented, in detail, in the 'Operational Improvements and Interventions' and 'Capital Improvements and Interventions' sections of this study including recreational shuttle routes, parking management, and enhancements to existing access areas.

An overview of bucketed common questions or concerns from the public and responses from the PMT can be found on page 93 in the Public Feedback Overview section. The questions and comments from the public for all public engagement activities can be found in Appendicies A, B, C & D.

Public Open House - Wilson Schoolhouse, February 2023

Guiding Principles

Based on robust public comment, extensive discussions with the PMT, and feedback collected from local/regional stakeholders, the following Guiding Principles informed development of the conceptual Considered Improvements in this study.



Key Study Considerations

The Teton Pass Corridor Study highlights significant challenges arising from population growth, employment opportunities, and increased traffic flow within the study corridor. These factors have led to congestion, safety concerns, and traffic-related issues, impacting both residents and visitors.

To address these challenges, the study identifies several key considerations:

- Implementing a seasonal Teton Pass Shuttle System catering to winter and summer recreational activities.
- Reconfiguring existing turnouts and adjacent areas as shuttle stops with proper circulation and space for vehicles with trailers.
- Exploring relocation of parking areas outside of the WYDOT right-of-way
- Formalizing some existing turnouts to enhance vehicle circulation.
- Increasing signage and incorporating grade-separated crossings to minimize pedestrian conflicts.
- Evaluating the Greater Yellowstone trail missing links along the corridor
- Identifying new areas for recreation access to enhance parking capacity and mitigate site obstructions.
- Integrating wildlife crossings and fencing to address safety and conservation concerns.
- Considering safer integration of snowmobilers particularly at popular locations like Phillips Canyon.

Ultimately, the study aims to provide local agencies with a range of options to pursue future funding opportunities. These considerations aim to enhance safety, alleviate congestion, protect natural resources, and improve the overall visitor experience along the corridor.

Projects & Improvements

The following operational and capital improvements represent the domain of feasible projects for the Teton Pass study corridor. Each has been thoroughly analyzed by the Project Partners and, individually or collectively, are considered to result in desired improvements to the safety, mobility, and access characteristics of the study area. Each project is further detailed in the main body of this study.

Project Type & Location	Improvement Description	Implementation Complexity (Cost)	Condition Improvement (Benefit)	Feasibility Cost / Benefit
Parking Full Corridor	Formalization of Parking Areas & Fee-Based Management Program	LOW	Revenue Generation Parking Utilization	STRONG
Transit East Corridor	Recreational Shuttle from Stilson to Victor	MID	Congestion Mitigation Parking Utilization Access Improvement	STRONG
Transit Full Corridor	Recreational Shuttle from Stilson to Coal Creek	MID/HIGH	Congestion Mitigation Parking Utilization Access Improvement	MID
Infrastructure East Side of Pass	Improvements to Existing Gravel Lot at Phillips Bench	LOW HIGH w UNDERPASS	Safety Access Improvement	MID
	New Alternate Access Lot at Phillips Bench	MID	Safety Access Improvement	STRONG
Infrastructure Summit Area	Improvements to Existing Summit Access Area	MID HIGH w UNDERPASS	Safety Access Improvement	MID
	Highway Realignment & Access Improvements	HIGH	Safety Access Improvement	STRONG
	New Alternate Access Lot at Shovel Slide	MID	Safety Access Improvement	MID
	Shoulder Widening & Rumble Strps	HIGH	Safety Access Improvement Connectivity	MID
	Snowsheds at Glory and Twin Slides	HIGH	Safety Delay Mitigation	MID
Infrastructure West Side of Pass	Improvements to Coal Creek Trailhead	LOW HIGH w UNDERPASS	Safety Access Improvement	STRONG
	HWY-22 Improvements	LOW	Safety	STRONG

Next Steps

The implementation of any individual or series of projects will require local leadership to determine priorities, build consensus, and seek funding opportunities. The Federal Highway Administration and Central Federal Lands will continue to be a supportive partner.

The following actions are offered as potential next steps for Teton Pass stakeholders, governing agencies, and the public.

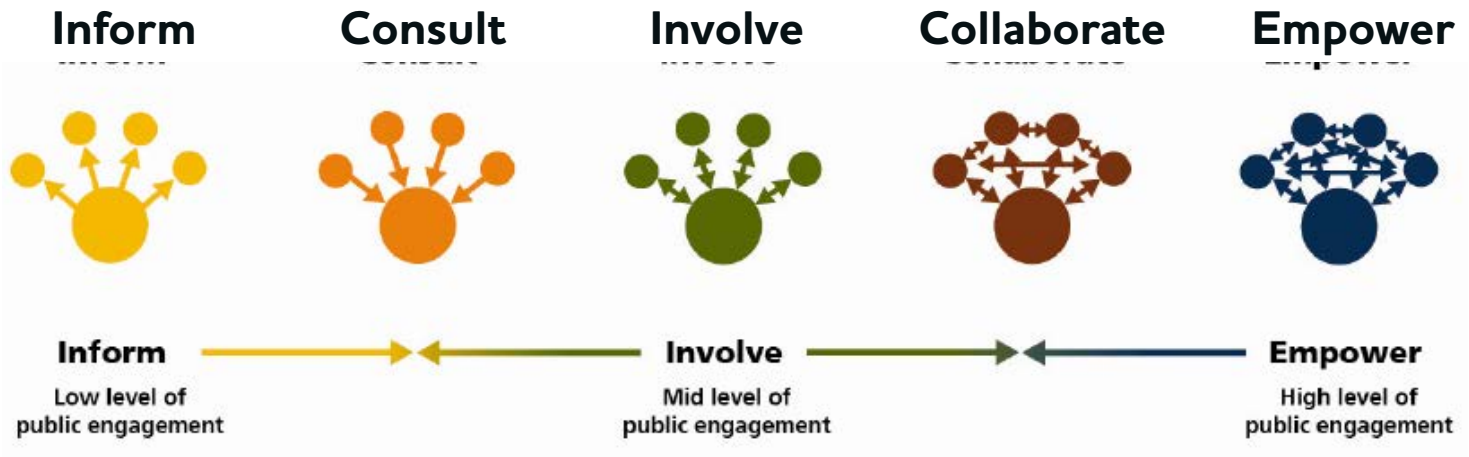
- Establish a formal advisory board or steering committee through a local resolution passed by an elected body (or bodies). It is recommended that any such committee include entities of both Wyoming and Idaho, local federal land managers, and the relevant State DOTs.

- Establish a shared vision for the corridor through a charter, or other foundational document (Statement of Values, etc.), that can provide guidance and a 'North Star' for any actions the committee proposes to take.

- Once a portfolio of projects is identified for implementation, determine which projects are highest priority and seek opportunities for partnerships and funding at the local, state and national levels.

- Identify the appropriate structures and mechanisms for advancing priority projects such as Public/Private Partnerships (P3s), and Special Use Permitting through the US Forest Service.

- Determine the level of public involvement (graphic below) and influence the committee will have and communicate expectations.



Stakeholder Acknowledgments

Leading up to both public meetings mentioned above, as well as early on in the study process, the PMT interviewed (both virtually and in person) key local and regional stakeholders to collect feedback and perspectives on the study corridor. The project team would like to thank each of the following for their time and the valuable information they provided.

- City of Victor, ID: Jeremy Besbris - Deputy City Manager and Carl Osterberg - City Planner
- Teton County, ID: Jade Krueger - Planner
- Friends of Pathways: Katherine Dowson - Executive Director and Chris Owens - Trails Program Director
- Greater Yellowstone Coalition: Kathy Rinaldi - Deputy Director of Conservation, Allison Michalski - Sr. Idaho Conservation Associate, and Teddy Collins- Western Wyoming Conservation Associate
- Wyoming Fish and Game: Alyson Courtemanch - Wildlife Biologist
- Idaho Transportation Department: Mark Layton, Jason Minzghor and Wade Allen
- Idaho Game and Fish: Jacob Grey
- Jackson Hole Ski and Snowboard Club: Alison Sehnert - Executive Director
- Jackson Hole Wildlife Foundation: Renee Seidler - Executive Director
- Mountain Bike The Tetons: Lindsay Nohl - Executive Director
- Southern Teton Rapid Transit: Jared Smith
- Teton Back Country Alliance: Gary Kofinas - Steering Committee Chair, Jen Reddy - Steering Committee Member, Tom Turiano - Steering Committee Member
- Teton County, ID: Michael Whitfield- County Commissioner
- Teton County, WY: Mark Newcomb - County Commissioner
- Teton County, WY: Luther Probst - County Commissioner
- Teton County, ID Public Works: Darryl Johnson- Executive Director
- Teton Freeriders: Harlan Hottenstein
- Teton Valley Trails and Pathways: Dan Verbeten
- US Forest Service Ambassador Program: Jay Pistono - Winter Ambassador
- US Forest Service Ambassador Program: Randy Roberts - Winter Ambassador
- Wison Advoacy Group- Tim Yong
- Wyoming Pathways
- Advocates for Multi Use of Public Lands: Will Mook, Executive Director
- Grand Teton National Park Foundation: Ryan Kelly - Senior Director of Partnership Projects

EXISTING CONDITIONS

Local & Regional Context

The scenic and mountainous Teton Pass corridor is a critical transportation link between the Jackson Hole area in Wyoming and the neighboring Teton Valley in Idaho. While the corridor stretches twenty-four miles between these two community centers, the sixteen-mile section of highway between Wilson, Wyoming and Victor, Idaho (Wyoming HWY-22 and Idaho HWY-33) is currently grappling with substantial safety, access, and capacity challenges. The volume of recreational, commercial, and commuter traffic has risen in conjunction with the overall economic and demographic expansion of the region.

These challenges are exacerbated by the rugged terrain of the corridor and the frequency and intensity of severe winter weather. The route is characterized by steep mountainous topography with severe weather conditions in the winter months. This requires constant avalanche monitoring and maintenance by the Wyoming Department of Transportation.

The abundance of wildlife in the corridor are an important resource for the area. However, the issue of wildlife vehicle collisions (WVC) continue to be a concern for both the traveling public as well as a threat to native wildlife populations.

Administration of the transportation and land uses along the corridor is further complicated by numerous public agencies with overlapping jurisdictional responsibilities, including:

- Wyoming Department of Transportation (WYDOT)
- Idaho Department of Transportation (IDT)
- Bridger-Teton National Forest (BT-NF)
- Caribou-Targhee National Forest (CT-NF)
- Teton County, Wyoming
- Teton County, Idaho

Additionally, numerous non-governmental organizations are actively involved in various special-interest efforts including wildlife conservation, recreation, and backcountry management/stewardship.

Finally, the corridor has emerged as an increasingly sought-after hub for outdoor recreation. Activities like backcountry skiing, mountain biking, road biking, snowmobiling, and hiking thrive here. Notably, there's a nationwide surge in winter recreational skiing within backcountry locales.

Brief History of travel on Teton Pass from 'The Pass' by Doris B. Platts- ***Teton Pass is an ancient travel corridor. People first ventured into the Teton valleys as glaciers receded. The earliest evidence of humans in this area dates back at least 11,000 years. By the time Europeans arrived, tribes such as the Shoshone, Bannock, Blackfoot, Crow, Flathead, Gros Ventre, Nez Perce and others were harvesting the valley's seasonal riches. These earliest travelers were all pedestrians, indigenous tribes traveling via foot over Teton Pass.***

European explorers arrived in the early 1800's, including Wilson Price Hunt's party of Astorians crossing Teton Pass, which was then called "Hunt's Pass". In 1832 the Rendezvous of trappers and traders met in Teton Valley, then called "Pierre's Hole", when hundreds of people crossed Teton Pass in each direction. The earliest walking trail actually started up Moose Creek from the west, and circled back to Teton Pass Summit. This trail was used until the late 1880's when settlers felt the need to bring wagons over and started work on a wagon road using Trail Creek, where today's highway goes. The first wagon crossed Teton Pass in 1886, despite steep and treacherous conditions. Demand for a better road increased after the founding of the Town of Wilson in 1895, and by 1905 the route over Teton Pass was used over the winter, and there were road houses for travelers at Coal Creek, Teton Pass, and Trail Creek Ranch on the east side.

Between Wilson and Victor, the Teton National Forest was created in 1897, and the Targhee NF in 1908. In 1913 a new graveled road over Teton Pass was surveyed and constructed using horse drawn equipment from 1913-1917. Today this is known as the Old Pass Road and the Old Jackson Highway. The Oregon Short Line Railroad tracks reached Victor ID at this time also, increasing the importance of Teton Pass for Jackson Hole. The route was widened in 1919, connecting Jackson to the Victor rail depot, and cattle drives moved large herds over the pass to ship to markets. Skiing was a form of transportation back then. In 1939, a CCC crew cleared a recreational ski trail on the east side three miles long, longest in the region at that time. The Old Pass served travelers until about 1970, when today's highway was opened.

Image 0: Pioneer road over Teto Pass

Over the past ten years, Teton County, WY has observed a substantial upswing in both winter and summer recreational usage on Teton Pass, with this trend projected to persist. While this boon often bolsters local economies, the imperative to anticipate and manage heightened demand across Teton Pass is evident, ensuring a secure passage for both residents and visitors. Access to favored recreational hotspots along Teton Pass is hampered by parking availability. The predicament escalates notably during winter months, when there's a pronounced clamor for backcountry access. Snowbanks along the highway corridor, coupled with regular snow clearance operations, curtail parking options and introduce safety hazards for both recreation enthusiasts and through-traffic.

Sociodemographic, Recreational, and Commuter Trends

The Teton Pass corridor directly serves two counties with a combined population of approximately 36,000 residents. The area accommodates a population comprising full-time residents, second homeowners, and seasonal workers. This transportation linkage acts as an economic catalyst for the region, significantly contributing to the tourism sector, as well as a vitally important workforce connection. Apart from its role in tourism, the Teton Pass Corridor accommodates various businesses relying on the transportation network to ferry goods and services. Despite its thriving industries generating substantial revenue for the local economy, the region's rapid sociodemographic expansion exerts pressure on the existing transportation infrastructure.

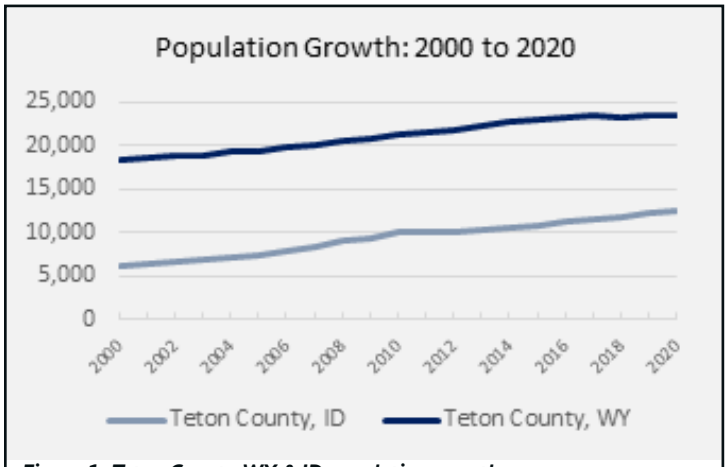


Figure 1: Teton County WY & ID population growth

Residential hubs in Jackson Hole and the Teton Valley have undergone remarkable growth in recent decades. From 2000 to 2020, the combined populations of Teton County (ID) and Teton County (WY) surged from 24,467 residents to 35,998, marking a 47.1% increase (Figure 1). Alongside population growth, the region has experienced proportionate employment expansion since the early 2000s. According to the most recently available data from the U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) Program, job opportunities in Teton County, ID, and Teton County, WY have surged by over 47% between 2003 and 2019. While job numbers on the Idaho side of Teton Pass doubled from around 1,500 to 3,100, economic growth on the Wyoming side is being driven by job creation; over the same period, Teton County, WY added more than 5,800 new jobs (primarily in the service and hospitality sector).

Given the high cost of living on the Wyoming side of the state line, numerous individuals employed in and around the economic and tourist hub of Jackson, WY reside in Teton Valley, ID, commuting daily to work. Among the 20,086 workers employed in Teton County, WY, over half commute from outside the county. This statistic is noteworthy, especially considering that the WY-22/ID-33 corridor is the sole direct route connecting communities on either side of Teton Pass.

Over the past decade, Teton County, WY has witnessed a substantial surge in recreational usage of Teton Pass during both winter and summer, a trend anticipated to persist. Although this trend bolsters local communities economically, there is a distinct need to strategically plan for and manage the escalating demand across Teton Pass to ensure the safe traversal of the corridor and access to public land destinations for residents and visitors.

Highway Geometry and Design Characteristics

The study corridor is a two-lane rural roadway that provides a critical connection between Victor, ID and Jackson, WY. The roadway has a functional classification of 'minor arterial'. The travel lanes are typically 12 feet wide, and the shoulder widths vary from zero to 7 feet. This mountainous roadway includes steep vertical grades as it climbs up over Teton Pass with grades steeper than 6%, with a significant length at 10% (Image 1). There are tight horizontal curves along the segment, with switchback curves having a minimum radius of approximately 17 feet. Sight distance obstructions along the route include cut slopes, vegetation, snowbanks, and horizontal and vertical curves. At lower elevations, the roadside is more forgiving, with recoverable side slopes and wider clear zones that allow errant vehicles to recover. At higher elevations, the roadside is less forgiving, with clear recovery areas limited to about 5 to 10 feet from pavement edge and guardrails are present along the steep mountainous drop-offs.

Image 1: Steep grades along WY-22 near Phillips Bench trailhead

There are numerous signs posted on the pass, including the following types:

- Regulatory, such as speed limit, parking restrictions, and avalanche control.
- Warning, such as advance curve warning signs with advisory speeds, truck speed limits, chevrons, steep grades, rock fall, pedestrian crossing, equestrian crossing, bicycles/share the road, and wildlife crossing.
- Guide, such as destination signs to Teton Village and Victor, ID.
- Other recreational signs, such as binocular symbol, 'be bear aware', and 'wildlife viewing area'.

Most of the corridor has double yellow centerline markings with white edge line markings. There are areas of passing zones where sight distance allows. Within Wilson, there is a striped two-way left turn lane, one marked crosswalk and one underpass, with a new underpass planned at the east entry to Wilson.

Steep grades exist over 5.2 miles of WY-22 prior to the town of Wilson. WYDOT has installed multiple measures on WY-22 to mitigate concerns for errant vehicles experiencing brake failure and restrictions on trucks with trailers including:

- A vehicle arrestor system installed near milepost 7.4, 1.9 miles west of Wilson (Image 2).

- Runaway truck ramp on the north side of WY-22 close to this vehicle arrestor system at milepost 7.2

- A weigh-in-motion scale and signage was installed to warn drivers in advance of the pass.

- A scale and scale house are located on the west side of the pass at milepost 15.7 for use by law enforcement.

- There are numerous grade warning signs and weight restriction devices along the pass.

- Each year there are seasonal restrictions on Teton Pass: no trailer traffic is allowed over the pass from November 15 to April 1 (Image 3). The seasonal restriction may also be extended into fall and spring due to inclement weather.

- An alternate route exists when Teton Pass is closed and for the restriction for trucks with trailers from November 15 through April 1 over Pine Creek Pass and through Swan Valley, Idaho and Alpine, Wyoming along ID-26 and US-89 (Figure 2). For comparison this alternate route from Victor to Jackson takes approximately 1 hour 40 minutes and is 85 miles long compared to 25 miles long along WY-22 and ID-33.

Image 2: Vehicle arrestor system at milepost 7.4 (buckrail.com)

Image 3: Existing signs on the east side of the Snake River Bridge on WY 22 (Photo Credit: Jackson Hole News & Guide)

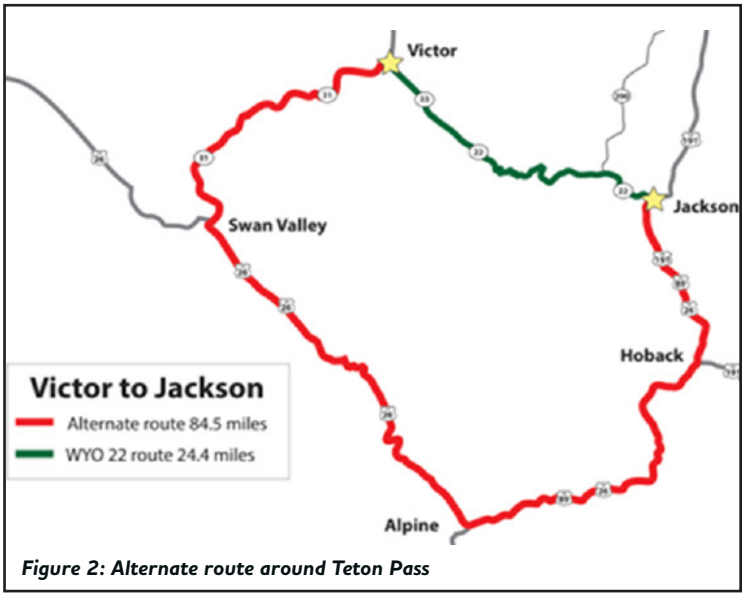


Figure 2: Alternate route around Teton Pass

Traffic Data

Traffic volumes are recorded by WYDOT and reported in the 2020 Vehicle Miles Book. The traffic volume data was sourced from the 2020 Vehicle Miles Book and is summarized in Figure 3

	2009		2019	
	All Vehicles	Trucks	All Vehicles	Trucks
Teton National Forest, MP 5.6 to 11.021	4879	197	9185	325
Targhee National Forest, MP 11.021 to 17.494	5349	216	7524	325

Figure 3: Average daily traffic Volume (Source: WYDOT)

WYDOT has a traffic counter installed west of the WY-390 intersection (Moose Wilson Road) at milepost 4.75. Shown below, the average daily traffic volume recorded at this location in 2020 was 10,307 vehicles per day (Figure 4). Initial data from 2021 demonstrate an increase in traffic at this location, with a projected 2021 traffic volume of 12,568 vehicles per day. From 2011 to 2021, the average annual daily traffic increased at a rate of 35%.

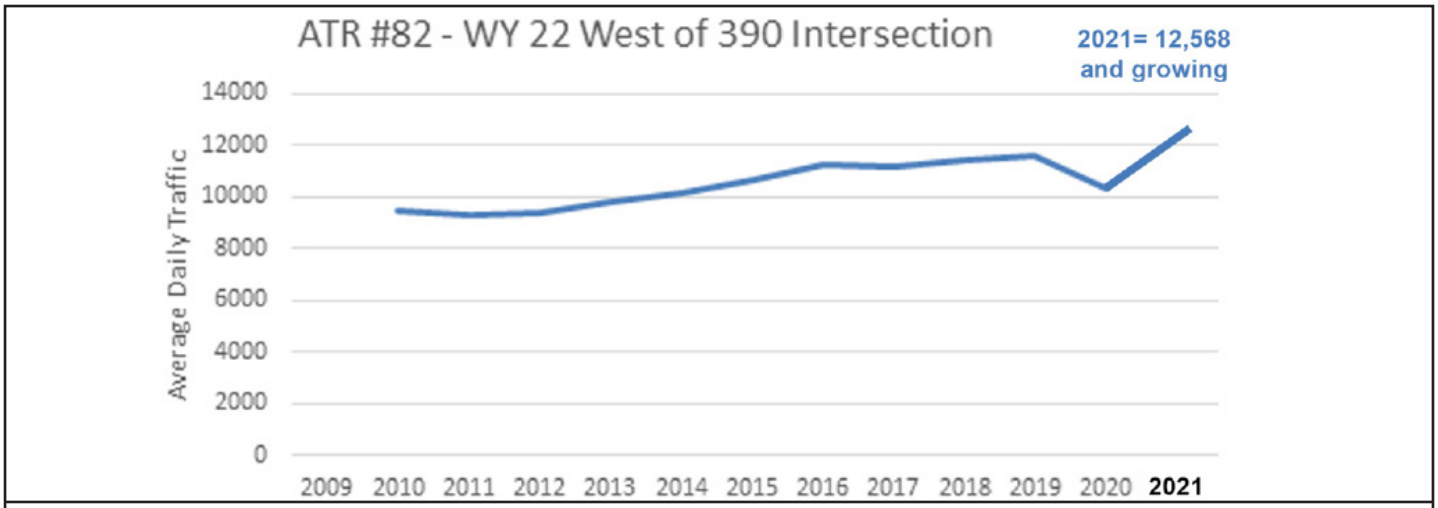


Figure 4: Average Daily Traffic by Year at ATR #82, M.P. 4.75, 2010 to 2021

Idaho Transportation Department (ITD) records traffic volumes east of Victor at milepost 152.432 - ATR #102 (Figure 5). The average daily traffic volume in 2021 was 7,351 vehicles per day. From 2011 to 2021, the average annual daily traffic increased from 4,336 vehicles per day to 7,351 vehicles per day, an increase of 70%.

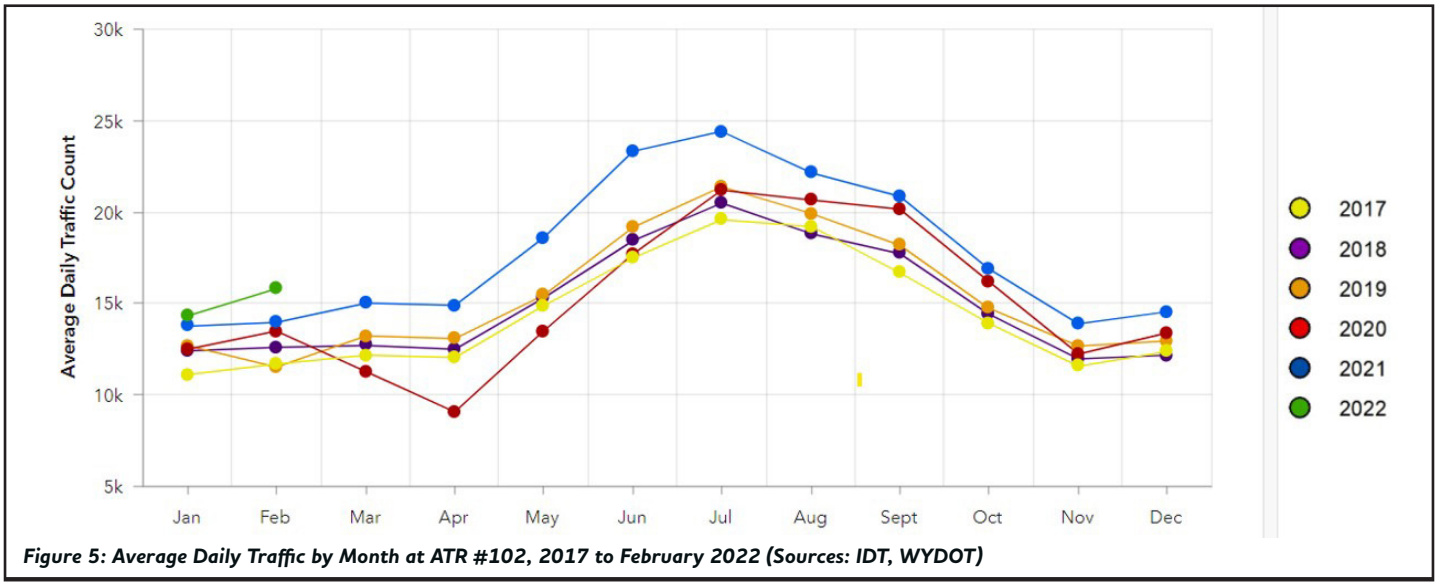


Figure 5: Average Daily Traffic by Month at ATR #102, 2017 to February 2022 (Sources: IDT, WYDOT)

The months with the highest traffic volumes are in the Summer (Figure 6).

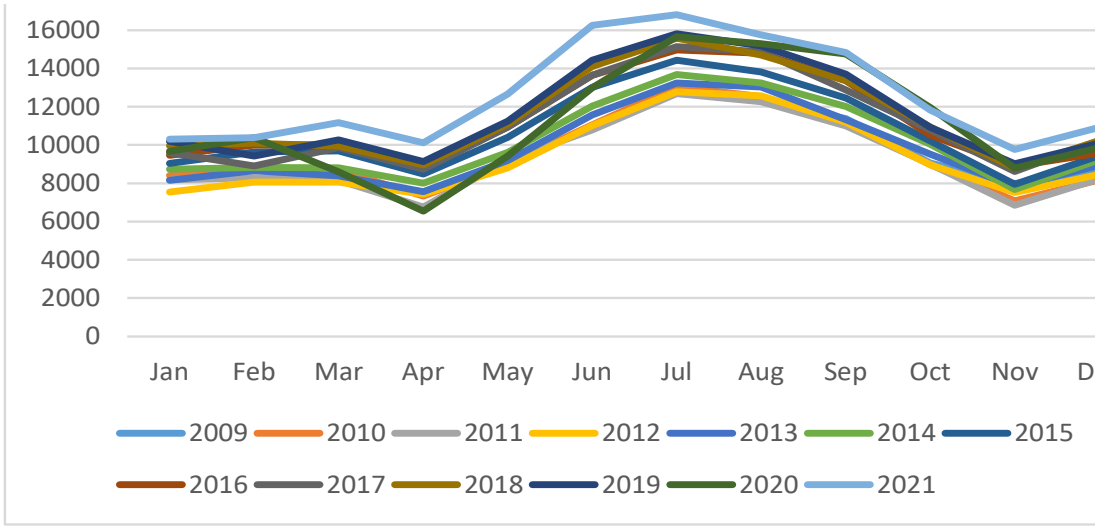


Figure 6: Average Daily Traffic by Month at ATR #82, 2009 to 2021 (Source: WYDOT)

In 2021, WYDOT completed a speed study on WY-22 from milepost 11 to 11.2, primarily focused on the top of Teton Pass. Prior to 2021, WY-22 had a posted speed limit of 55 MPH over the pass. The speed study included an analysis of existing roadway conditions, including roadway geometry, signs, and sight distance, and an analysis of vehicle speeds and pedestrian use. Data collected by WYDOT showed vehicle speeds at the top of the pass were typically less than 40 MPH. Based on the results of the speed study, WYDOT decided to reduce the posted speed to 45 MPH from the Coal Creek Trailhead (milepost 14) to the Old Pass Road intersection (milepost 6.6) near Wilson. The posted speed limit change occurred in Spring 2022.

During interviews with project stakeholders, speed was brought up as a concern at the following locations:

- Near Coal Creek Trailhead, the steep mountainous grades flatten out for vehicles traveling westbound, and drivers tend to increase speed to pass slower-moving vehicles. This is also a location where pedestrians cross WY22 from the Coal Creek Trailhead to access trails on the south side of the highway. This is also an area for wildlife crossings, notably moose. A future pedestrian underpass is set to be implemented at Coal Creek as part of the Greater Yellowstone Trail.

- In general, the speeds at the top of the pass were noted as remaining close to the posted speed. The concern is in the lower elevation, straight sections of road where drivers tend to exceed the posted speed. In passing zones, vehicles will speed up to pass slower-moving trucks, sometimes with unsafe passing maneuvers.

The IDT traffic counter east of Victor (ATR #102) also collects speed data:

- In January 2022, the average speed was 56 MPH and the 85th percentile speed was 63 MPH.
- In July 2021, the average speed was 58 MPH and the 85th percentile speed was 64 MPH.

Crash data for the study corridor was provided by both WYDOT (reporting period 2016 to 2020) and IDT (reporting period 2017 to 2020).

Summary findings for crashes along the ID-33/WY-22 corridor include:

- Common crash types include wildlife-vehicle collisions, roadway departure crashes, and rear end crashes.

- The total number of crashes included in this study is 340. Between 2016 and 2020, there were an average of 68 crashes per year along the corridor.

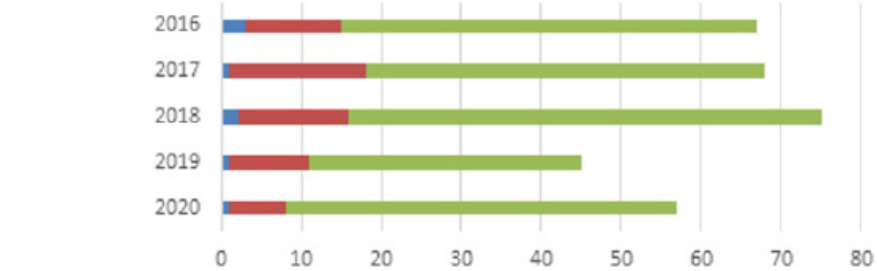
- Summer months have the highest traffic volumes and the highest number of crashes.

- There was one pedestrian-related crash in the crash data (fatal injury, occurred in Wyoming). This pedestrian crash involved an on-duty highway worker but was a non-highway related crash.

- Crashes occurred along the entire study area, with horizontal curves typically having more crashes than tangent sections.

WYDOT provided crash incident data on WY-22 from milepost 4 to 17.49 (Figure 7) for years 2016 to 2020.

Over this 5-year period, there were 8 fatal incidents, 60 incidents involving other injury (none involving bicycles), 78 crashes related to roadway junctions, and 244 events with property damage only (PDO) for an average of 62 crash event incidents (of all types) per year.



	2020	2019	2018	2017	2016
Severe Injury/Fatal	1	1	2	1	3
Other Injury	7	10	14	17	12
PDO	49	34	59	50	52

Figure 7: WY-22 Milepost 4 to 17.49 Crash Count by Severity and Year, 2016 to 2020 (Source: WYDOT)

Crashes are classified by severity based on the most severe outcome associated with the crash, with the following reported in the database (in descending order of severity): fatal, suspected serious injury, suspected minor injury, and PDO. Critical crashes include all fatal and serious injury crashes. Figure 8 presents crash count by severity over the 5-year period.

- Among reported crashes, 8 (3%) resulted in a critical crash (fatal or serious injury crash).
- Minor and possible injuries were reported in 60 (19%) of the crashes.

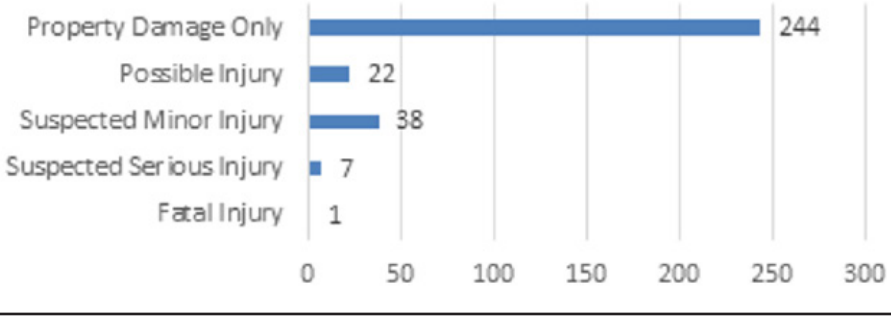


Figure 8: WY22 (Milepost 4 to 17.49) Crash County by Severity, 2016 to 2020 (Source: WYDOT)

The number of reported crashes each year between 2016 and 2020 ranged from 45 to 68, with the number of serious injury/fatal crashes ranging from 1 to 3 crashes per year. The months with the most crashes are November, July, and August. The months with the most serious injury/fatal crashes are May, July, and August. The time of day with the most crashes are 7 AM to 8 AM, 2 PM to 3 PM, and 4 PM to 6 PM. The number of crashes per day varies from 39 to 51, with the most crashes reported on Wednesdays and Thursdays.

According to the WYDOT Investigator's Traffic Crash Reporting Manual, the First Harmful Event (FHE) is defined as the first injury or damage-producing event that characterizes the crash type. The most frequent first harmful events were:

- Non-collisions (Overturn/Rollover)
- Collisions (Motor Vehicle in Transport on Roadway)
- Collision with fixed objects (Guardrail)
- Animals (Deer and Moose)

The five most frequent first harmful events in serious and fatal injury crashes were:

- Non-collisions (MC loss of control, Equipment failure)
- Collisions (Motor Vehicle in Transport on Roadway, Pedestrian)
- Collision with fixed objects (Guardrail)

The Idaho Transportation Department (ITD) provided crash data on ID-33 from the City of Victor to the WY/ID State Line and the reporting period was 2017 to 2020.

A total of 28 crashes is included in the data. There were no pedestrian or bicycle related crashes reported in the database.

Two crashes involved a motorcycle. Three crashes were related to an intersection. The number of reported crashes each year between 2017 and 2020 ranged from 5 to 9 (Figure 9).

The most common contributing factor in reported crashes is an animal in the roadway (15 crashes, or 54% - shown in Figure 10)

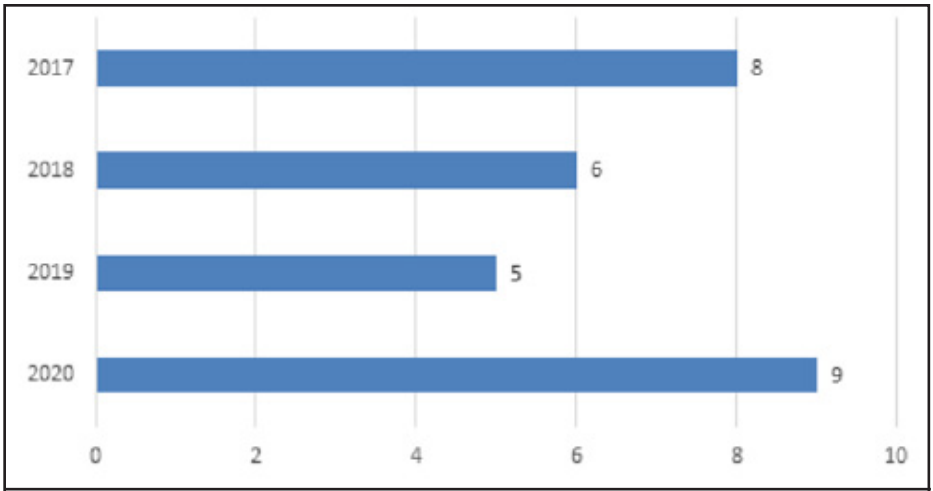


Figure 9: Figure 10: ID-33 Crash Count by Year, 2017 to 2020 (Source: IDT)

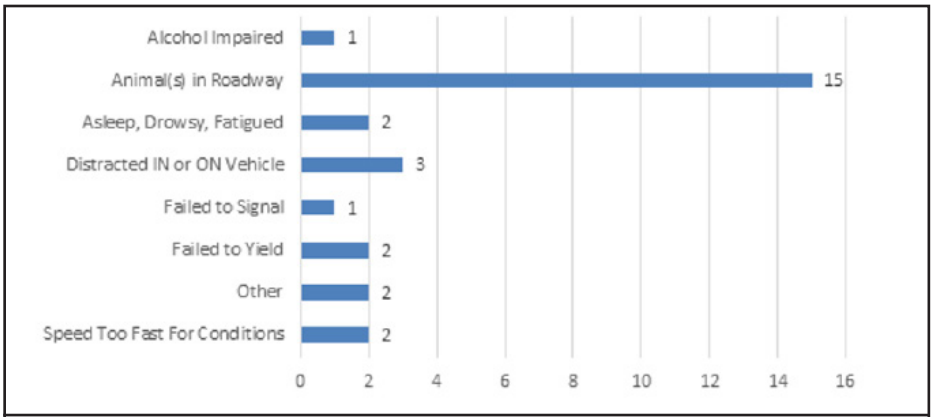


Figure 10: ID-33 Crash Count by Contributing Factor, 2017 to 2020 (Source: IDT)

Parking Capacity and Utilization

Parking along the Study corridor is highly coveted all year long, especially on high use recreation days. Turnout areas adjacent to popular trailheads are mostly on National Forest System land within a Wyoming State highway right-of-way (ROW).

Turnout parking areas within the WYDOT ROW are intended to be used for highway maintenance and operations as well as with some parking areas used to maintain safe access to USFS recreational lands. Some days when parking areas are full, automobiles are parked illegally parallel to the highway and access roads, which present increased risks from limited site line distances, increase of automobile/pedestrian conflicts and potential collisions, pedestrian highway crossings, limited emergency vehicle access and others.

Below, Figure 11, displays assumptions for each column corresponding to the turnout areas in the following Winter and Summer use tables.

Turnout Area	Approx. total square feet (SF) of turnout area
Vehicle Capacity	Determined vehicle capacity numbers by coordinating with BTNF and CTNF
Max. Vehicle Capacity During Daylight Hours	**Winter (10 hours 8AM- 6PM):** Vehicle Capacity (assuming an hourly turnover rate) X 10 = Winter Max Vehicle Capacity **Summer (12 hours 8AM-8PM):** Vehicle Capacity (assuming an hourly turnover rate) X 12 = Summer Max Vehicle Capacity
Approx. Parking Duration (hrs)	A range of minimum to maximum parking duration (example set for below: 2 hours to 4 hours) >Max vehicle capacity divided by 4 hours = low end of parking lot turnover >Max. vehicle capacity divided by 2 hours = high end of parking lot turnover
Est. Daily Visitation	2.4 occupancy rate per vehicle Visitation is highly variable with peak use Dec-March and July-September

Figure 11: Parking Capacity and Utilization Analysis Assumptions

Maximum seasonal parking scenarios are defined in Figures 12 and 13 (below) and each scenario includes areas along the Study corridor where vehicles are parking to access recreation. These turnout areas include designated USFS trailheads, other trailhead access, as well as other areas like waysides and pullouts. Some of these areas are plowed in the Winter season by WYDOT, giving Winter recreationalists the ability to park and recreate. Some areas are not plowed and are only used for parking in the summer season due to avalanche concerns during the Winter months.

Based on trail counter data from Friends of Pathways and use estimates from JH Ski Club, estimated annual visitation in the Teton Pass area (Bridger-Teton National Forest and Nordic facility) is 263,000 people. There was a 14% increase in use on the National Forest between 2020 and 2021.

It is worth noting that not all Turnout Areas in each chart below are equally desirable from a recreation perspective, as some are a greater distance to a trailhead as compared to others.

SUMMER					
Turnout Area	**Turnout Area Total Est. SF**	**Vehicle Capacity**	**Vehicle Capacity Daylight Hours X12**	**Approx Parking Duration**	**Est daily Visitation (2.4)**
Bridger Teton National Forest					
Trail Creek Trailhead	19,692	30	360	(2-4hrs) 90 - 180	216 - 432
Below Truck Runaway	9,972	5	60	1hr 60	144
West of Truck Runaway	12,070	5	60	1hr 60	144
Close to Pond	10,919	5	60	1hr 60	144
Phillips North (along road)	10,523	8	96	3-4hrs 24 - 32	58 - 77
Phillips South (Gravel lot)	9,912	30	360	1-4hrs 90 - 360	216-864
Shovel Slide Access	12,000	34	408	1-2hrs 204 - 408	490 - 979
Top of Pass	20,447	55	660	1-2hrs 330 - 660	835 - 1584
TOTAL Bridger Teton	**105,535**	**172**	**2,064**	**738 - 1,820**	**2,146 - 4,368**
Caribou Targhee National Forest					
Weigh Station	3,220	5	60	2-4 hrs 15-30	36 - 72
Mail Cabin	24,386	52	624	2-4hrs 156-312	374 - 749
Coal Creek	28,392	68	816	2-4hrs 204-408	490 - 979
Waste Pit	26,540	55	660	1-3hrs 220-660	528 - 1,584
Trail Creek CG	5,385	10	120	1hr 120	288
Moose Creek GYT access	14,851	31	372	1-2hrs 186 - 372	446 - 893
Mike Harris	20,046	45	540	1 - 3 hrs 180 - 540	432 – 1,296
Total Caribou Targhee	**140,376**	**400**	**3,192**	**961 – 2,442**	**3,437 - 8,953**
Overall Total	**245,911**	**572**	**5,256**	**1,699 - 4,262**	**5,583 – 13,321**

Figure 12: Maximum Summer parking scenario

WINTER (includes only plowed areas)					
Turnout Area	**Turnout Area Total Est. SF**	**Vehicle Capacity**	**Vehicle Capacity Daylight Hours X10**	**Approx. Parking Duration**	**Est. daily Visitation (2.4)**
Bridger Teton National Forest					
Trail Creek Trailhead	19,692	30	300	(2-4hrs) 75-150	180-360
Phillips East pullout (winter)	12,801	30	300	(2hrs) 150	360
Shovel Slide Access	12,000	34	340	(2-4hrs) 85 - 170	204-408
Top of Pass	20,447	55	550	(2hrs) 275	660
TOTAL Bridger Teton	**64,940**	**149**	**1,490**	**160-745**	**384-1,788**
Caribou Targhee National Forest					
BPA Weather STA pullout	1,944	3	30	(1hr) 30	72
Coal Creek	28,392	61	610	2-4hrs 153 - 305	367-732
Weigh Station	3,220	5	50	2-4hrs 13 - 25	31-60
State Line	29,176	63	630	1-4hrs 158 - 630	379-1,512
Mike Harris	20,046	45	450	1-2hrs 225 - 450	540-1,080
Total Caribou Targhee	**82,778**	**177**	**1,770**	**879-1,900**	**1,670-4,560**
Overall Total	**147,718**	**326**	**3,260**	**944-2,645**	**2,054-6,348**

Figure 13: Maximum Winter parking scenario

Turnout areas along the corridor that are used for parking to access recreation in Figures 12 and 13 were identified by representatives from Caribou Targhee and Bridger Teton National Forests. The total vehicle capacity for both National Forests in these areas total to approximately 326 parking spaces for Winter and 572 spaces for Summer. Assuming an hourly turnover rate, max winter use in daylight hours could be as much as 3,260 vehicles, and because more space is available in summer due to the absence of snow, total daily vehicles could be as high as 5,256.

There is also limited winter parking availability due to protection/parking restriction within avalanche paths Of course, if parking was formalized, then more lots would be plowed, and these numbers would be normalized across seasons. Also, these numbers represent a maximum build out of parking for planning purposes, and it is unlikely that all theoretically available parking will be formalized.

The following are summary points related to parking and recreation connections:

- In the Winter months, walking (or skiing, snowshoeing, etc.) along the Highway shoulder increases safety concerns conflict potential due to the snow berm build up
- Most all recreation use parking is informal and unpermited, meaning there is no formal designated parking stalls or circulation flow
- Recreational access areas located on the opposite side of the informal turnouts create safety concerns crossing conflict potential
- Signage in of themselves do no solve the issue, and only encourage unsafe crossings and false sense of security that WYDOT does not want to encourage, and also violates the MUTCD that state no crossings shall be on high speed high volume roadways.

Transit, Bike & Ride, and Park & Ride

Fixed-route and on-demand/micro transit services in the Jackson, WY region are provided by Southern Teton Area Rapid Transit (START), which has been in operation since 1987. START offers a variety of transit options for visitors and residents, including a free town (Jackson) shuttle, express routes to Teton Village, and weekday commuter services to Teton County, Idaho.

Over the past two decades START's ridership has grown significantly, increasing from approximately 200,000 in 1998 to nearly 1.1 million in 2019. Like most transit service providers, START experienced a sharp decline in ridership during the COVID-19 pandemic in 2020 and 2021, but system usage appears to be rebounding. Currently, START does not provide transit service to recreation destinations along the Study corridor, however there are four stops currently along the Teton Valley to Jackson commuter service route within the study corridor in Wilson, WY and Victor, ID (highlighted in yellow in Figure 14) which consists of three eastbound runs in the morning commute period and three westbound runs in the evening commute period.

AM Trips				
Driggs/Wilson/Jackson		TV1	TV2	TV3
78	Driggs Community Center	5:40	6:25	7:00
76	Victor Depot	5:52	6:37	7:12
74	Victor Transit Center	5:56	6:41	7:16
72	Wilson/Nora's	6:22	7:07	7:42
70	Village Rd Transit Center	6:25	7:10	7:45
56	Maple Way (formerly Kmart)	6:35*	7:20*	7:55*
54	Buffalo Way & Alpine	6:36*	7:21*	7:56*
49	Lodge at Jackson Hole	6:38*	7:23*	7:58*
36	49'er Inn	6:41*	7:26*	8:01*
20	Antler Inn	6:42*	7:27*	8:02*
16	Simpson & Willow	6:44*	7:29*	8:04*
10	Broadway & Stormy Circle	6:46*	7:31*	8:06*
9	Snow King & Willow	6:49*	7:34*	8:09*

PM Trips				
Jackson/Wilson/Driggs		TV1	TV2	TV3
8	Snow King Center	3:45	5:05	6:00
11	St. John's Hospital	3:48	5:08	6:03
17	Simpson & Willow	3:50	5:10	6:05
21	Pearl & Glenwood	3:52	5:12	6:07
35	Pearl & Jackson	3:55	5:15	6:10
50	Scott & Broadway	3:58	5:18	6:13
53	Albertsons	4:01	5:21	6:16
55	Hampton Inn	4:02	5:22	6:17
70	Village Rd Transit Center	4:15	5:35	6:30
71	Wilson/Hungry Jack's	4:18	5:38	6:33
74	Victor Transit Center	4:44	6:04	6:59
77	Victor Depot	4:49	6:09	7:04
78	Driggs Community Center	5:01*	6:21*	7:16*

Figure 14: START Teton Valley Commuter Service Schedule

For context, Figure 15 below shows the START Bus System map with the area along the Teton Valley to Jackson commuter service route through the study corridor highlighted.

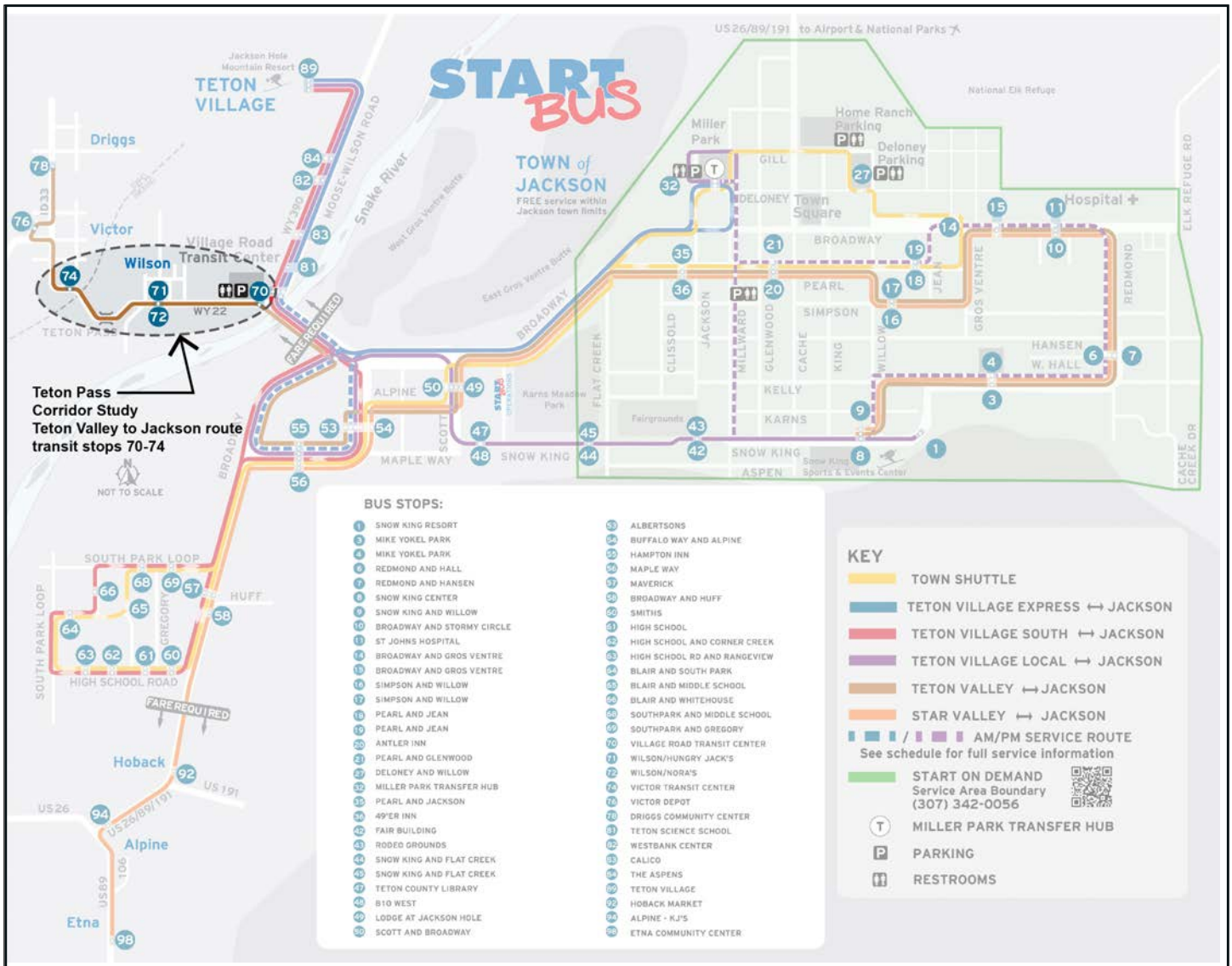


Figure 15: START Bus System Map (Source: Jacksonwy.gov/587/START-Bus)

At the base of both the eastern and western sides of the pass are two important parking and transit facilities. On the eastern side of the pass is the Stilson Transit Center (Image 4; stop 70 in Figure 15) which is a large (850 parking stalls) and developing surface-level parking and transit facility that mainly services the Teton Village ski area along and resort located north of the community of Wilson along WY-390 (not along the Teton Pass corridor study). This lot is secondarily used as a meeting point for backcountry skiers to carpool and travel up the pass and is a stop along various Southern Teton Area Rapid Transit (START) transit routes. The facility includes both secured and unsecured bicycle parking.

On the western side of the study corridor is the Victor Transit Center (Image 5, stop 74 in Figure 15). This facility is approximately $\frac{3}{4}$ of a mile southwest of downtown Victor and opened in 2012. There are 100 parking spaces available. There are no restroom or other amenities at present, but the city of Victor plans to add amenities in the near future. However, the facility is adjacent to the Kotler Ice Arena which, when open, has restroom facilities. There is bicycle and pedestrian access to the Victor Transit Center via the Centennial Trail segment of the regional Greater Yellowstone Trail system.

Image 4: Stilson Transit Center

Image 5: Victor Transit Center

<u>Ride Hailing & Hitchhiking-</u> Although a formal ride hailing service and/or app has not been established to serve recreationists wanting a ride to the top of the Pass, for many years informal 'hitchhiking' has been an alternative. Most people hail rides at an informal area just west of Wilson and across WY-22 from Old Pass Rd (see Figure 45). When the FHWA staff were on site in October 2021, they spoke to several recreationists and learned about

Anecdotal evidence suggests this informal hitchhiking system is well used and deemed safe. However, from a WYDOT operations perspective, hitchhikers can endanger themselves along the shoulders of the highway when snowplows are in operation and when visibility is poor in Winter conditions.

A more formal recreational ride hailing system in coordination with companies like Uber, Lyft or VIA could potentially support ride hailing as an alternative method to recreate along the corridor.

Image 6: Hitchiker along Teton Pass corridor (Source: Avalon7.com)

<u>Recreational Shuttle</u>- The concept for a Teton Pass recreational shuttle has been discussed, but not implemented, by local agencies and has been listed as a potential mitigating solution for congestion along the study corridor. The Teton Back Country Alliance (TBCA) conducted a user survey and found that most users were in favor of a recreational shuttle system. On January 26, 2020 the TBCA organized a free Teton Pass shuttle pilot to transport winter recreationists to the top of Teton Pass with the goal of collecting data and feedback for a potential long-term shuttle operation. The following takeaways on the pilot shuttle were provided by the TBCA Steering Committee Chair:

- *Before the shuttle was launched, WYDOT staff expressed concerns that a westbound shuttle crossing the highway center line into the drop-off area at the top of the Pass would create collision hazards.*
- *In response to WYDOT's concern, a decision was made to create a loop route, starting at the Old Pass Rd. trailhead, continuing to the top of the Pass, descending to Coal Creek, and then retracing the route over the Pass in the reverse direction to complete the loop.*
- *TBCA determined that two passenger vans would be sufficient rolling stock to service the demand.*
- *Exiting from the top of the Pass when traveling westbound is likely the riskiest maneuver on this route. Ascending from the west is also the preferred route for passengers. Making a stop at the "overflow" lot at the summit of the pass could potentially provide improved visibility in both directions.*

Environmental Context and Natural Hazards

The pass corridor traverses a region of the Teton mountain range that is rich in environmental and cultural values. The roadway is threaded between two congressionally designated wilderness areas with the Jedediah Smith Wilderness to the north, and the Palisades Wilderness Study Area to the south. The area is part of the Greater Yellowstone Ecosystem and home to a variety of wildlife including black and grizzly bear, big horn sheep, wolverine, moose, and elk.

The variety of uses and volume of traffic and activity along the corridor poses significant conflicts and obstacles to human life, property, and wildlife. Without mitigations, growth and development trends will continue to exert pressures on natural systems while increasing potential risks to travelers and visitors.

The majority of the Teton Pass corridor is within native habitat of various migratory ungulate species (Figure 16). Wildlife habitat fragmentation happens when parts of a habitat are destroyed or when hard barriers are created and access to the full extent of a native habitat is compromised.

What was once a contiguous habitat for many native animal species is now divided by the roadway corridor, and wildlife vehicle collisions (WVC) are becoming more frequent due to increased traffic volumes and vehicle speeds. WVCs pose a hazard to traveling vehicles, but wildlife itself has been identified as one of the region's highest resource values and is critical for a tourism-based economy.

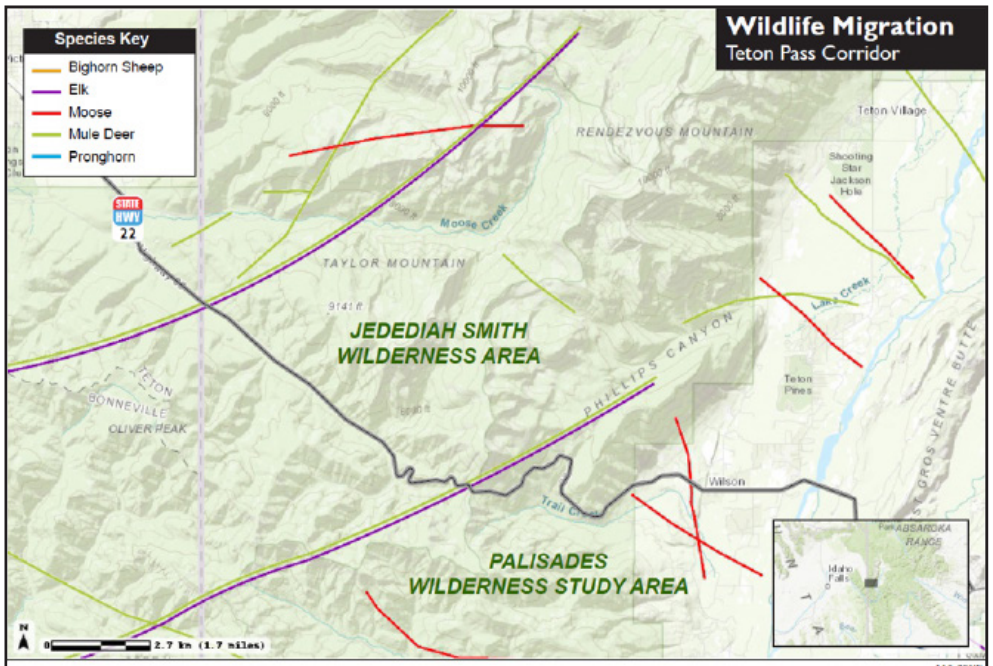


Figure 16: Wildlife migration along Teton Pass corridor (Source: Databasin.org)

Locally collected data show that between 1991 and 2020, researchers documented a total of 439 wildlife-vehicle collisions along this pass segment, with incidents steadily increasing over time (see Figure 17).

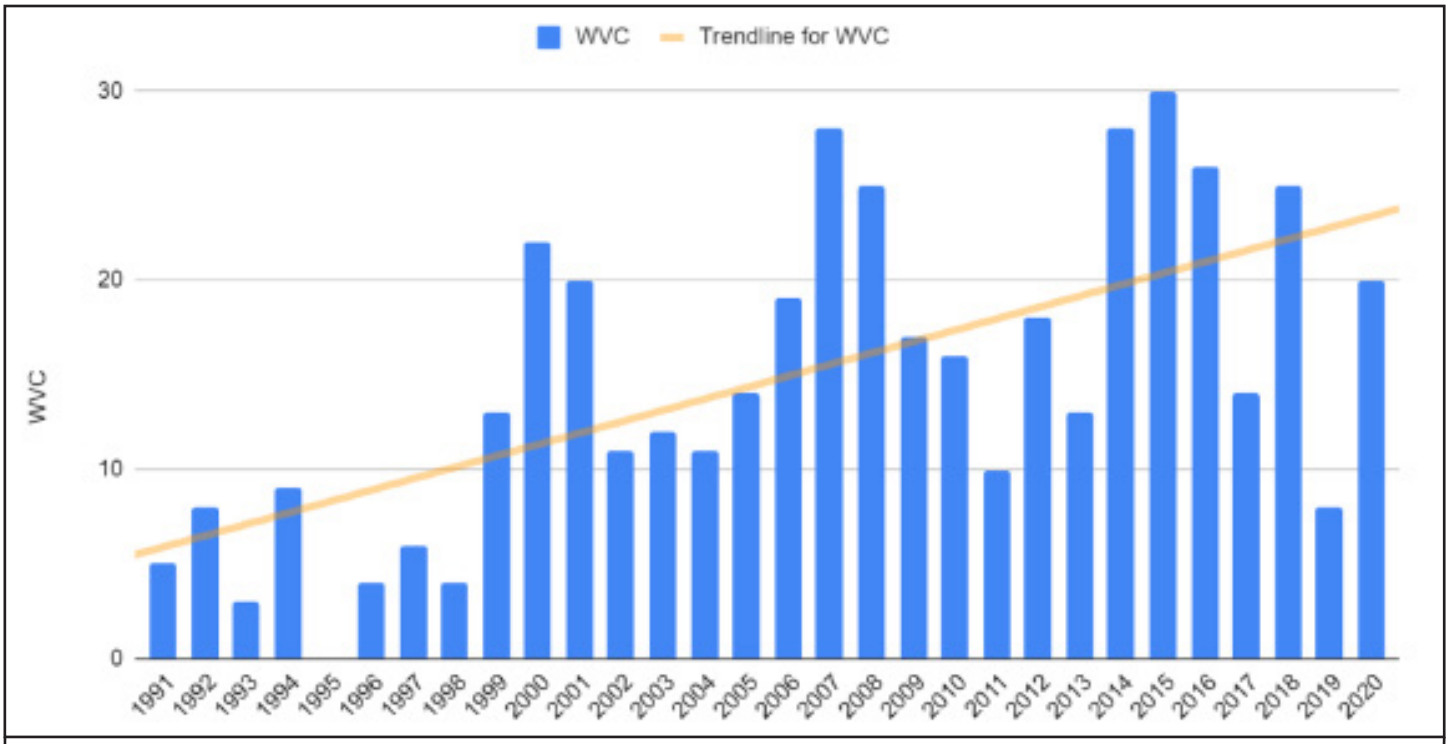


Figure 17: WVC by year
(Source: Greater Yellowstone Foundation)

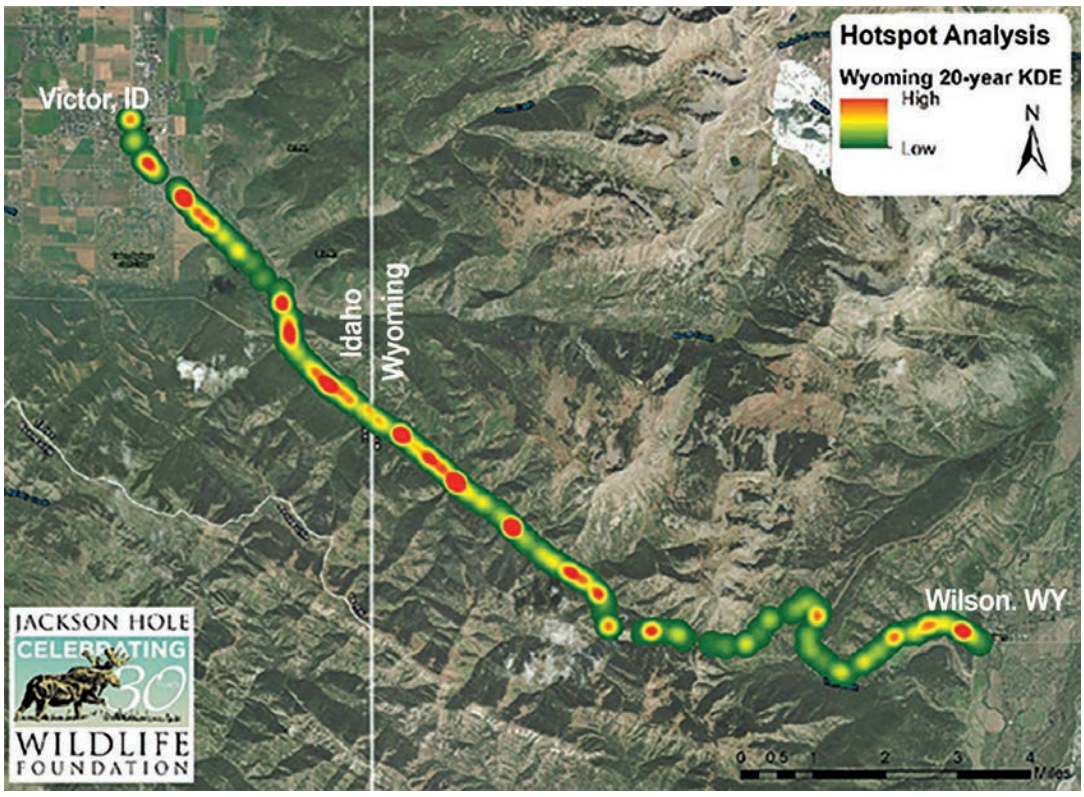


Figure 18: WVC hotspot analysis, 2002-2021
(Source: Jackson Hole Wildlife Foundation)

The Jackson Hole Wildlife Foundation has identified wildlife-vehicle collision "hotspots" for a 20-year period from 2002 to 2021 along the study corridor of WY-ss and ID-33 encompassing both the Wyoming and Idaho sides of the state line (see Figure 18).

Trails, Sidepaths, and Non-Motorized Infrastructure

The study area and surrounding region is abundant with non-motorized, bicycle, and pedestrian infrastructure with future plans for expansion. The area is also well-known for its mountain biking and hiking trails, which provide stunning views of the Teton Range and other outdoor recreational experiences. Additionally, the study area features a significant portion of the Greater Yellowstone Trail (GYT), a multi-use, paved, detached, and grade separated regional trail system that is envisioned to eventually span over 180 miles.

On the eastern side of the pass, the main trunk route of the GYT system connects the Teton Pass summit with the communities of Wilson and Jackson (WY), and continues north to Grand Teton National Park. On the western side of the pass, the main trunk-route of the system connects the communities of Victor and Driggs (ID) via the recently (2022) completed Centennial Trail segment.

The GYT is also connected to various recreational trail networks in the surrounding National Forest lands as well as the urban bicycle and pedestrian systems of the adjacent communities.

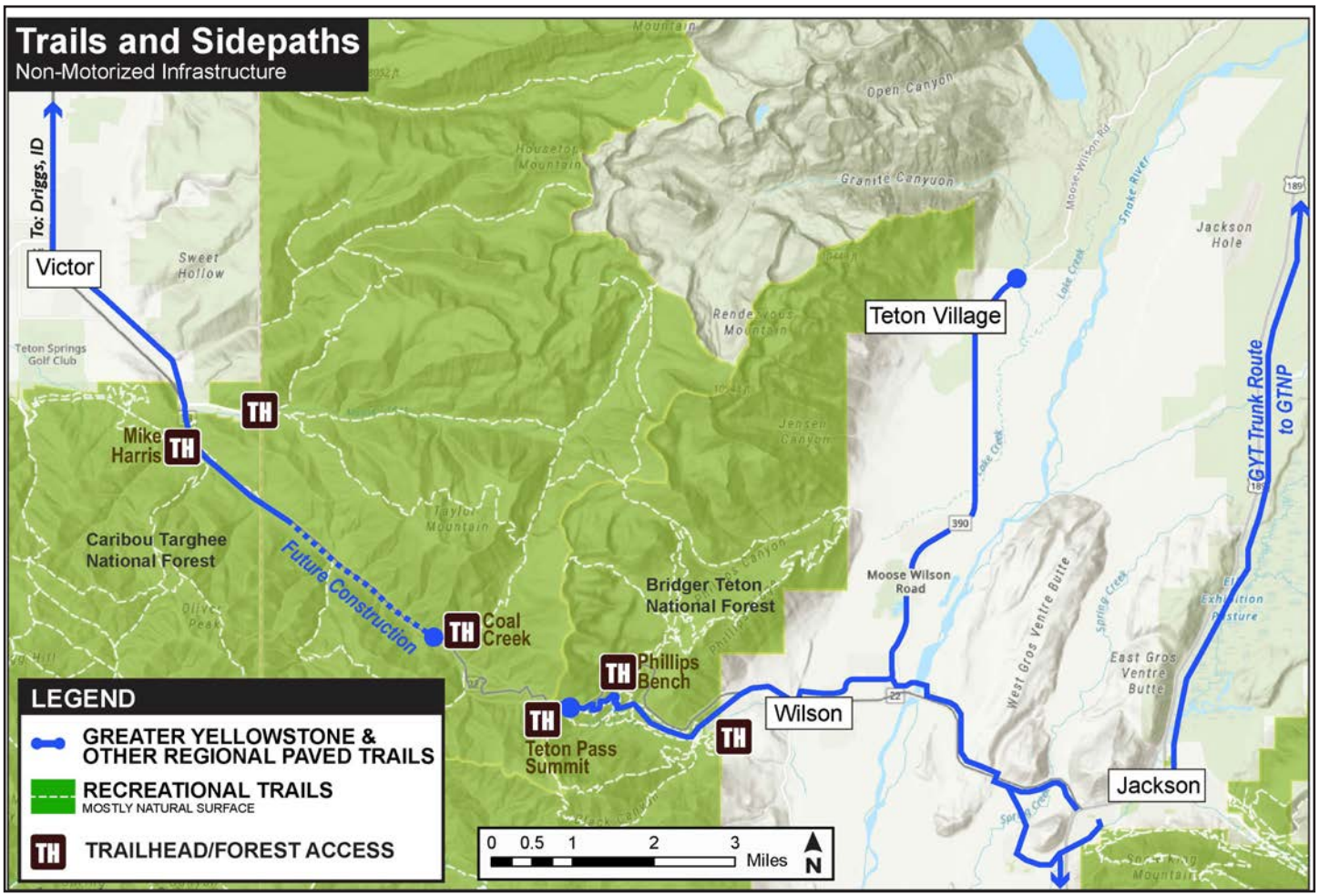


Figure 19: Trails and sidepaths surrounding study area

Towns on both sides of the pass have well developed bicycle and pedestrian infrastructure including off-street trails and sidepaths, the 'START' bike-share system in Jackson operated by B-Cycle, complete streets initiatives, and other bicycle and pedestrian improvements that enhance mobility and safety.

Image 7: Off-street trail infrastructure in Jackson, WY

The Bridger-Teton and Caribou-Targhee National Forests feature vast recreational trail systems that include networks of hiking, mountain biking, backcountry skiing, equestrian and snowmobiling trails that range from easy to challenging.

The non-motorized trails and bicycle/pedestrian infrastructure in the Teton Pass corridor are an essential component to the infrastructure of the region. These facilities support a wide range of outdoor activities, such as commuting, transportation, and recreation. Their ease of access and world-class quality are leading to increased pressures on the infrastructure and natural systems that support their use and enjoyment.

The following key findings have been identified related to bicycle and pedestrian circulation in the study area:

- The safest, most desirable facilities to bike and walk along parts of the study corridor are along the paved multi-use paths

- Pedestrians frequently cross the highway at non formalized locations to recreate. MUTCD and WYDOT guidance advises that formalized ladder crosswalks are not desireable along high speed roadways (45 MPH at Teton summit) . Grade separated crossings are most desirable

- There is limited signage along the highway to warn motorists of potential upcoming pedestrian congestion and potential crossings

- Approaches along the highway where pedestrians frequently cross have limited sight distances due to horizontal and vertical curves

- Pedestrians and skiers often use the narrow shoulders along the highway to get back to their vehicles which pose dangerous situations

- Pedestrians will use non-formal ride share (or hitchhiking) at non-formalized pick-up areas mostly at the base of the Glory Slide and Heidelberg

- The steep uphill mountainous grades of the roadway also enhances the motorists' ability to come to a stop for any conflict in the roadway

- WYDOT's 2020 Speed Limit Study at the top of Teton Pass indicate that "there is more than enough gaps in the traffic flow or at least one adequate gap per minute for the study period to safely cross the highway." Therefore, according to WYDOT's Pedestrian and School Traffic Control Manual, a marked crossing or pedestrian enhancements at the top of the Pass is not warranted.

- The Old Pass Road paved multi-use trail section of the GYT in the Bridger Teton NF, of which e-bikes are currenntly not allowed, is currently being evaluated for possible e-bike use

OPERATIONAL IMPROVEMENTS

Transit & Parking Management

The issues resulting from the high levels of recreation demand discussed above have raised the potential need for more active operational management of recreational access. Specifically, a coordinated program including an intercept transit shuttle program along with a parking management program has been considered. The full document of the analysis of this strategy is presented in Appendix E.

The following presents a summary of the various operational options considered for the corridor.

- An "East Side Route" option that would provide service between Wilson (Stilson Lot) and Coal Creek versus a "Full Route" option between Wilson and Victor (Victor Depot).
- Service in winter versus summer.
- Service on weekends and holidays only versus seven-day-a-week.
- Various fare levels

***All proposed operational improvements require further independent investigations beyond and separate from the scope of this study.**

Transit Route Options

Given the relative population and level of visitation, it is estimated that approximately 75 percent of the demand for a winter recreational shuttle program is generated on the Wyoming (east) side of the pass and the remaining 25 percent on the Idaho (west) side. As such, one option would be to provide a shuttle only from the east side of the pass. The conceptual route options are shown in Figure 20. The "East Side Route" option is shown in orange, while the "Full Route" option adds the portion shown in blue.

The East Side option would serve the following stops:

- Stilson Transit Center – A new facility currently being designed for construction by Teton County will provide six bus bays, more than adequate capacity to accommodate a Teton Pass shuttle program without impacting the other transit services.

- Wilson – At the existing START stops adjacent to Nora's Fish Creek Inn on the south side and Hungry Jack's General Store on the north side. These stops are intended to serve residents/guests in Wilson rather than park-and-ride activity, which should be directed to Stilson Ranch.

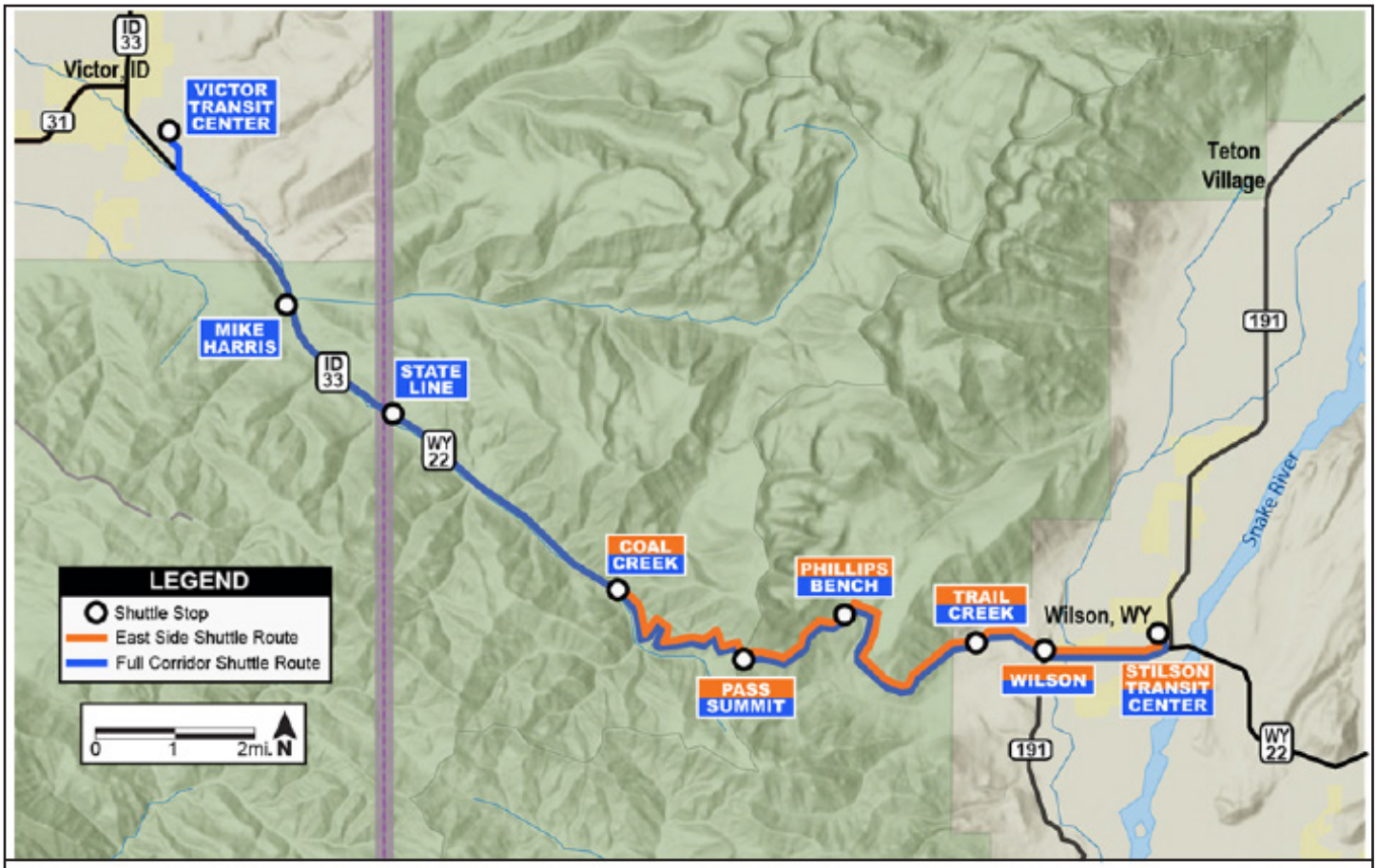


Figure 20: Recreational shuttle conceptual route options with stops

- Trail Creek – A stop at the intersection of Trail Creek Rd. and WY-22 or at the end of Trail Creek Rd.

- Phillips Bench – The optimal location for a stop is at or near the existing Phillips Bench Road. However, a stop at this location may not have adequate sight distance for drivers to turn left (east) given the horizontal curve just to the west that limits the ability to judge an adequate gap in the high-speed downhill eastbound traffic. If the considered parking area on the north side of the highway at the western end of this area (Figure 28) is designed with an access point to the west of this curve, it would be possible to provide drivers exiting the parking area with adequate sight distance in both directions.

- Pass Summit – A stop on the south side of the highway, served in both directions. If a pedestrian underpass is provided, the westbound stop could be on the north side.

- Quarter Mile East of Pass – A stop in the considered parking lot on the south side of the highway (Figure 34) could take place instead of a stop at the Summit.

- Coal Creek – A stop accommodated at the Coal Creek Trailhead, which could provide a good location to turn around the bus on the East Side route option.

The Full Route option would add the following stops:

- State Line – A stop in the parking area on the south side in both directions. This stop could also serve Trail Creek Campground a quarter-mile to the east.
- Mike Harris – A stop in the parking area on the south side in both directions.
- Victor Transit Center – the west end of the shuttle route just off of ID-33 along S. Agate St. southeast of downtown Victor.
- This route is 20.9 miles in length (including Trail Creek Trailhead) and requires 33 minutes to drive one-way under good conditions. Including time to serve the 10 stops in each direction, to load/unload passengers and gear, and to provide a driver break, a 2-hour round-trip time would be required.

Transit Span of Service Options

The overall seasonal span of winter service considered is mid-December through the end of March, while the summer span is Memorial Day Weekend through Labor Day Weekend.

Within these spans, options were considered for weekend/holiday only service as shown in Figure 21.

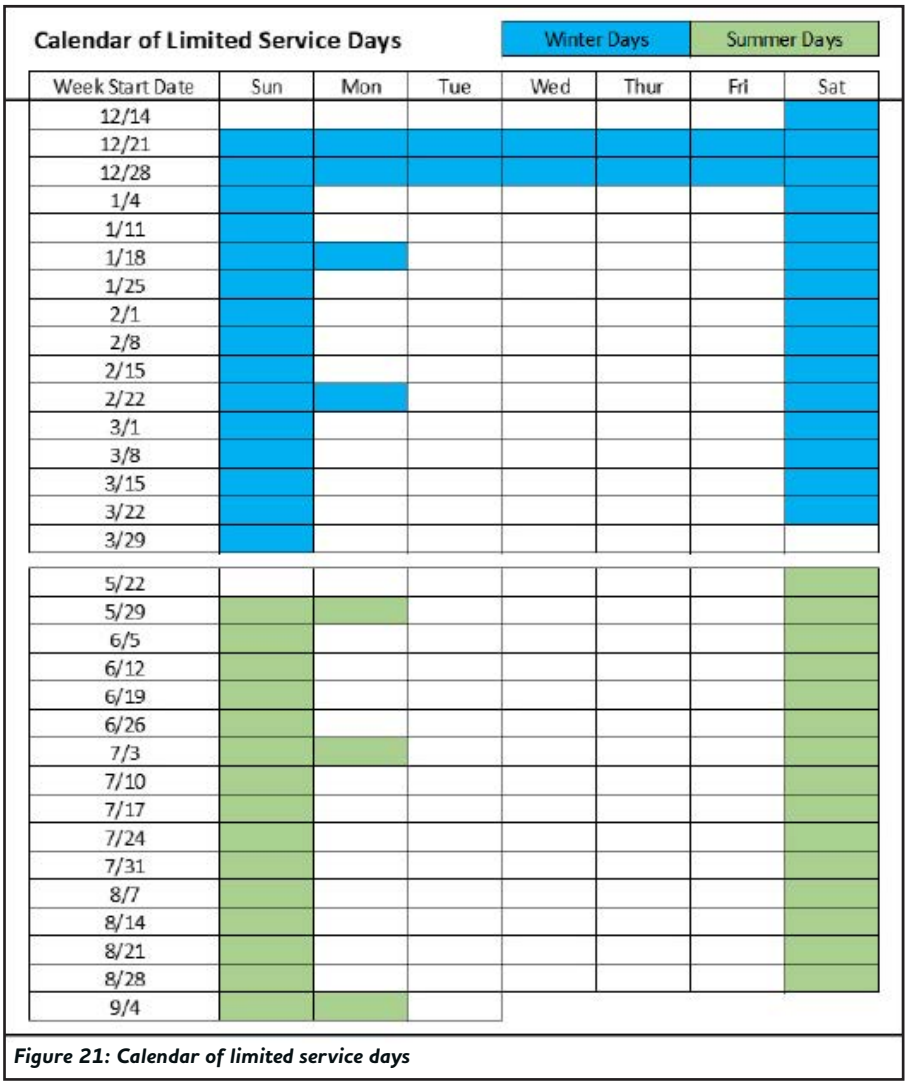


Figure 21: Calendar of limited service days

Transit Service Configuration: Winter Service

The optimal service plan given the ridership demand, required service frequency, route length and round trip cycle times discussed above would be as follows:

- For the East Side scenarios, two buses would cycle between Stilson Lot and Coal Creek, stopping in each direction at Trail Creek Trailhead. Each bus would make 9 round trips per day, with the first westbound departure at 8:00 AM and the last eastbound departure at 5:00 PM.

- For the Full Corridor scenarios, four buses would be used to provide half-hourly departures over a two-hour cycle length from 8:00 AM to 5:00 PM. This would provide sufficient capacity on weekdays. On weekends and holidays, a fifth bus would operate between Stilson Ranch and Coal Creek (without stops at Trail Creek) to provide adequate capacity on the east side. This additional bus would not be shown in the schedule as a separate departure time, but rather would be operated flexibly as a "tripper" bus responding on the published half-hourly schedule as needed to accommodate variation in demand.

Teton Pass Transit Service Winter Alternatives

December 14 Through March 31

	# Days of Service	Daily Hours of Service			Route Round Trip Length (Mi)	Daily Round Trips	Annual			Number of Vehicles	Route Cycle Length (Hours)
		Start	End	# Hours			Vehicle-Hours of Service	Vehicle-Miles of Service	Transit Operating Cost		
Weekend Only Alternatives											
East Side Focus											
Half-Hourly Service	42	8 AM	5 PM	9	18	18	756	13,608	$66,200	2	1.00
Full Corridor											
Half-Hourly Service	42	8 AM	5 PM	9	41.8	18	1,512	31,601	$135,500	4	2.00
Tripper Bus - Stilson to Coal Creek	42	8 AM	5 PM	9	19.6	9	378	7,409	$33,500	1	1.00
TOTAL							1,890	39,010	$169,000	5	
7-Days-A-Week Alternatives											
East Side Focus											
Half-Hourly Service	107	8 AM	5 PM	9	18	18	1,926	34,668	$168,700	2	1.00
Full Corridor											
Half-Hourly Service	107	8 AM	5 PM	9	41.8	18	3,852	80,507	$345,300	4	2.00
Tripper Bus - Stilson to Coal Creek	42	8 AM	5 PM	9	19.6	9	378	7,409	$33,500	1	1.00
TOTAL							4,230	87,916	$378,800	5	

Figure 22: Transit service winter route alternatives

The annual vehicle-hours of service ranges from 756 for weekend/holiday East Side service up to 4,230 for consistent service over the entire corridor. Vehicle-miles of service each year ranges from 13,608 up to 87,916.

Using the existing unit costs of the START service as a basis, the service alternatives range in cost from $66,200 per year up to $378,800 per year. Note that these figures do not include any administrative costs, such as for contract administration.

Transit Service Configuration: Summer Service

The analysis of summer service options is presented in Figure 23, using the same methodology as discussed above. One vehicle would be operated hourly between the Stilson Lot and Coal Creek. If operated weekends only, this would incur a cost of $29,900, while expanding to 7-day-a-week service increases the cost to $94,400.

Teton Pass Transit Service Summer Alternatives

June 1 through Labor Day Weekend

	# Days of Service	Daily Hours of Service			Route Round Trip Length (Mi)	Daily Round Trips	Annual Vehicle-Hours of Service	Annual Vehicle-Miles of Service	Annual Transit Operating Cost	Number of Vehicles	Route Cycle Length (Hours)
		Start	End	# Hours							
Weekend Only Alternatives											
Hourly Service	31	8 AM	7 PM	11	18	11	341	6,138	$29,900	1	1.00
7-Days-A-Week Alternatives											
Hourly Service	98	8 AM	7 PM	11	18	11	1,078	19,404	$94,400	1	1.00

Figure 23: Teton Pass transit service summer route alternatives

Transit Fares

Fares would take the form of a day pass, as well as a season pass. A range of potential fare levels were evaluated, with a day pass of $5 and a season pass of $25 used as the base, conservative case.

Parking Management Options

A range of potential parking fee options were evaluated, including entrance kiosks, pay-and-display meters, an iron ranger self-registering approach and a corridor access pass program. This latter approach, similar to the Northwest Forest Pass program in Oregon/Washington and the Adventure Pass program in southern California, is probably the most feasible option. A day pass rate of $10 per vehicle and a season pass rate of $60 is identified. Passes could be available online (through printing out a pass) or in person at local offices, such as the following:

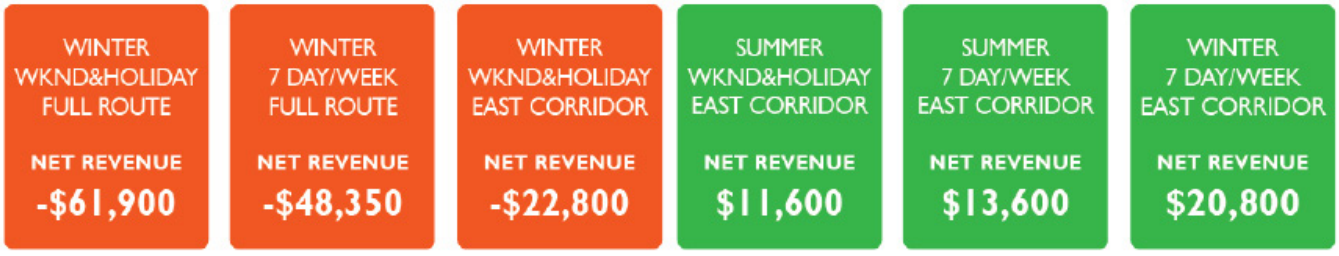
- Caribou-Targhee NF Teton Basin Ranger District Station in Driggs
- Bridger-Teton NF Jackson Ranger District in Jackson
- Stilson Lot Transit Center
- Victor Depot
- County offices
- Chambers of Commerce

There may also be the possibility of selling passes through retail establishments (outdoor equipment stores, etc.) for a handling fee.

Conclusion

In sum, this evaluation indicates that a shuttle and parking management program can be financially self-sustaining, scenarios that are revenue positive are shown below in green. Between transit passenger revenues and parking fees, the operational costs of the program (both transit and parking management costs) could be covered. With a relatively modest level of subsidy funding ($48,500 per year), the winter scenario could be implemented for the full corridor. It should also be noted that a consistent 7-day-a-week service would be easier for a transit service operator to staff, as it would provide a more consistent employment opportunity.

Revenue Negative Scenarios | Revenue Positive Scenarios



CAPITAL IMPROVEMENTS

Access, Mobility & Safety Infrastructure

As the study corridor increasingly becomes a year-round world-class recreation destination, it has experienced a surge in vehicle and foot traffic at the most popular access points to the backcountry. This surge is due to limited parking availability, leading to conflicts between vehicles and pedestrians.

The primary focus areas for capital improvements revolve around enhancing recreational access in three key zones that witness the highest recreational activity along the study corridor: Phillips Bench, Teton Pass Summit, and Coal Creek.

Furthermore, there are growing environmental concerns related to wildlife habitat degradation and an increasing frequency of wildlife-vehicle collisions (WVC), particularly along the 5.3-mile stretch between the Coal Creek Trailhead in Wyoming and the Mike Harris Campground in Idaho. Avalanche dangers pose a recurrent threat to the safety of both the traveling public and recreationists, resulting in disruptions and delays in commuting traffic along the corridor, especially at the Twin Slides at milepost 11 and the Glory Slide at milepost 10.2. This section of the study outlines contemplated capital project improvements along the corridor, as depicted in Figure 24:

- Improved Access Areas: These encompass existing access points requiring formalization and safety enhancements for vehicle and pedestrian circulation, as well as provisions for potential recreational shuttles.

- Alternate Access Areas: These refer to undeveloped areas in close proximity to existing access points that, with appropriate development, could alleviate current problems related to pedestrian and vehicle circulation, enhance safety for all users and visitors, and accommodate potential recreational shuttles.

- Potential Safety Enhancements for Future Studies (with evaluation).

- Wildlife Crossings: Considering the persistent threat of wildlife collisions to both human safety and wildlife conservation, the implementation of wildlife crossings could help mitigate these conflicts.

- Avalanche Management: The construction of avalanche sheds could reduce safety hazards for the traveling public, significantly minimize temporary highway closures, and decrease traffic delays during commuting.

***All proposed capital improvements require further independent investigations beyond and separate from the scope of this study.**

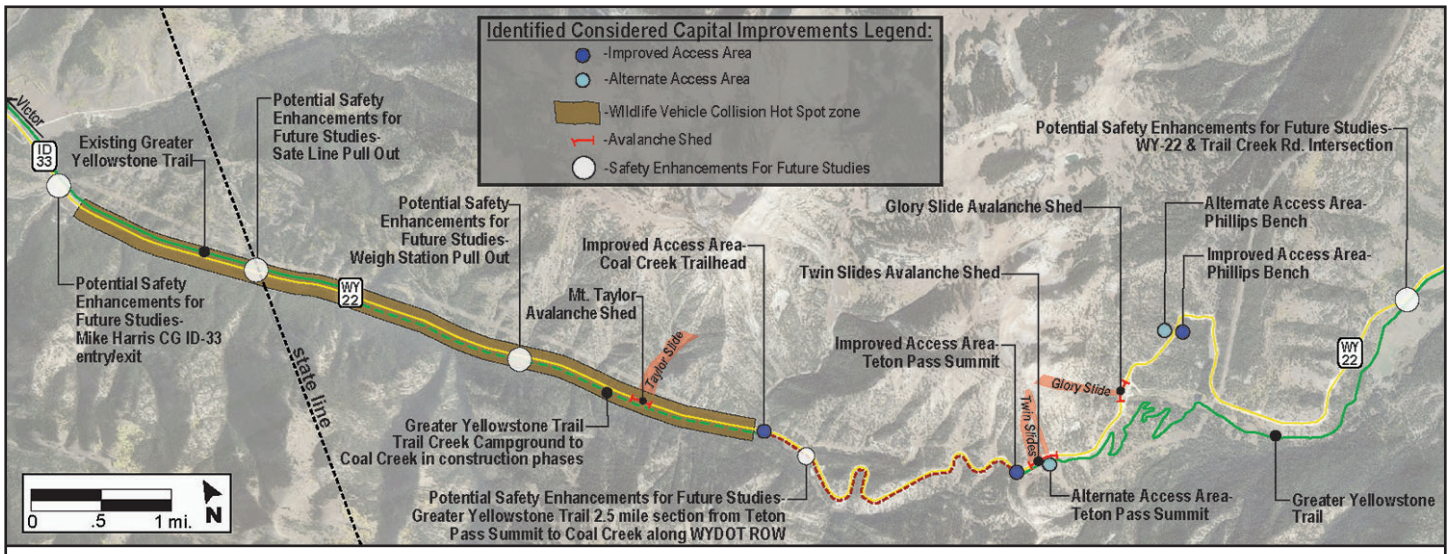


Figure 24: Potential capital improvement areas/projects

East Side of Pass: Phillips Bench Area

Existing Conditions

The Phillips Bench area of the corridor has connections to the popular recreation areas around Phillips Ridge that include the popular Ski Lake Trail on the north side of the highway, and to popular mountain bike trails and the paved Greater Yellowstone Trail on the south side of the highway. There are three main access areas that accommodates vehicles around this area. These include and titled for this report as Phillips Ridge Rd., Gravel Lot and Snowmobile Access (Figure 25).

Figure 25: Phillips Bench identified improvement areas

Phillips Ridge Rd.

Phillips Ridge Rd. (aka Forest Rd. 30972) provides direct access to the Phillips Canyon recreation areas on the north side of the highway which include the popular Ski Lake and Phillips Ridge areas. Visitors park on both sides of the road, for the first 400 feet up to the existing USFS kiosk. Visitors do park further up the road but most of that is associated with dispersed campsites and not trailhead use. Although this forest road does not get snow plowed, there is still winter recreation activity that includes growing snowmobile use as well as snowshoeing and backcountry skiing opportunities. Summer activity includes hiking, mountain biking, camping and some equestrian use.

- Approximate SF for parking and circulation: 10,523 SF
- Approximate vehicle capacity: 25

Image(s) 8 below shows how conditions can become congested on a non-Winter conditions day, with some vehicles spilling out and illegally parked along the highway corridor.

Image(s) 8: Congestion during non-Winter conditions at Phillips Ridge Rd.

Gravel Lot

The 'Gravel Lot' directly across the highway from Phillips Ridge Rd. is a WYDOT owned material staging area. This area is not a formalized designated parking area, but WYDOT does currently allow recreational access parking here.

The area provides direct south access to the Phillips Connector trail which leads to the regional paved Greater Yellowstone Trail as well as to intermediate to expert level mountain bike specific trails. The area is not snow plowed.

- Approximate SF for parking and circulation: 9,900 SF (excluding the center dirt/gravel piles)
- Approximate vehicle capacity: 28

Image(s) 9 below shows how conditions can become congested at the Gravel Lot especially with limited vehicle capacity due to the center piles of gravel and dirt.

Image(s) 9: Gravel lot congestion & overflow parking

Snowmobile Access Lot

The only access area along the entire study corridor that is informally used for snowmobile access and parking for vehicles carrying snowmobiles is a the 'Snowmobile Access' pullout area. This area is approximately a quarter mile along the highway to the east of Phillips Ridge Rd. and is plowed in the Winter for emergency parking. Other than occasional overflow parking for the Gravel Lot and Phillips Ridge Rd., this lot does not get a lot of use in the Summer months, but Winter use is seeing an increasing number of snowmobile users.

Vehicles park and unload their snowmobiles here, ride across the highway, and either ride along the informal snow bank adjacent to the north side of the road or ride along the west bound travel lane or shoulder along the highway, all to get to Phillips Ridge Rd. and the snowmobile trails up around Phillips Ridge.

- Approximate SF for parking and circulation: 12,800 SF (snow plow build up can reduce this)
- Approximate vehicle capacity: 36 (larger pickup trucks hauling snowmobiles can drastically reduce this parking capacity)

Image(s) 10 below shows the comparison of the Snowmobile Access area in Winter and Summer conditions

Image(s) 10: Snowmobile Access seasonal comparisons

Safety Risks

Consistent with the entire study corridor, the Phillips Bench area is seeing significant increases in recreational access and use. With this increased use comes potential conflicts and safety risks especially for Wintertime snowmobile access and Summertime mountain biking and hiking access. High traffic volumes, limited gaps, roadway grades, horizontal curves and sight obstructions with a near 90-degree curve in between the access areas present increased vehicle-pedestrian conflict potential.

Figure 26 (below) diagrams some of the potential safety risks for accessing the Phillips Bench access areas. Other risks include:

- Pedestrian traffic across the highway to access recreation areas is a potential safety concern.
- Limited snowmobile parking capacity, limited sight distance, and limited turning radii entering/exiting the highway (see Image(s) 10).
- In busy summer months, because of the lack of parking capacity, the Gravel Lot and Phillips Ridge Rd access areas can overflow, which lead to potential vehicle conflicts and accidents, and encroachments into the highway.
- The Gravel Lot is not level and has an approximate 15 ft. elevation change across the site which limits vehicle capacity and circulation, and limited refuge area for considered recreational shuttle staging.

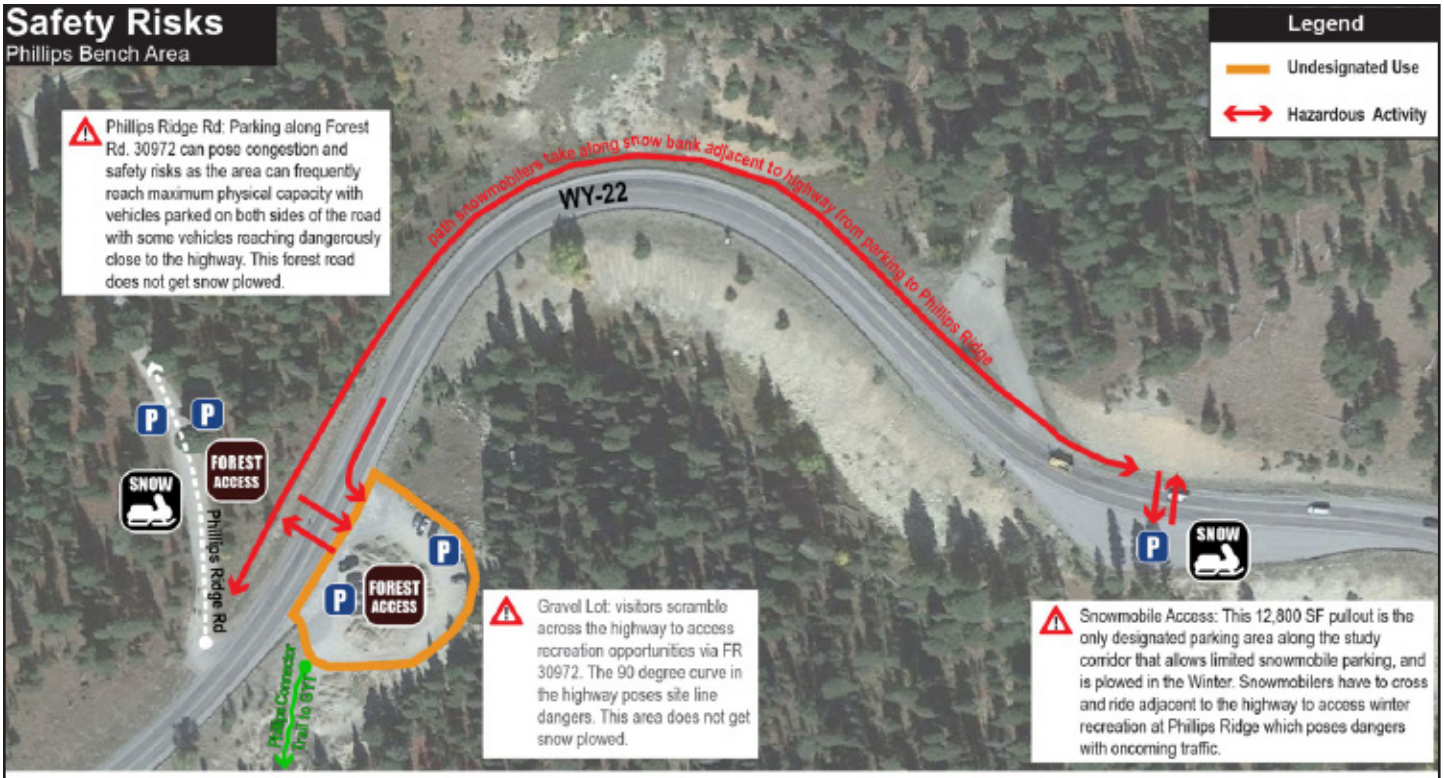


Figure 26: Phillips Bench area safety Risks

Considered Capital Improvements - Phillips Bench

The following considered capital improvements aim to make vehicle and pedestrian circulation safer for accessing recreation around Phillips Bench that includes navigating the access areas themselves and approaching the access areas from the highway, as well as accommodating potential recreational shuttle operations. The following improvements include improving the existing access area at the Gravel Lot and a considered alternate new access area adjacent to Phillips Ridge Rd. to the west.

Improved Access Area- Phillips Bench Gravel Lot

As the demand for recreation access increases to the Phillips Bench area, considered improvements maximize pedestrian and vehicular circulation and access to and from the existing Gravel Lot. These improvements include:

- A formalized and paved access area graded evenly across the site
- A site that would maximize recreational staging and circulation
- Removing pedestrian-vehicle conflicts with grade separated crossing

FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $5.7 Million
- Pedestrian undercrossing only cost estimate: $3 Million

Figure 27 below diagrams the considered site improvements at the Gravel Lot.

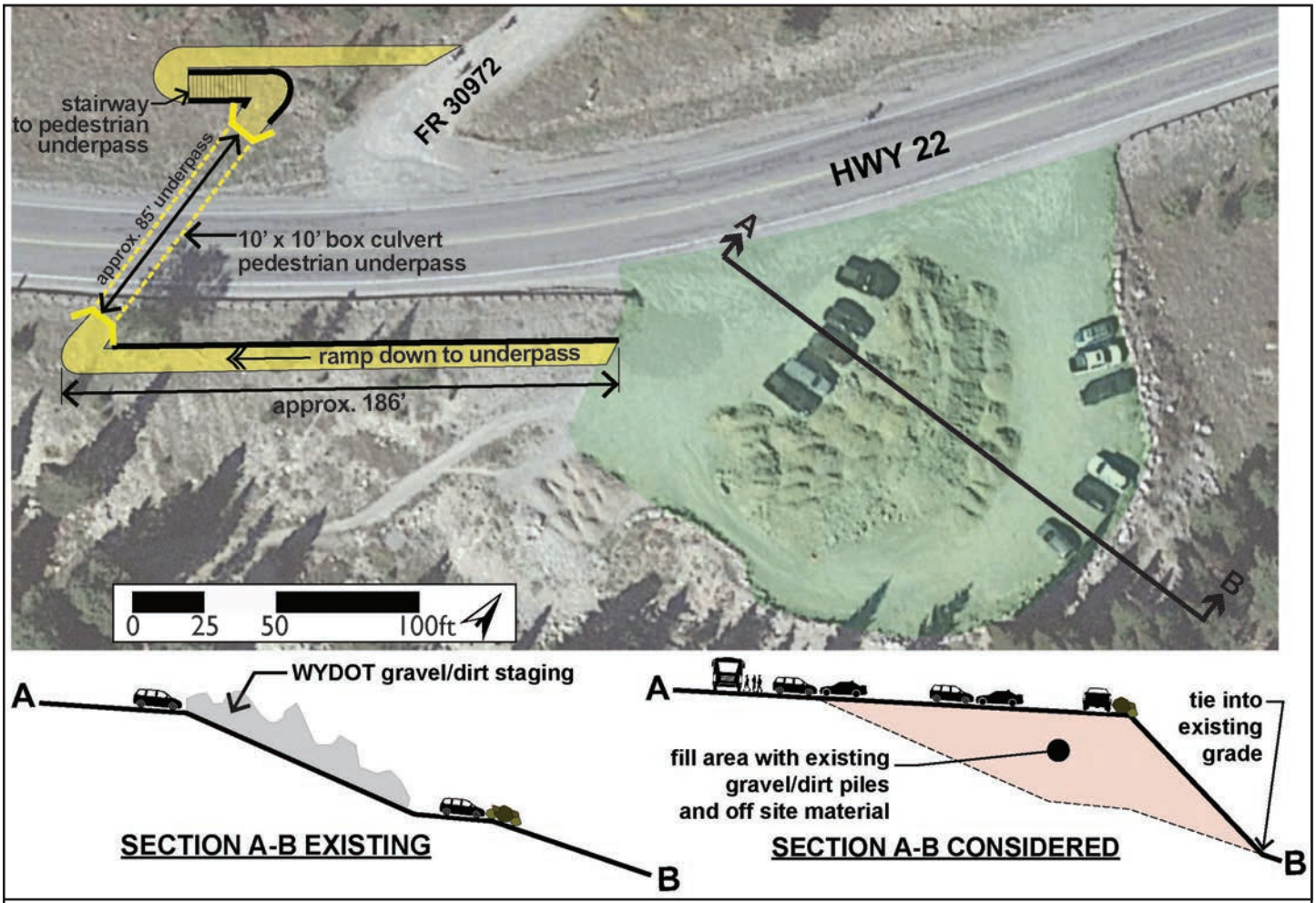


Figure 27: Phillips Bench Gravel Lot considered improvements

Below (Image(s) 11) is a pedestrian undercrossing project recently installed in the study corridor. This undercrossing is part of the Centennial Trail, a FHWA Western Federal Lands completed project in Summer 2022 under Idaho Highway 33 and adjacent to Mike Harris campground.

Image(s) 11: Existing pedestrian undercrossing along the study corridor

Opportunities & Constraints at Gravel Lot

Opportunities:

- An evenly graded and formalized site would maximize parking efficiency and accommodate vehicle circulation more efficiently and safer
- The present area for parking (not counting center dirt/gravel piles) area is around 9,900 SF which accommodates approximately 28 vehicles. An evenly graded site (flattening dirt gravel piles) would accommodate this existing parking and circulation much more safely and not as constricted as what is present
- An evenly graded and formalized access area would safely accommodate a potential recreational shuttle service's circulation space and essential amenities
- Accommodating more parking by grading the site evenly would mitigate parking congestion along Phillips Ridge Rd. and potential parking alongside the highway
- An undercrossing connecting the Gravel Lot with Phillips Ridge Rd. would mitigate pedestrian-vehicle conflicts

Constraints:

- Another area would be needed for WYDOT material storage
- Agreements would need to be made to formalize this area into a USFS trailhead, if applicable
- Some environmental damage caused by pedestrian underpass built into side slope
- Right-of-way maintenance agreements and responsibilities
- NEPA and geotechnical stability study would be needed
- Underpass lighting power source needed
- Erosion and drainage concerns

Alternate Access Area – Phillips Bench

There are potential conflicts, as well as a lack of efficient circulation for both pedestrians and vehicles accessing areas at Phillips Ridge Rd., the Gravel Lot, and Snowmobile Access. To mitigate some of these concerns for efficient circulation for all modes and a potential recreational shuttle, an Alternate Access Area to Phillips Bench is considered (Figure 28).

The alternate access area is located adjacent to WY-22 and Phillips Ridge Rd. The current condition is an approximate 38,000 SF non-developed site with an 25% slope and around 25% tree cover (Figure 29).

FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $3 Million

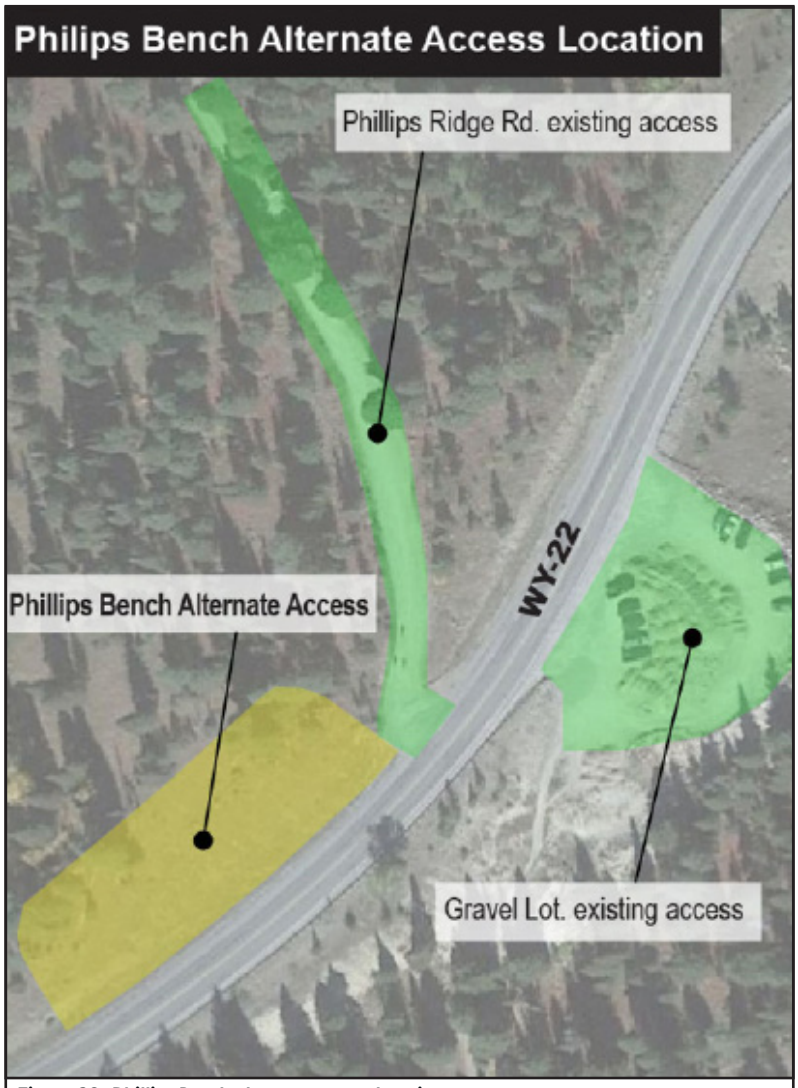


Figure 28: Phillips Bench alternate access location

Figure 29 below diagrams the considered site improvements at the Phillips Alternate Access.

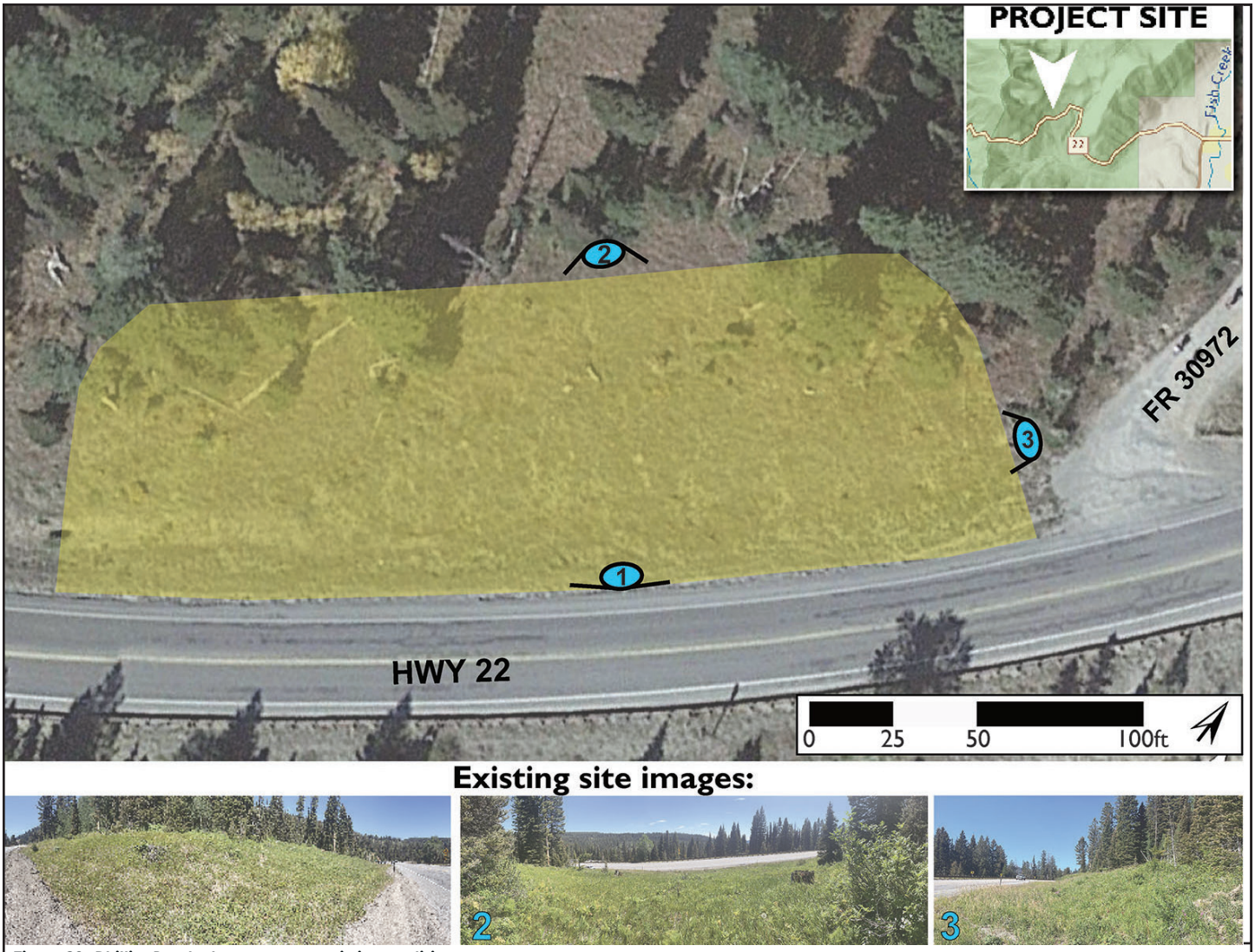


Figure 29: Phillips Bench alternate access existing conditions

Opportunities & Constraints at Phillips Bench Alternate Access

Opportunities:

- The only available snowmobile access area along the study corridor exists at a small pullout a quarter mile east of this of this location on the south side of the highway. This considered new location would increase parking capacity as provide a much safer access area compared to what is present.
- Would accommodate shuttle drop-off and pick-up safely and more efficient.
- Site has minimal site line distance and obstruction issues.
- A formalized parking area that would accommodate approx. 68 spaces.
- Would eliminate and separate maintenance conflicts with parking at Gravel Lot.

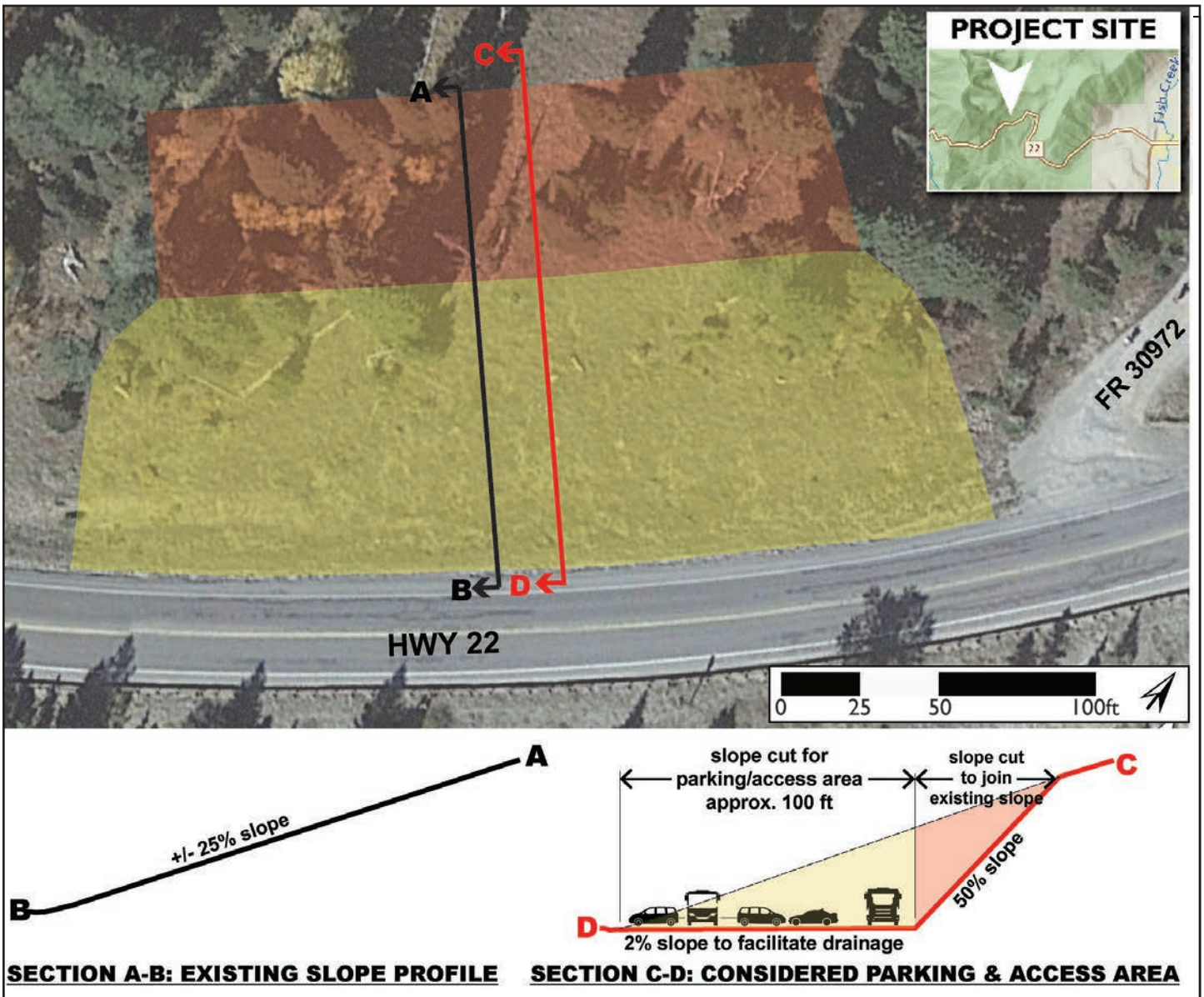


Figure 30: Phillips Bench considered alternate access area cross sections

Constraints:

- Would require grading and earthwork, and removal of around 12 trees
- Still need safe pedestrian crossing of highway to access recreation on south side (if Gravel Lot improvements in Fig. 27 are not implemented together with this improvement)

Project precedent: Image 12 to the right is a parking and recreation access area at Berthoud Pass in the Arapaho National Forest in Colorado and represents a larger example of what a new Phillips Bench access area could resemble.

Image 12: Berthoud Pass

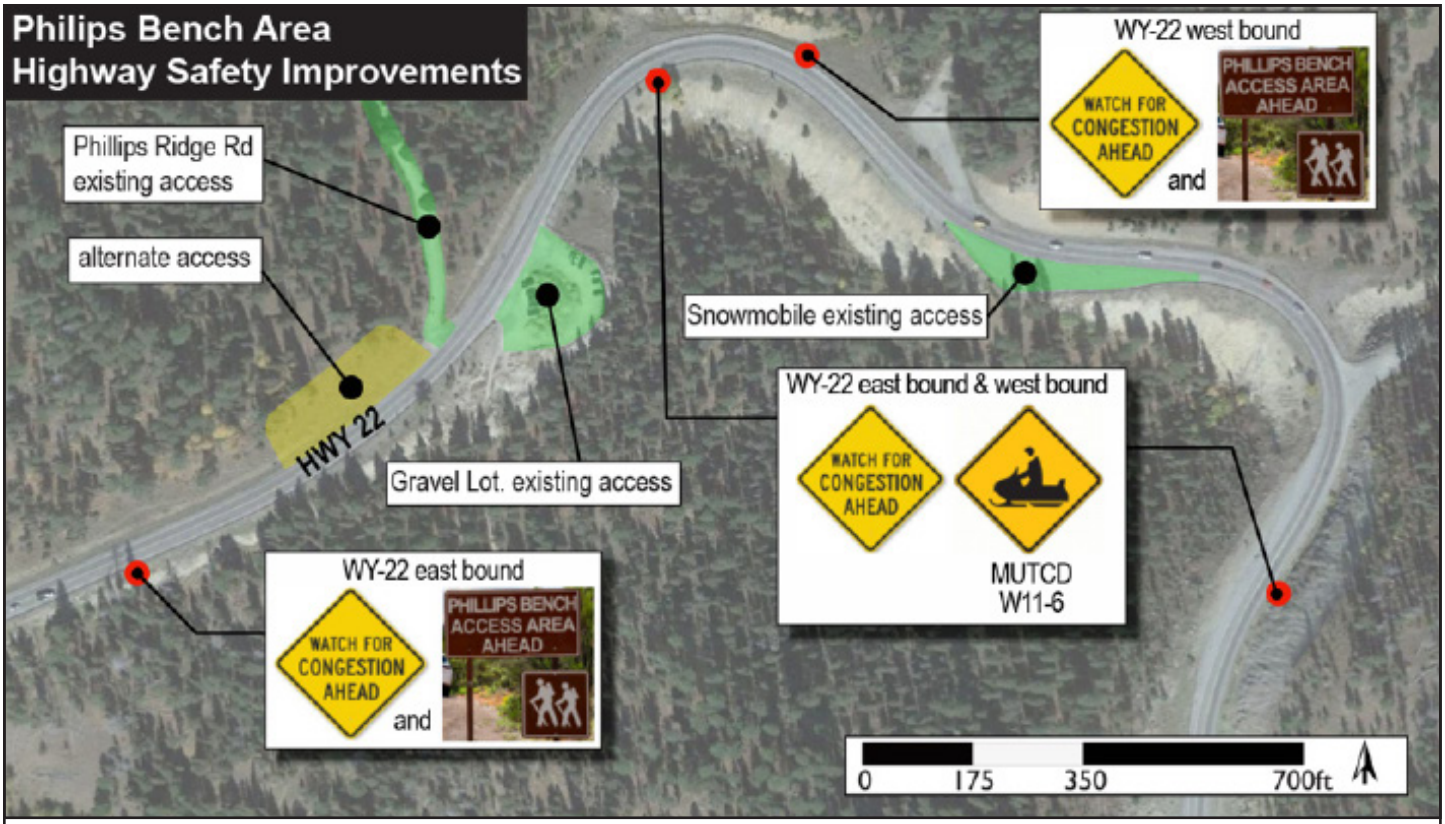


Figure 31: Phillips Bench area considered Highway safety Improvements

Considered Improvements Along Highway 22 Corridor

As recreation activity and traffic flow increases around the Phillips Bench access areas, so do the potential conflicts between automobile and pedestrians. There is minimal highway signage that warns motorists of pedestrian activity so this study considers adding MUTCD or other signage as vehicles approach active areas (Figure 31).
Notes on considered signs:

- The lack of safe pedestrian crossings and adequate stopping sight distance may be the reasons why no pedestrian ahead warning signs are present.

- MUTCD recommends not to encourage pedestrian crossings on high speed high volume roadways, as this creates a false sense of security and promotes activities that are not in the best interest of the pedestrian.

- The MUTCD sign to warn of snowmobile activity ahead (W11-6) could be a winter months seasonal sign. Snowmobiles are considered motor vehicles and must abide by rules of the road when yielding to other traffic when entering or exiting highway.

- Considered USFS typical brown signs approaching Phillips Bench access areas which includes a 'Watch For Congestion Ahead' sign, if applicable.

Top of Pass - Summit and Surrounding Area

Existing Conditions

The Teton Pass Summit area of the corridor consists of the main Summit area and the Shovel Slide access area approximately a quarter-mile to the east along the highway from Summit (Figure 32).

Figure 32: Teton summit existing access areas

Summit Access Area

Image 13: Iconic 'Howdy Stranger' sign

The Teton Pass summit at an elevation of 8,431 ft is the highest point on the Teton Pass corridor. The area provides direct access to popular backcountry ski routes north of the highway to Mt. Glory and south of the highway along Ridge Road. The area is also very popular for hiking access to Mt. Elly and Mt. Glory as well as for mountain biking and road biking, as the singletrack Black Canyon Trail as well as the paved regional Greater Yellowstone Trail both currently culminate at the Summit. The area is technically owned by the USFS but has long beenimportant from a highway, emergency response, and recreation perspective serving as a brake check area, pull-out for slow-moving vehicles, staging area for search and rescue, and parking for access to summer trails and winter backcountry skiing. However, with the substantial increase in recreation use and commuter/commerce traffic, adequately serving highway, emergency, and recreation needs has become increasingly problematic. No-parking is signed and enforced along the north side of the highway. The area is also very popular for tourists as they stop to take in the vista and take pictures of the iconic "Howdy Stranger" sign (Image 13).

- Approximate SF for parking and circulation: 20,500 SF
- Approximate vehicle capacity: 58

This stretch of WY-22 can also be subject to temporary closure due to avalanches from the Twin Slides path that cover the road as well as from WYDOT avalanche management operations procedures. Image(s) 14 below shows recreation access conditions in Winter and Summer months at Teton Pass Summit.

Images 14: Summit Winter and Summer conditions

Shovel Slide Access Area

The Shovel Slide access area is owned by the USFS but WYDOT possesses a right of way easement for operation and maintenance activities. The area is fairly flat and has a dirt/gravel surface (Images 15). The area was improved by WYDOT in the late 2000s to accommodate snowplows during the winter season. However, the area quickly became an overflow recreation parking area and is primary used during the winter with some use during the summer by mountain bikers accessing trails from this location.

- Approximate SF for parking and circulation: 24,900 SF
- Approximate vehicle capacity: 71

Images 15: Shovel Slide overflow access area

Safety Risks

The summit location presents vertical and horizontal site line obstructions for all vehicles and pedestrians navigating the area. As Winter time is the most active for recreationists, the potential for vehicle-pedestrian conflicts increase when vehicles are parked on the south side of WY-22 and when backcountry skiers navigate across the highway to the north side to the Mt. Glory boot pack trail (Image 16).

Image 16: start of boot pack trail to Mt. Glory

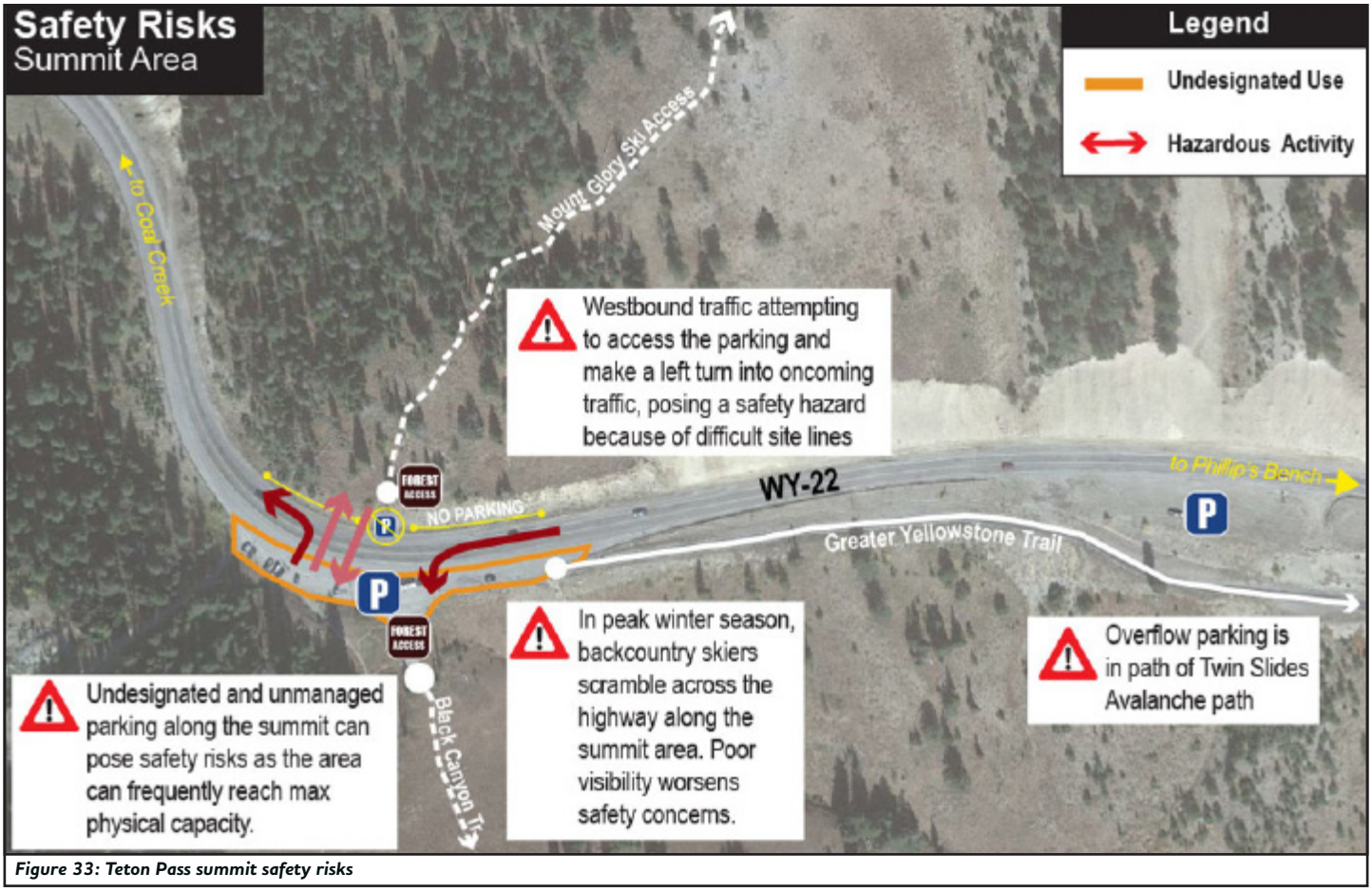


Figure 33: Teton Pass summit safety risks

Figure 33 (above) diagrams some of the safety risks for accessing the Summit access areas. Highlighted risks include:

- Pedestrian traffic generated by the recreational access areas across the highway (boot pack trail, Image 16) is a potential safety concern
- Absence of a separated pedestrian crossing over the highway
- Vertical and horizontal site line issues along the highway at the Summit
- The overflow lot is in the path of an avalanche slide
- In busy months, the Summit access area can overflow, which lead to potential vehicle conflicts and accidents, and encroachments into the highway

Considered Capital Improvements - Summit Area

The following considered improvements propose to minimize vehicle-pedestrian access conflicts at the Teton Pass Summit and Shovel Slide areas, as well as accommodate proposed recreational shuttle operations.

Improved Access Area - Teton Pass Summit

As the demand for recreation access and vehicular traffic at the Summit area increases, improvements are considered to minimize conflicts and maximized capacity for recreational shuttle drop-off, pick-up and staging zones, and pedestrian circulation and crossings (Figure 34; existing and considered cross sections Figure 35). These improvements include:

- A site that will maximize capacity of recreational shuttle staging and circulation
- Mitigating vehicle-pedestrian conflicts with a grade separated crossing
- Improvements in site line distances

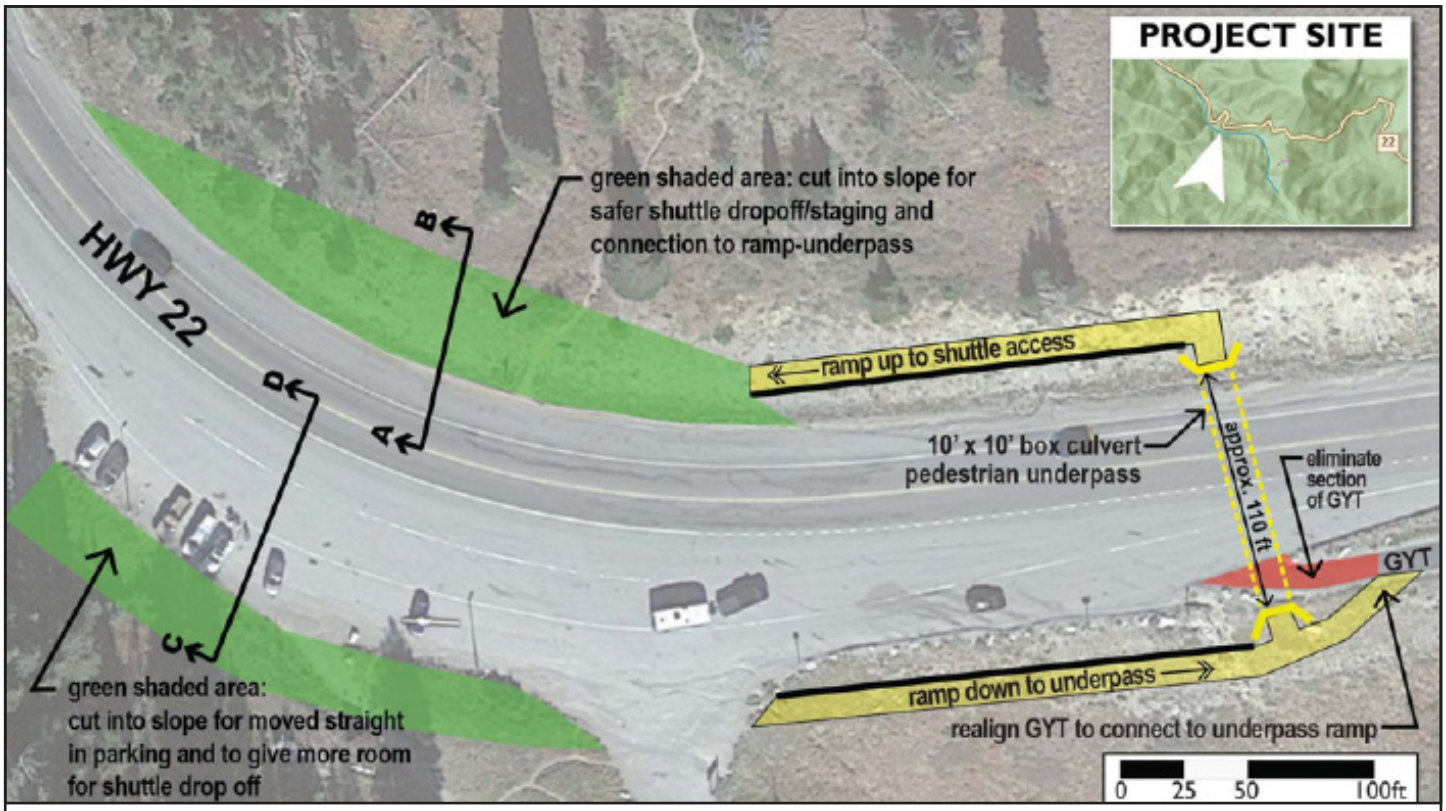


Figure 34: Teton Pass summit considered improvements

FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $11.3 Million
- Pedestrian undercrossing only cost estimate: $3 Million

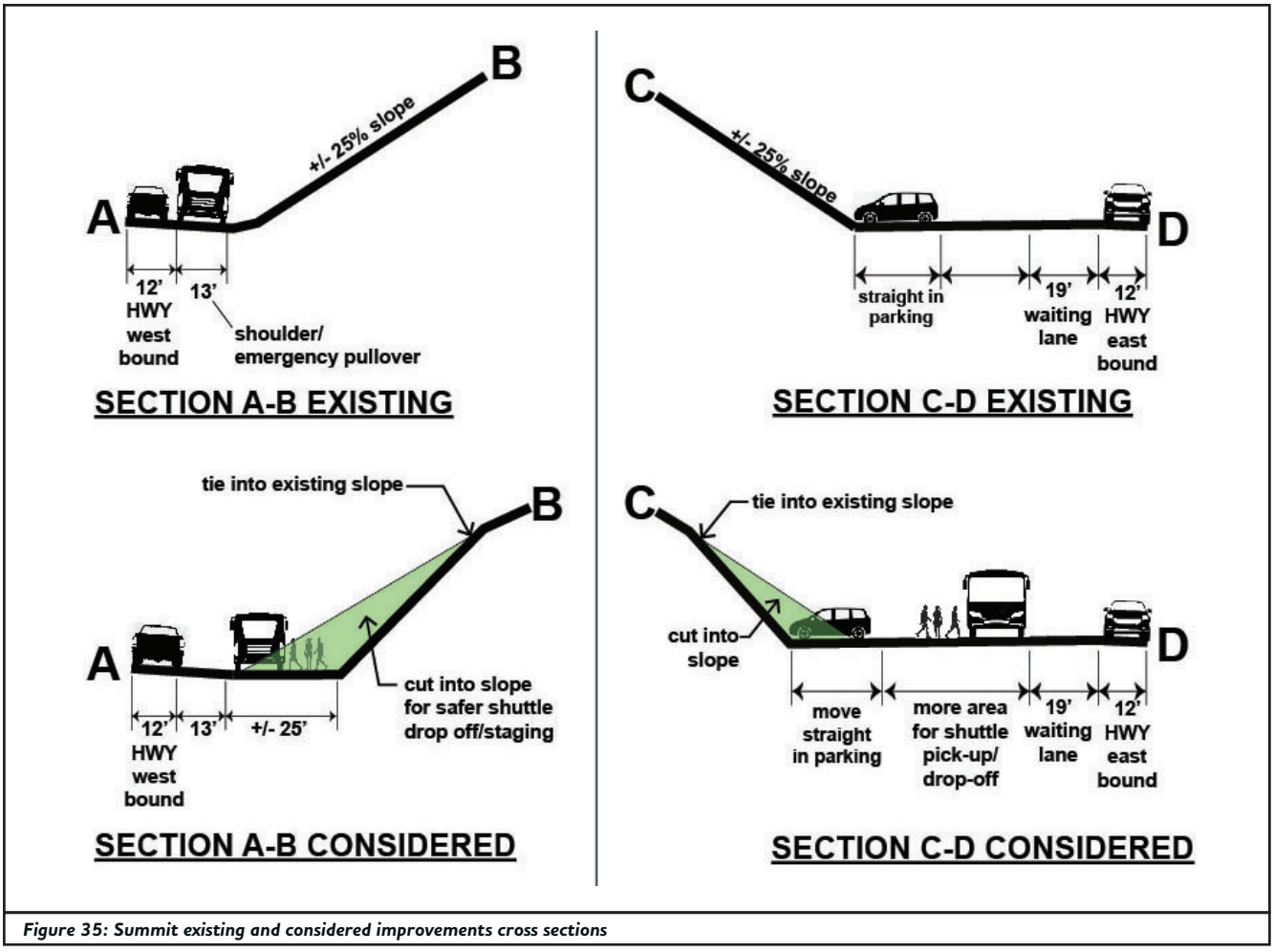


Figure 35: Summit existing and considered improvements cross sections

Opportunities & Constraints of Summit Improvements

Opportunities:

- Provides safer areas on both sides of highway for potential recreational shuttle access
- Maximizes parking capacity
- Undercrossing would provide much safer crossing of highway for pedestrians and mitigate vehicle-pedestrian conflicts
- Cut into north slope could provide for better site line distance

Constraints:

- Some environmental impacts from cutting into the north and south slopes
- Cutting into south slope may disturb historical site
- Underpass would most likely not get used in Winter with deep snowpack
- Right-of-way maintenance agreements and responsibilities
- NEPA and geotechnical stability study would be needed
- Underpass lighting power source needed
- Erosion and drainage concerns

Improved Access Area Summit Alternative - Highway Realignment

As Winter recreation access is continually congested at the Summit with increased visitor parking on the south side of the highway and recreationists mostly crossing the highway for backcountry skiing at Mt. Glory, this consideration would realign the highway to the south and place the majority of the parking and circulation on the north side (Figure 36).

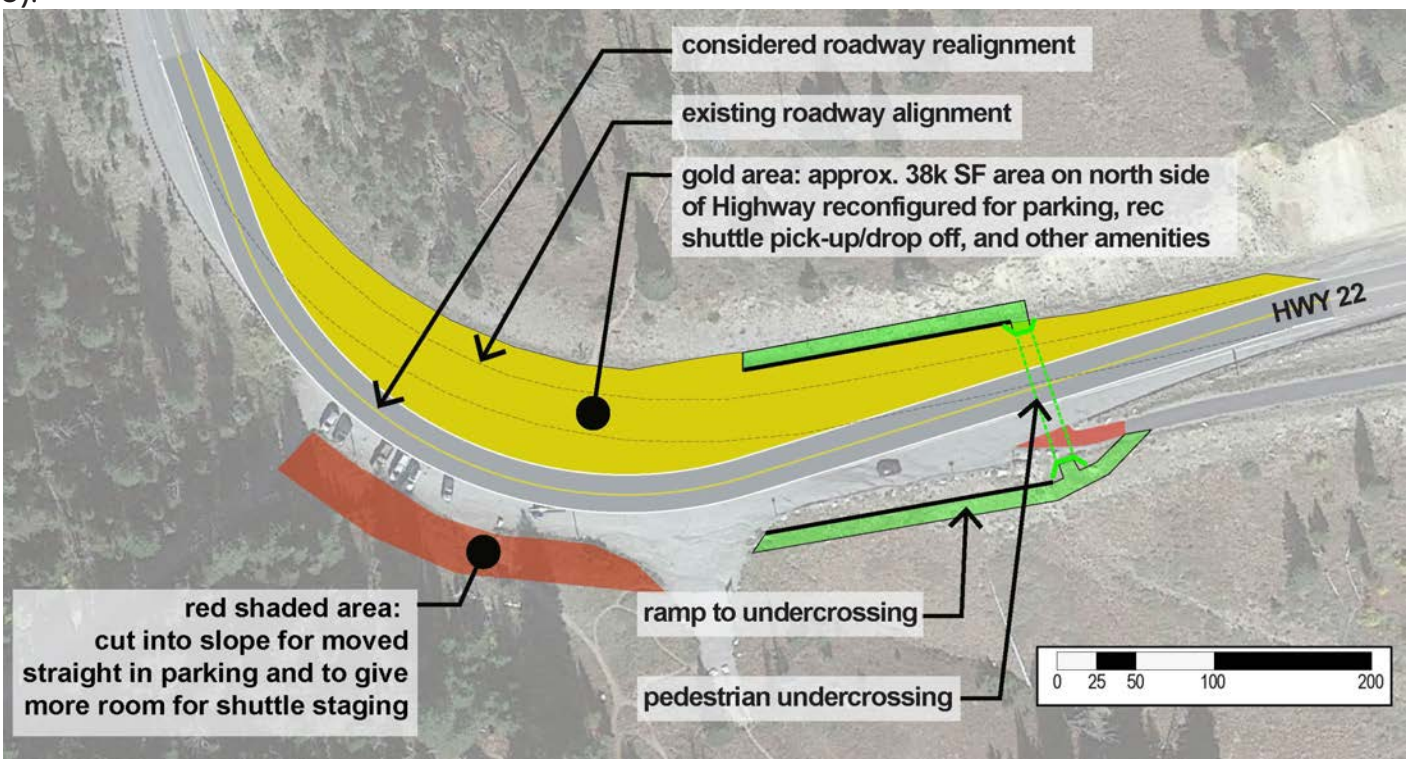


Figure 36: Considered summit highway realignment

FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $22 Million
- Pedestrian undercrossing only cost estimate: $3 Million

Opportunities & Constraints of Summit Highway Realignment:

Opportunities:

- The new access area on the north side of the highway would maximize parking capacity, improve circulation and accommodate recreational shuttle staging more efficiently
- Would accommodate shuttle amenities, and drop-off and pick-up safely and more efficient
- Realigning roadway to south could present opportunity to improve vertical and horizontal site obstructions which would minimize conflicts for both vehicles and pedestrians
- For Winter recreation access to Mt. Glory, visitors do not have to cross highway

Constraints:

- There is more summer hiking and mtn. biking recreation access on the south side of the highway so more visitors would cross the highway for access in Summer if underpass is not implemented
- Less circulation room and parking for short stops to view the vista and take pictures of the "Howdy Stranger Yonder is Jackson Hole" sign on south side
- Cutting into south slope may disturb historical site and cause some environmental damage
- Right-of-way maintenance agreements and responsibilities
- NEPA and geotechnical stability study would be needed
- Underpass lighting power source needed

Alternate Access Area at Summit - Shovel Slide

As Winter recreation access continually increases congestion at the Summit, moving the main access area a quarter mile to the east to a formalized Shovel Slide location (Figure 37) could reduce this congestion and improve capacity. FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $800K

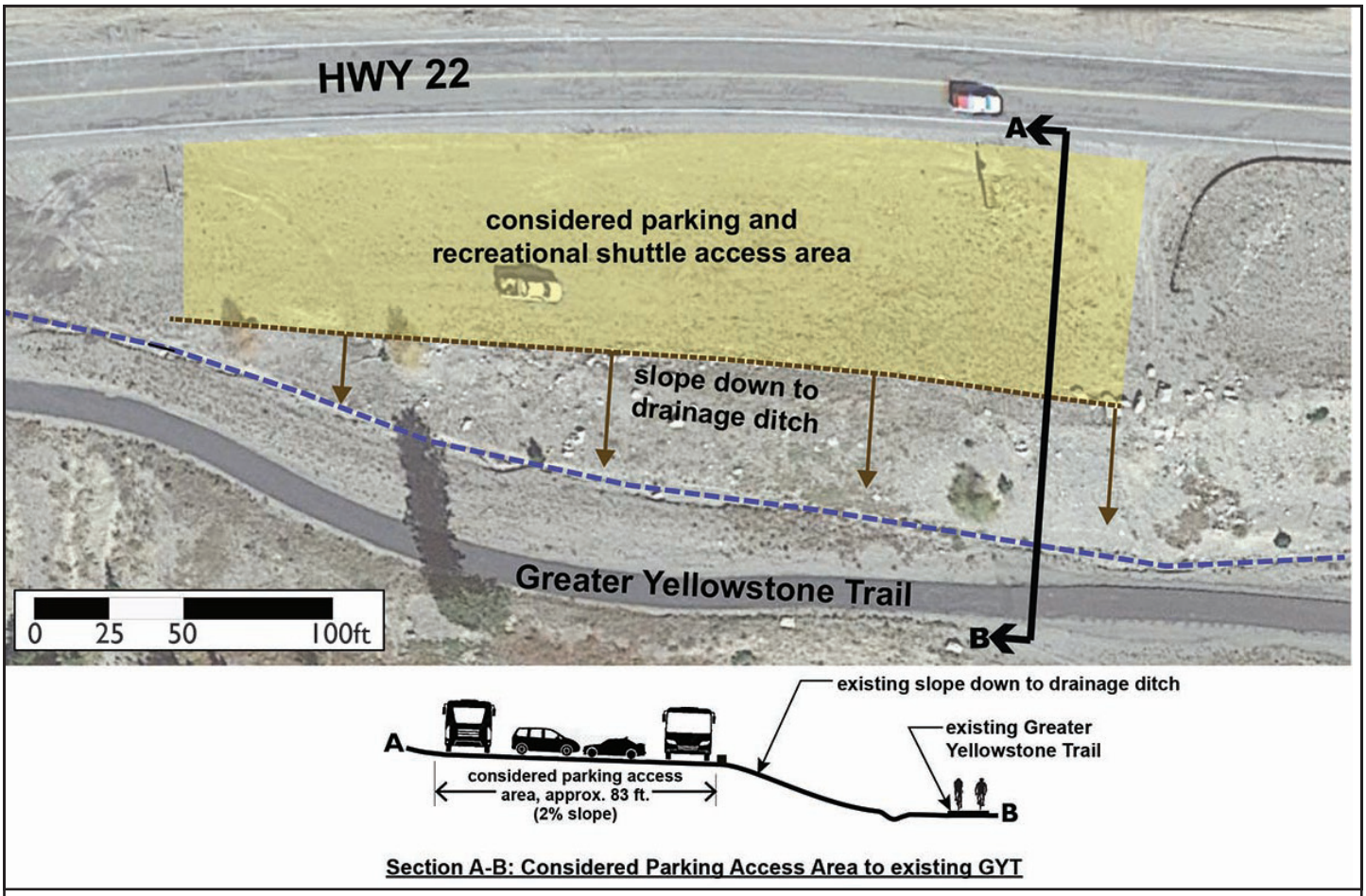


Figure 37: Summit alternate access area - shovel slide

Opportunities & Constraints of Alternate Access Area at Summit:

Opportunities:

- Would be much safer as the prime access area rather than the present Summit because of minimal site obstructions and safety issues
- Area is mostly flat (approx. 2% slope) so minimal grading required to formalize lot
- Would accommodate approximately the same amount of vehicles as what is present at the Summit with room for more, as well as recreational shuttle operations
- Area could be combined with an avalanche shed and parking structure
- Area is directly adjacent to existing Greater Yellowstone Trail which provides direct access to the Summit
- With more room compared to the Summit, area could house restroom facilities

Constraints:

- Area is in direct line with Twin Slides avalanche path

Considered Improvements Along Highway 22 Corridor

As recreation activity and traffic flow increases around the Summit, so do the potential conflicts between automobile and pedestrians. There is minimal highway signage that warns motorists of pedestrian activity so this study considers adding signage as vehicles approach active areas (Figure 38).

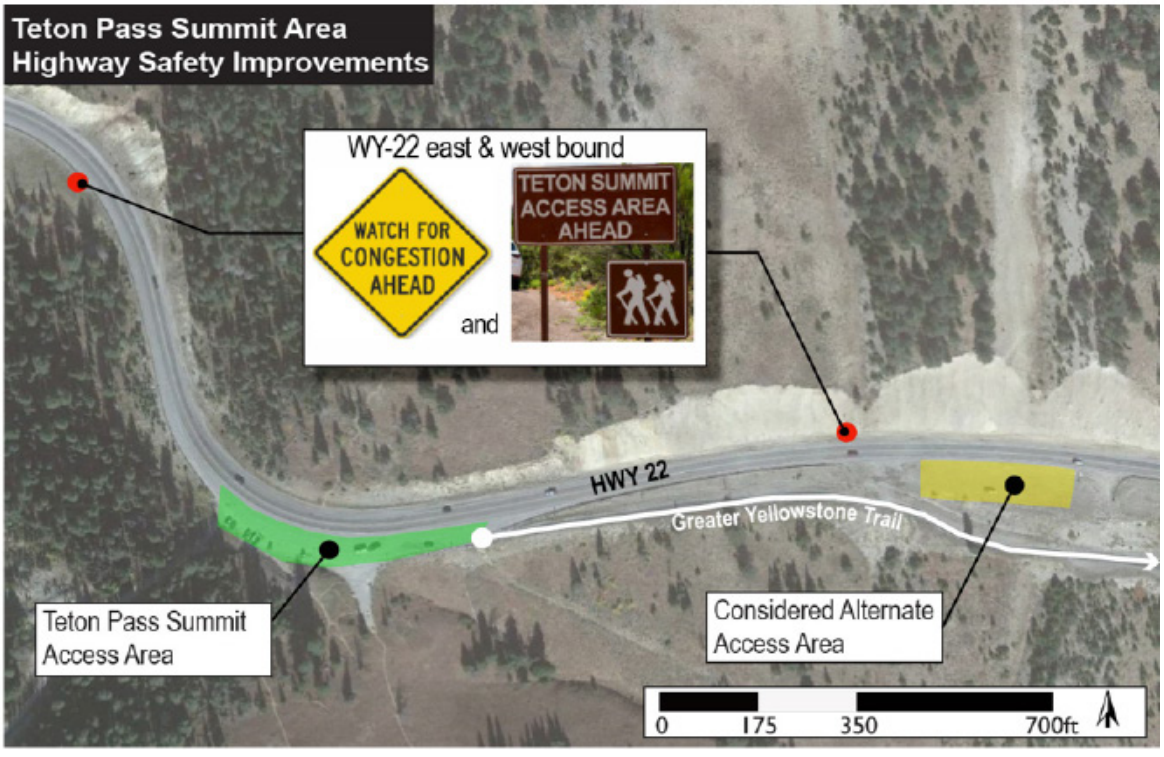


Figure 38: Summit area considered highway safety improvements

West Side of Pass: Coal Creek Trailhead

Existing Conditions

Coal Creek Trailhead is operated by the Caribou-Targhee National Forest and is a popular access point for recreation all year long. This includes Summer hiking and backcountry skiing. Winter time access is exceeding Summer time visitation and sometimes the area gets overly congested with vehicles parking dangerously close to the highway (Image(s) 17). The area is 1.25 miles west of Teton Summit and is along a fairly flat part of the highway, compared to the steep mountainous terrain at the Summit.

- Approximate SF for parking and circulation: 28,500 SF
- Approximate vehicle capacity: 82

Images 17: Coal Creek trailhead in Winter and Summer

Considered Capital Improvements - Coal Creek Trailhead

As explained in the Considered Operational Improvements & Interventions section of the report, the flat topography along the straight section of the highway makes Coal Creek an ideal location for a recreation shuttle turn around for the East Corridor shuttle route.

Considered improvements include formalizing the whole lot, accommodating shuttle pick-up/drop-off and circulation, and re-purposing the center green area as a waiting area complete with shuttle and other amenities (Figure 39).

FHWA engineer's high level cost estimate (2023 USD) for design, engineering, and construction:

- All elements and improvements: $700K

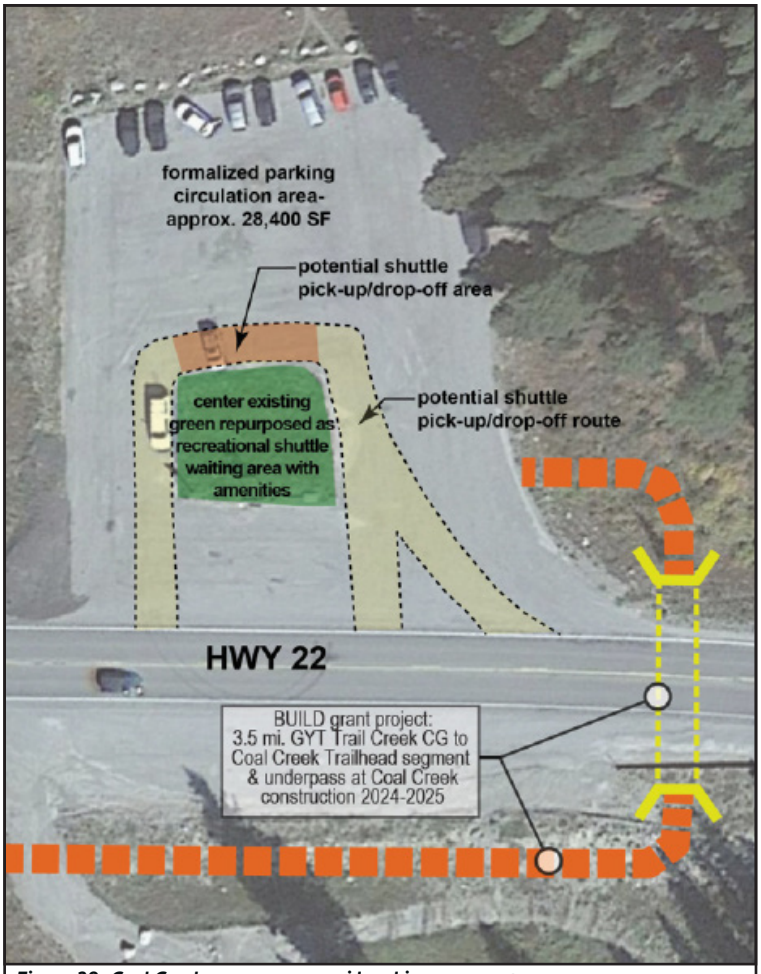


Figure 39: Coal Creek access area considered improvements

Opportunities & Constraints of Coal Creek Improvements:

Opportunities:

- Serve as the terminus for the East Corridor recreation shuttle service
- More inviting, formalized trailhead with refurbished pavement conditions
- Center green area as a recreational and shuttle amenity

Constraints:

- The Coal Creek parking area is potentially undersized to function as an intercept lot for a recreational shuttle system
- Potential shuttle operations at Coal Creek would warrant the construction of an east bound left turn lane into Coal Creek on Hwy 22 to mitigate back ups and congestion. A west bound separate right turn lane could also be justified. These improvements would have to be coordinated with WYDOT before construction of the funded and future pedestrian undercrossing and GYT extension.

Coal Creek Area Highway Safety Improvements

As recreation activity and traffic flow increases approaching Coal Creek Trailhead, so do the potential conflicts between automobile and pedestrian interaction. This is especially true during Winter as visitation is increased and visitors access recreation on both sides of the highway. There is minimal highway signage that warns of pedestrian activity, so this study considers adding signage as vehicles approach active areas (Figure 40).

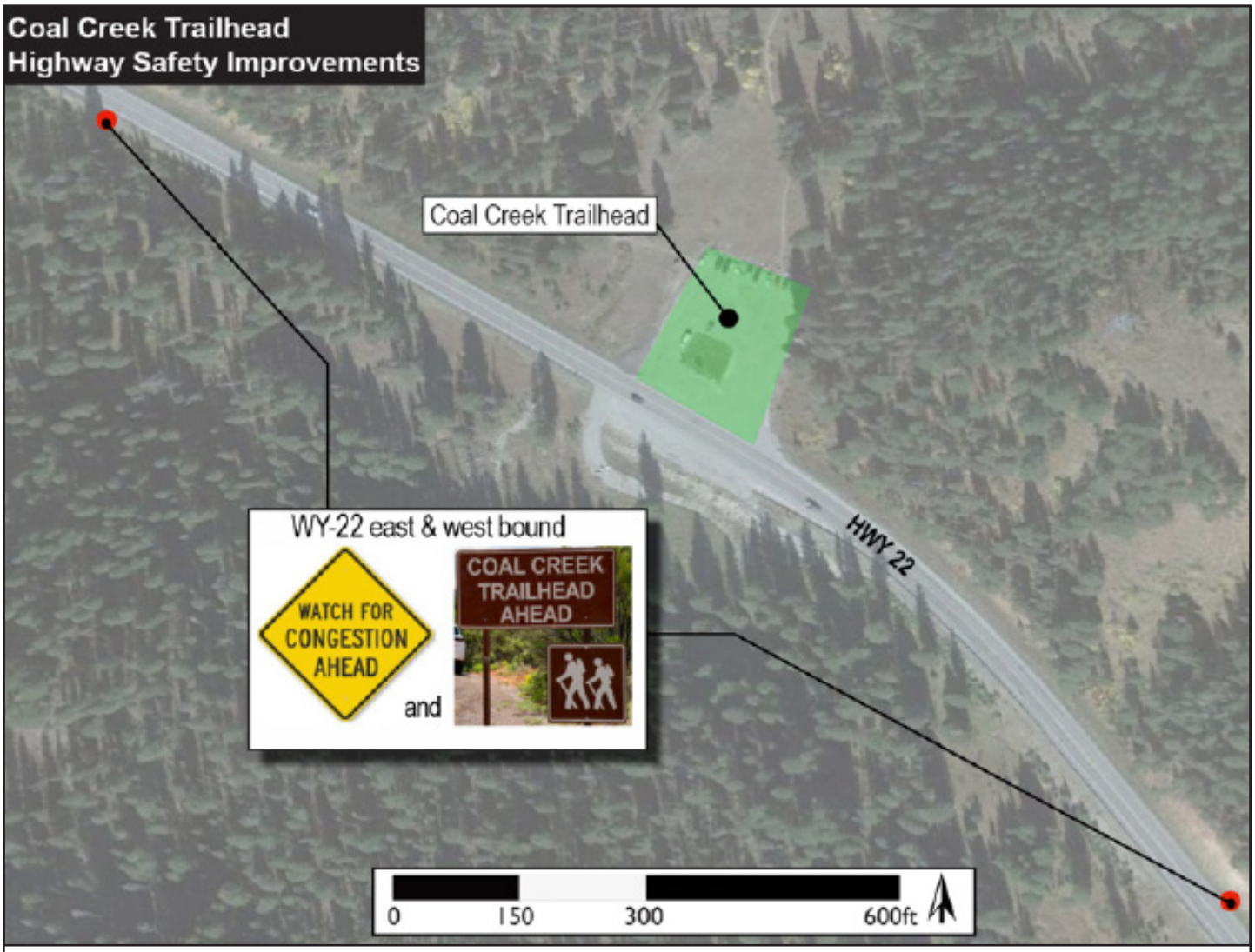


Figure 40: Coal Creek area highway safety improvements

Notes on considered sign placement:

- Guidelines from the Manual on Uniform Traffic Control Devices for advance placement of warning signs suggests that signs on 45 MPH highways should be around 775 feet before activity area to give the time needed for detection, recognition, decision and reaction

- Considered USFS typical brown signs approaching Phillips Bench access areas which includes a 'Watch For Congestion Ahead' sign, if applicable.

ACTIVE TRANSPORTATION & THE GREATER YELLOWSTONE TRAIL

Transportation plans and policies for Teton County (WY), Teton County (ID) and the cities of Victor, Wilson and Jackson all support bicycling and walking as viable modes of transportation. Although there is biking, walking, skiing, etc. along the highway corridor, mostly to retrieve recreational user's parked automobiles, it is not safe mainly because of high-speed limits, limited site distances, limited adjacent shoulder width and the lack of a completed and separated multi-use trail along the highway corridor. The safest route for cyclists and pedestrians is along the existing Greater Yellowstone Trail or GYT (Image 18).

Existing Conditions

Image 18: Greater Yellowstone Trail approaching Teton summit

The Greater Yellowstone Trail (GYT) represents an ambitious 180-mile regional multi-use trail system designed to ultimately connect significant natural areas such as Grand Teton National Park, Yellowstone National Park, Bridger Teton National Forest, Caribou Targhee National Forest, two state parks, various regional parks, and multiple towns and municipalities in the broader Yellowstone region spanning Wyoming, Idaho, and Montana. The original GYT concept plan was finalized during the spring of 2015. The overarching vision entails establishing a world-class regional trail system that not only elevates the quality of life but also effectively links communities to public lands, fostering economic development opportunities within the distinctive and multifaceted corridor. GYT development efforts have spanned more than a quarter-century. Within this defined study corridor, the GYT takes the form of separated pathways, recognized as the Jackson Hole Community Pathway System, and low-traffic roadways from the Stilson Transit Center to Wilson, WY.

Starting from Wilson, the GYT follows a separate path on the south side of WY-22 until reaching Trail Creek Rd. (also known as Old Pass Rd.), at which point it transitions into a shared-use roadway, continuing along Trail Creek Rd. until its terminus at the Trail Creek Trailhead. From Trail Creek, Old Pass Rd. has undergone a comprehensive transformation, resulting in a 10 ft. wide pathway spanning 3.5 miles up to the Teton Pass Summit (Image 18). This particular section underwent a full repaving in 2020.

From from the Victor (ID) Transit Center, the GYT incorporates a combination of separated pathways and shared-use roadways, primarily along the sparsely-used Old Jackson Hwy for an approximate 3-mile stretch, extending just beyond Moose Creek Ranch. This section of Old Jackson Hwy, classified as a two-lane rural roadway, underwent extensive reconstruction to establish a complete street facility.

A recently completed 2.5-mile, 10-foot wide separated pathway situated on the north side of ID-33 and WY-22, with a section separated from the highway by Jersey barrier (Image 19), extends to the Trail Creek Campground, just east of the state line in Wyoming. Known as the Centennial Trail project, it reached completion in September 2022, with funding secured through the Federal Lands Access Program (FLAP). This section additionally includes a bicycle and pedestrian underpass (Image 20) that connects to the south side of the highway, facilitating access to Mike Harris Campground and Trail Creek Campground and another underpass that connects to Trail Creek Campground.

Image 19: Jersey barrier separating GYT

Image 20: Bicycle/pedestrian undercrossing accessing Mike Harris CG

Starting from Trail Creek Campground, located on the south side of WY-22, the design phase is currently at a 50% completion milestone for the 3.5-mile segment of the GYT extending east to Coal Creek Trailhead. Construction is scheduled for the 2024-2025 season, with funding secured through the BUILD grant.

The Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants program funds investments in transportation infrastructure. BUILD grants were awarded in 2018, 2019, and 2020. The RAISE Discretionary Grant Program has taken the place of BUILD starting in 2021. In September 2020, Teton County, WY and six other funding partners were awarded a $25 million USDOT BUILD grant for the Teton Mobility Corridor Improvements project for projects spanning over 30 miles from Jackson, WY to Driggs, ID along the WY-22 and ID-33 state highway corridors. (https://tetonbuildgrant.com/)

Current & Ongoing Projects

Figure 41 (below) shows existing and planned active transportation and other multimodal projects within the study corridor. Projects include from east to west:

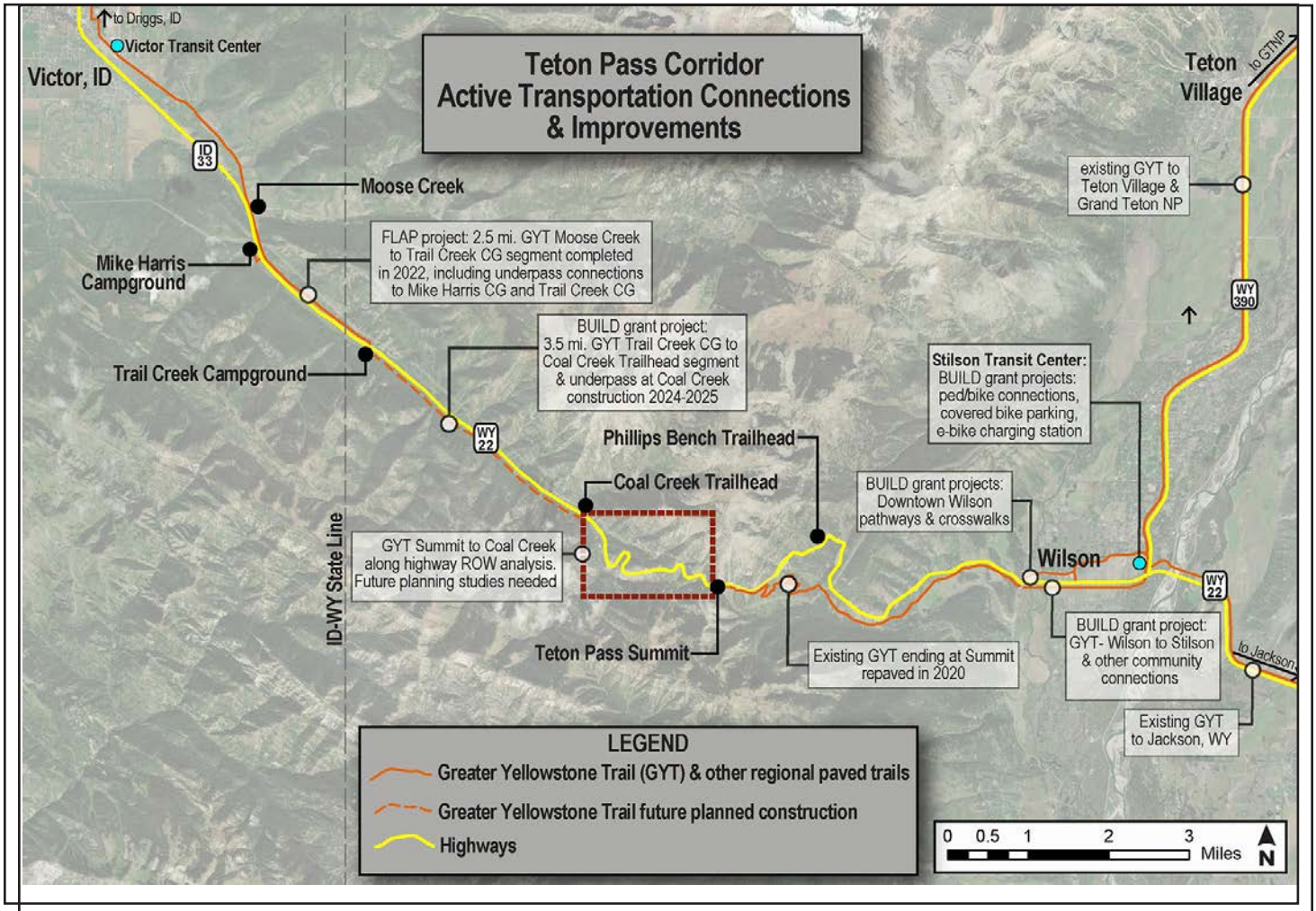


Figure 41: Study corridor active transportation projects

- Stilson Transit Center (BUILD funded): Acquisition of 5.7 acres of land and construction of a 2,700 square-foot 6-bay transit center, with a dedicated 403-space paved public park 'n ride lot, car-charging stations, pedestrian and bicycle pathway interconnections, covered bicycle parking, bike repair stand, e-bike charging, and a new transit signal study in separate warrant analysis at WY-390 that is yet to be determined by WYDOT. The project is anticipated to be complete by 2026.

- GYT Wilson to Stilson Transit Center (BUILD funded): Construction of pathway and underpasses below WY-22 linking Wilson to the planned Stilson Transit Center. (pathway and underpasses are now built).

- Downtown Wilson (BUILD funded): Construction of continuous active transportation facilities through Wilson linking regional pathways.

- GYT Wilson to Teton Summit: Existing 3.5 miles of repaved GYT (in 2020) from Trail Creek to Teton Pass Summit.

- 3.5 mile GYT from Coal Creek CG to Trail Creek CG including underpasses (BUILD funded): Anticipated completion in 2025.

- 2.5 GYT from Trail Creek CG to Moose Creek including two underpasses (FLAP funded): Completed in 2022.

Other investments:

- Purchase of four START commuter buses with bike racks serving the Teton Valley commuter route (BUILD funded).

- Existing GYT from Moose Creek through Victor, ID to Driggs, ID.

<u>The Rise of E-Bike Use & Technology</u>- A connected and physically separated GYT can not only provide another recreational amenity with supporting infrastructure along the study corridor, but with the rapid rise in its technology, E-Bike use could start to become a viable and more sustainable transportation alternative. The E-Bike industry continues to benefit from advancements in technology, leading to improved battery life, range, and power, as well as greater affordability for consumers:

'The revised Electric Bicycle Incentive Kickstart for the Environment (E-BIKE) Act (H.R. 1685/S. 881) recently reintroduced in Congress would give a refundable tax credit of 30 percent on the purchase of a new e-bike, up to $1,500, on bikes that cost less than $8,000. Individuals making less than $150,000 or $300,000 in joint households are eligible for this tax credit.'

Currently along the GYT in the study corridor, E-Bike use along paved multi-use trails is not allowed (Image 21). This study recommends a considered revaluation for guidelines on E-Bike use on paved trails.

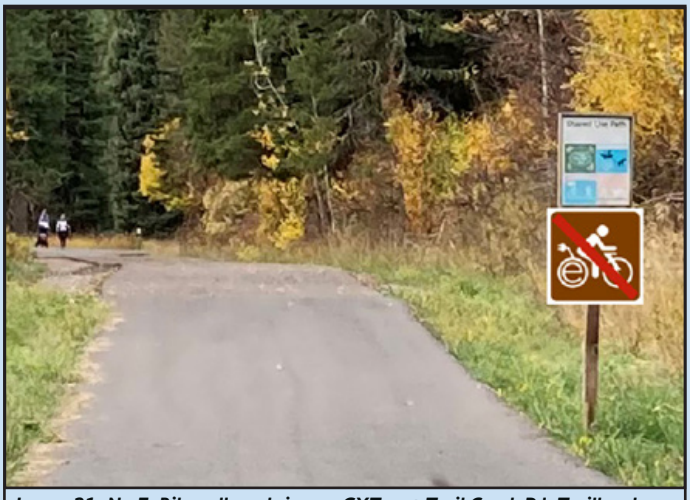


Image 21: No E-Bikes allowed sign on GYT past Trail Creek Rd. Trailhead

GYT Summit to Coal Creek ROW Analysis

The only permissible and sustainable alignment by area agencies is the 2.7 miles of WYDOT right-of-way along WY-22 (See Figure 41 for approximate area). This was agreed upon by the PMT consisting of WYDOT, USFS and Teton County (WY) representatives.

At an initial high level, Figures 42 (upslope study) and 43 (downslope study) start to examine the feasibility of placing a 10-foot 2-way separated GYT along the highway ROW from a slope analysis by viewing the 'Cal Topo' app as well as from images from site visits by FLH staff and Google Street View images. The feasibility categories by slope with corresponding high level approximate cost estimates (2023 USD) per Linear Foot (LF) include:

- GREEN: flat to minor slopes: $100-200 LF
- YELLOW: intermediate 5-15% slopes: $500 - 1K LF
- RED: major 15% + slopes: $5K – $10K LF
- MAROON: significant slopes that are at or near vertical: $11K LF

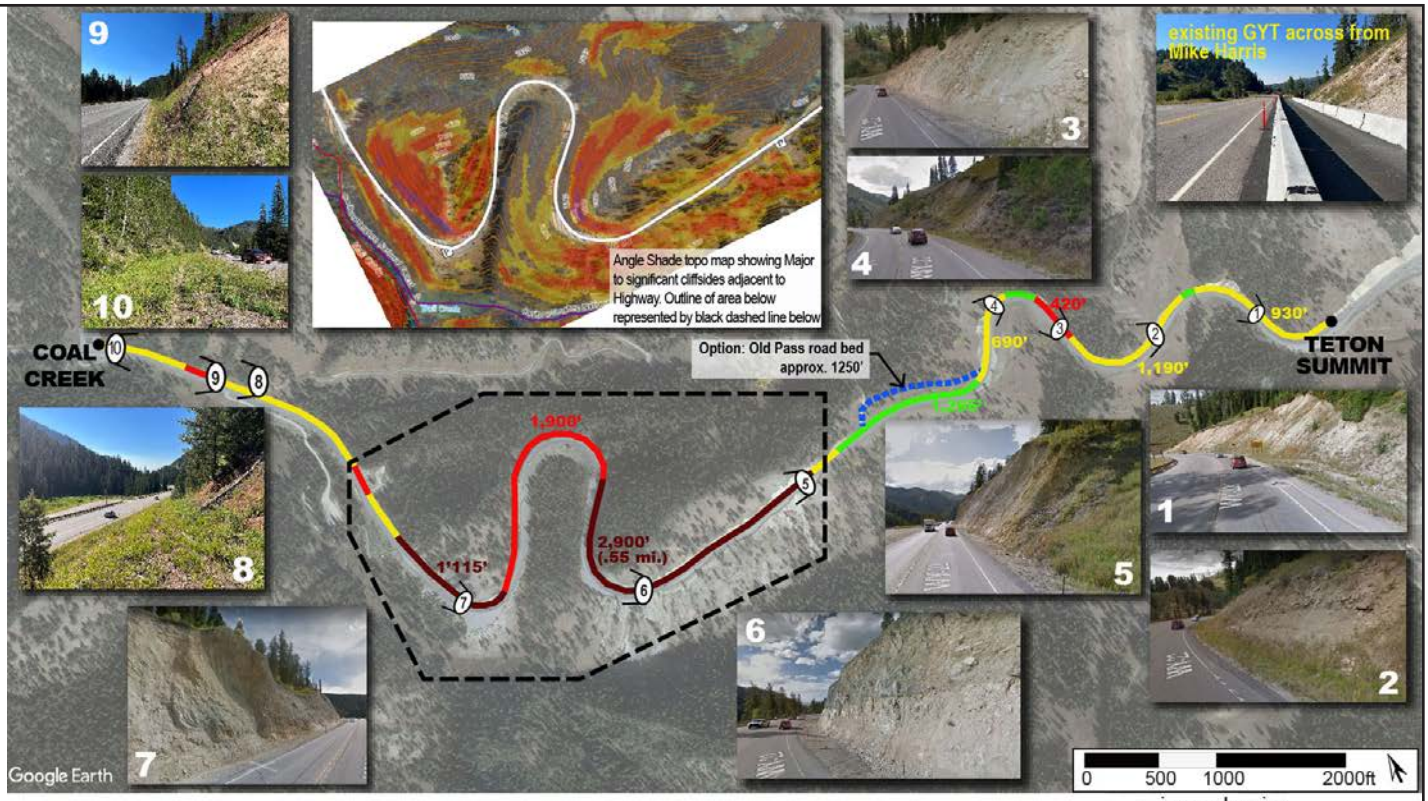
Below are existing examples of color slope ratings along the study corridor:

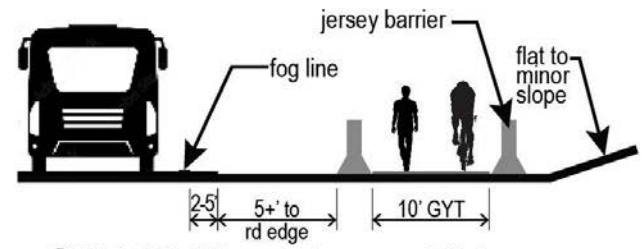
Image 22: GREEN slope example MP 11.4 (downslope)

Image 23: YELLOW slope example MP 12.8 (downslope)

Image 24: RED slope example MP 11.2 (downslope)

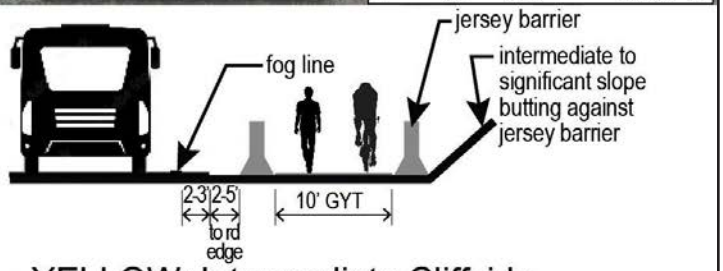
Image 25: MAROON slope example MP 13.2 (upslope)





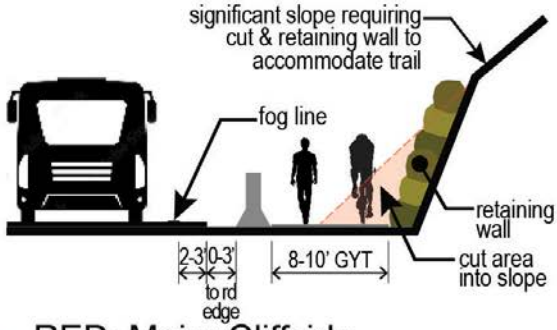
GREEN: Minor slope or Flat

- slope starts outside of required trail footprint
- trail footprint starts 5'+ from roadway edge
- jersey barriers may not be needed



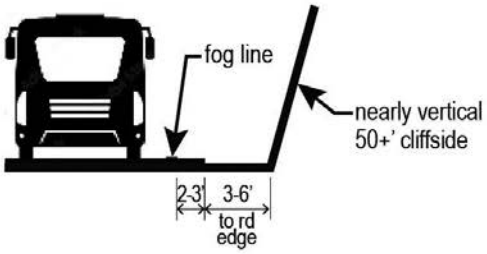
YELLOW: Intermediate Cliffside

- requiring standard earthwork and/or minor retaining wall
- jersey barrier 2 - 5' from road pavement edge
- see existing example pic above located across from Mike Harris CG



RED: Major Cliffside

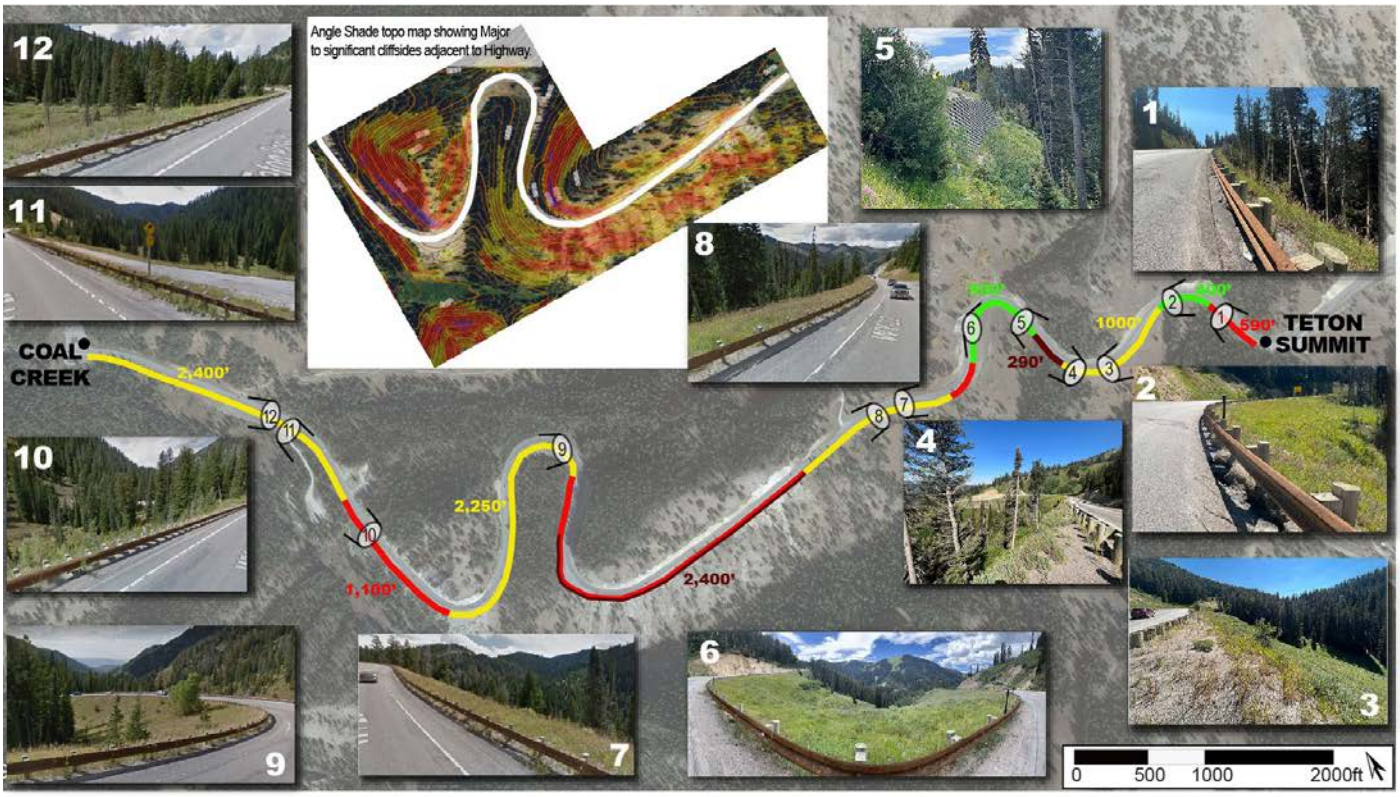
- close to highway requiring significant earthwork and retaining wall
- jersey barrier 0 - 3' from road pavement edge

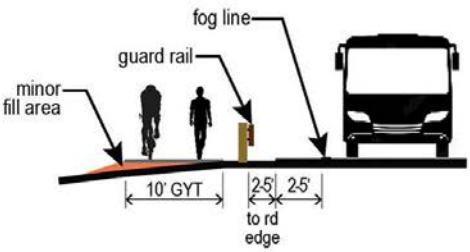


MAROON: Significant, Vertical Cliffside

- nearly vertical cliffside
- cut into cliffside impossible
- falling debris dangers

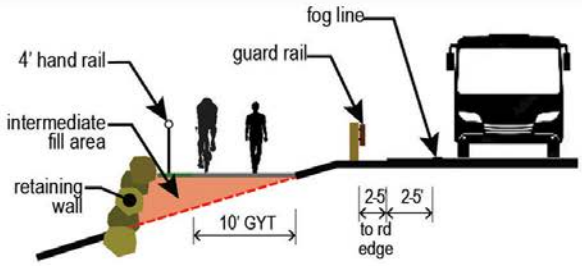
Figure 42: GYT along WYDOT ROW upslope study





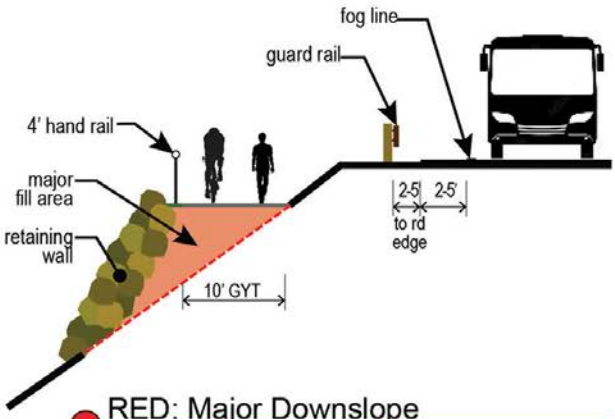
GREEN: Minor Downslope or Flat

- trail on flat grade or minor fill area
- 5% or less slope area



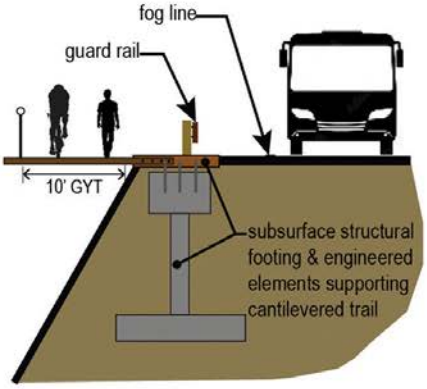
YELLOW: Intermediate Downslope

- trail on fill from 5-15% downslope
- intermediate retaining wall



RED: Major Downslope

- trail on fill from 15%+ downslope
- major retaining wall



MAROON: Significant, Downslope

- nearly vertical ciffside downslope
- cut into cliffiside impossible
- siginificant expense to build

Figure 43: GYT along WYDOT ROW downslope study

Cost Efficient Considerations to Connect the GYT

As recreationalists all year long hike, bike, and ski along the roadway corridor's shoulders for various reasons, it is recommended that an Road Safety Audit (RSA) be conducted on the full study corridor and especially on the 2.7-mile section of WY-22 between the Teton Pass Summit and Coal Creek where the GYT will connect along the highway corridor for the near term. An RSA should be focused on multimodal use and what feasible recommendations can be considered to make the roadway safer for all modes including cyclists, pedestrians (including skiers) and vehicles.

A Road Safety Audit (RSA) is the formal safety performance examination of an existing roadway by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. An RSA Team considers how roadway, traffic, environmental, and human factors impact safety, within the context of mobility, access, surrounding land use, and aesthetics. For more information on RSAs visit the FHWA Highway Safety Programs page at:

Considerations for improvements could include:

Widened Shoulders: Numerous incidents involving non-motorized users can be attributed to their coexistence with motorized traffic along the roadway. To mitigate such risks, the introduction of paved shoulders featuring ample widths is proposed for consideration. These widened shoulders facilitate the segregation of motorized and non-motorized users along the highway corridor, a strategy that has demonstrated efficacy in reducing various types of collisions. A minimum design width of 4 feet, with a preference for exceeding 5 feet is reccommeded (see Figure 44). According to findings presented in the Federal Highway Administration's document titled 'Safety Benefits of Walkways, Sidewalks, and Paved Shoulders,' the advantages of enhanced paved shoulders include:

Figure 44: WY-22 Milepost 12.7 existing and considered improved shoulder treatments

- Heightened comfort levels for bicyclists.
- Provision of space for maintenance operations and snow storage.
- Decreased demands on shoulder maintenance.
- Lessened incidents of pedestrian and cyclist accidents (pertaining to individuals walking alongside the roadway).

Image 26: Edgeline rumble strip with gaps

Edgeline Rumble Strips or Stripes: FHWA's 'Rumble Strip Implementation Guide: Addressing Bicycle Issues on Two-Lane Roads' suggests implementing edgeline rumble strips (Image 26) placed on the outside of the fog-line and adjacent to the shoulder and to provide gaps within the continuous rumble strips so that bicyclists can easily move between the shoulder and travel lane as necessary to avoid debris, make turns, pass, etc. This treatment can also mitigate run-off-the-roadway vehicles into the shoulder by alerting the driver. Working with bicycle groups to understand their needs as road users, educating them on the safety benefits of rumble strips, and addressing the bicycle community's concerns when implementing policies is critical tothe successful implementation of this safety countermeasure. The Wyoming Strategic Highway Safety Plan also recognized the benefits of rumble stripes and has recommended their implementation.

Image 27: WY-22 milepost 12.8 site line issues

MUTCD Signage: As recreation activity continues to increase along the whole study corridor, there will likely be an increase in roadside bicycle and pedestrian activity.

MUTCD W11-1 signs (Image 28) should be considered along the 2.7mi section of WY-22 between Teton Pass Summit and Coal Creek that connects the GYT along the roadway shoulder to alert motorists where unexpected entries into the roadway might occur by cyclists.

Adding MUTCD W40-3 (Image 29) signs at strategic locations can help to alert motorists of potential pedestrian activity ahead, particularly where Winter time plowed snow build up along sharp curves can lessen site line distances like at Milepost 12.8 along WY-22 (Image 27).

Image 28: MUTCD W11-1 sign

Image 29: MUTCD

SAFETY HOTSPOTS

Trail Creek Rd. and WY-22 Intersection

Currently, the intersection of WY-22 and Trail Creek Rd. (also known as Old Pass Rd.) serves as the primary access point to several key facilities and areas. These include the Trail Creek Nordic Training Facility, Trail Creek Ranch which features numerous Nordic trails, and a formalized trailhead located at the road's terminus providing direct access to the Greater Yellowstone Trail. Additionally, on the north side of WY-22, there exists an informal yet highly frequented area in front of the Heidelberg. This area is unofficially used for ridesharing and hitchhiking pick-up and drop-off.

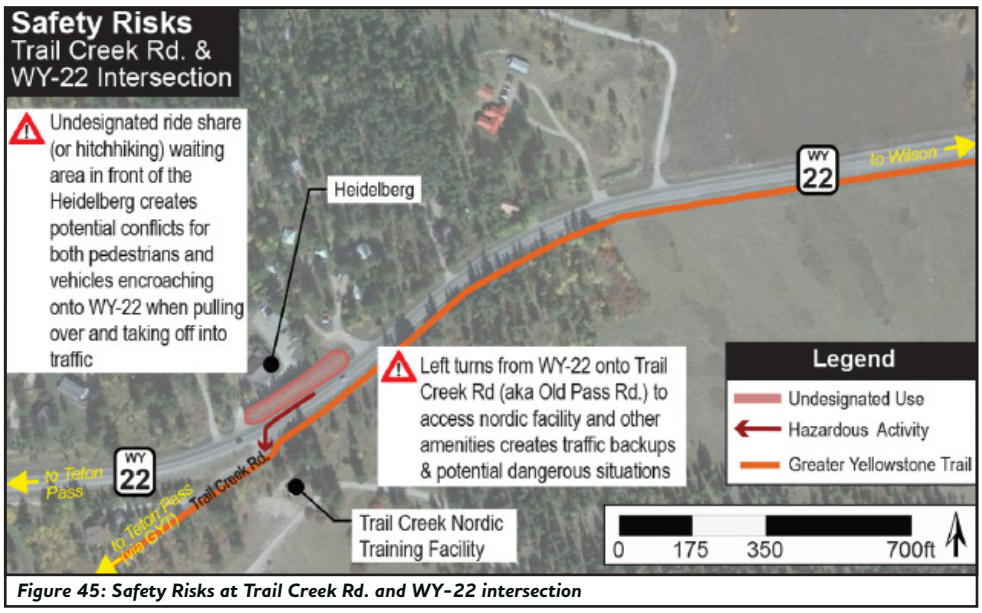


Figure 45: Safety Risks at Trail Creek Rd. and WY-22 intersection

While the historical record of accidents at this location remains minimal, with only three documented incidents reported by WYDOT, it is crucial to acknowledge that the intersection faces several safety challenges. These challenges become particularly pertinent given the anticipated increase in recreational access and overall traffic. Some of the key safety risks include (refer to Figure 45):

- ***Potential Left-Turn Conflicts:*** There is a notable absence of a designated left-turn refuge on WY-22 at this intersection. This deficiency presents a potential risk of conflicts when vehicles attempt left turns, possibly impeding the flow of traffic.
- ***Traffic Congestion Hazards:*** The intersection's layout and usage patterns introduce the potential for traffic congestion. Such congestion, if not managed effectively, could lead to a heightened risk of accidents.
- ***Undesignated Waiting and Hitchhiking Area:*** Directly across from Trail Creek Rd., an undesignated area serves as a waiting and hitchhiking spot. This location generates potentially hazardous situations for pedestrians, especially when vehicles pull over to pick up passengers and subsequently merge back onto WY-22 amidst ongoing traffic flow.

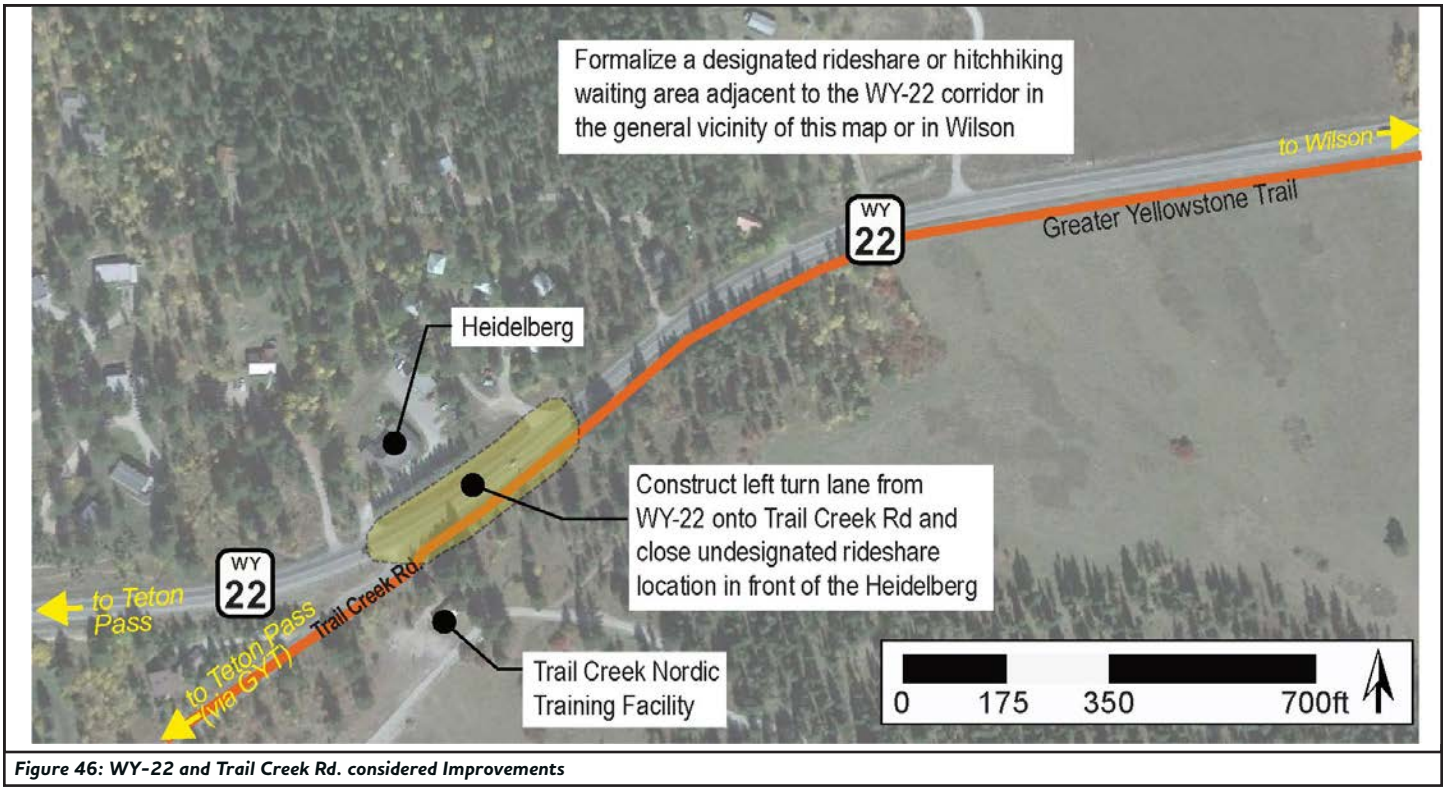


Figure 46: WY-22 and Trail Creek Rd. considered Improvements

Considered Improvements at WY-22 & Trail Creek Rd. Intersection: To minimize vehicle and pedestrian conflicts, the following are proposed for consideration (Figure 46).

- Create a left-turn lane from WY-22 onto Trail Creek Rd.
- Close the undesignated ride share and hitchhiking access area at the Heidelberg site and designate a formalized ride-share location in the general vicinity of this area or in Wilson.

Weigh Station

The Weigh Station is a pullout area off the southern side of WY-22 and is utilized and managed by WYDOT for commercial truck traffic control. Along the western portion of the pullout is a small, unofficial parking area for recreationalists. This location is sometimes utilized during high avalanche danger as overflow for the Coal Creek parking area to access the backcountry trails in the Winter, south of the highway (Figure 47).

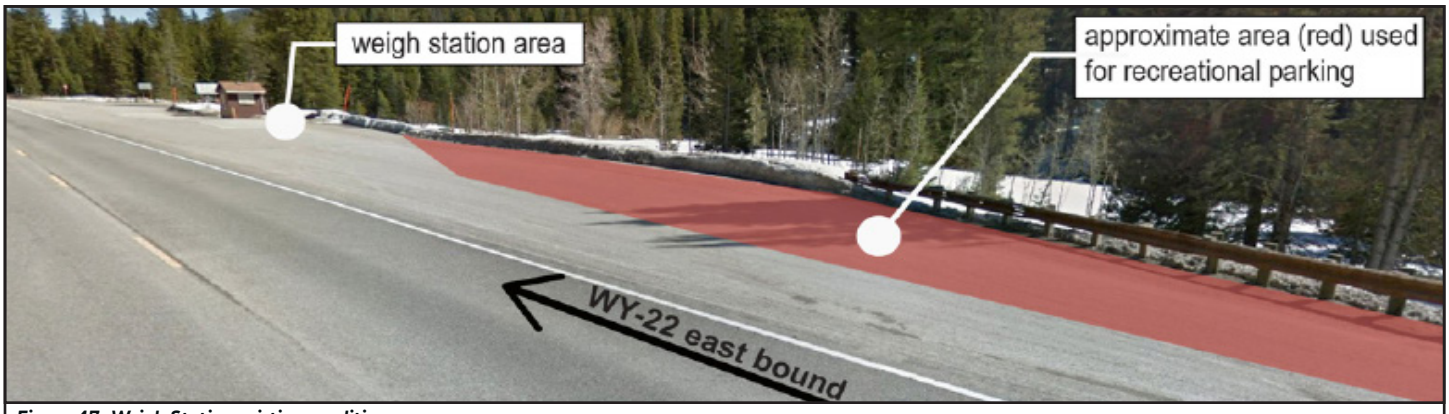


Figure 47: Weigh Station existing conditions

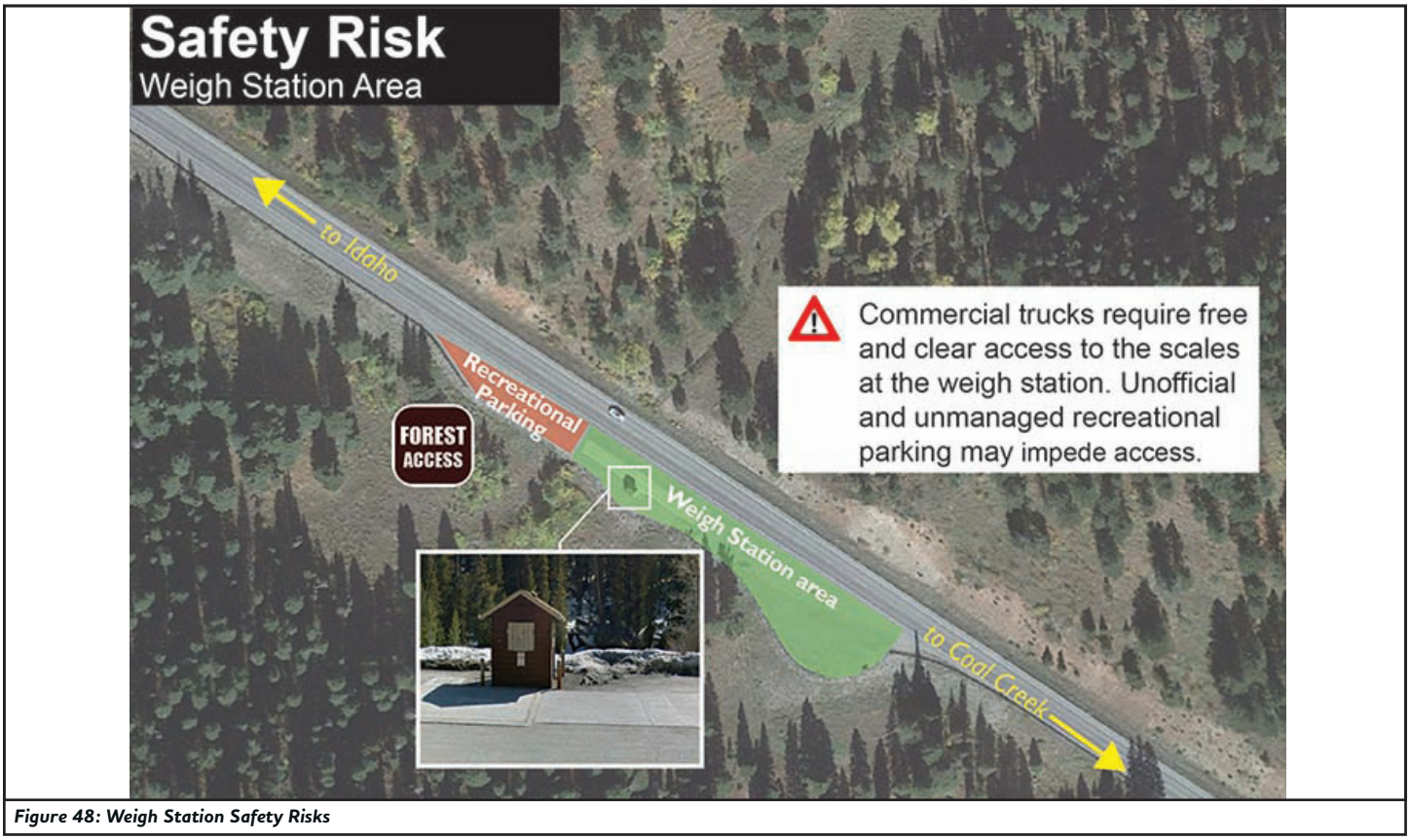


Figure 48: Weigh Station Safety Risks

Safety Risks: The unofficial and undesignated recreation access parking area pose some minimal safety concerns for commercial truck traffic to access the scales (Figure 48).

Considered Improvements at Weigh Station: The Weigh Station's primary objective is to manage commercial truck traffic, but as the western part of the area is used for recreation access, improvements should be made to distinguish the areas and uses. Considered improvements include (Figure 49):

- Sign the approximate 3,200 SF western part of the area for Parallel Parking Only
- Distinguish the parking area and weigh station area with paint hatch and No Parking signage
- Option: eliminate informal rec parking and relocate and create new in another location in close proximity of rec area.

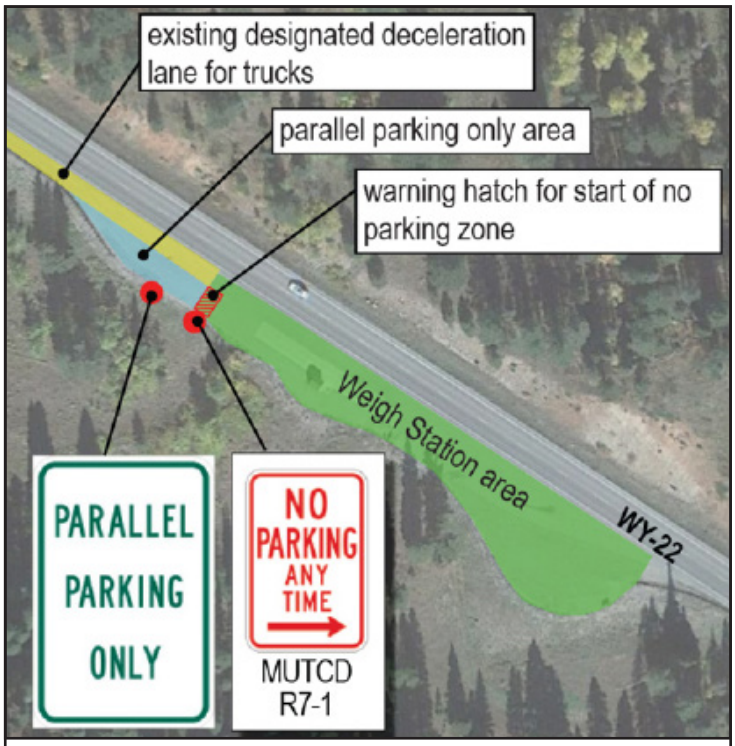


Figure 49: Weigh Station considered improvements

State Line

The State Line area is an approximate 229,200 SF pullout off the southern side of the highway that accommodates approximately 83 vehicles (Images 30). It is officially managed by WYDOT as a chain-up station during the Winter months. The site is regularly used for recreation parking, especially in Winter months for backcountry skiing access to Mt. Oliver and other slopes on the north side. With the adjacent and newly built Greater Yellowstone Trail located on the north side, recreation access numbers could change especially for cycling and mountain biking access. Also, Idaho and Wyoming "Welcome To" signs are placed on both sides of the highway here and are a popular prop for photographs.

Image(s) 30: Existing conditions at State Line

Safety Risks: The safety concerns primarily arise from westbound vehicles pulling out of the travel lane and into an undesignated, unimproved, and limited capacity (2-3 vehicles) roadside area to take photos of the "Welcome To Idaho" sign and lack of pedestrian congestion ahead signs (Figure 50).

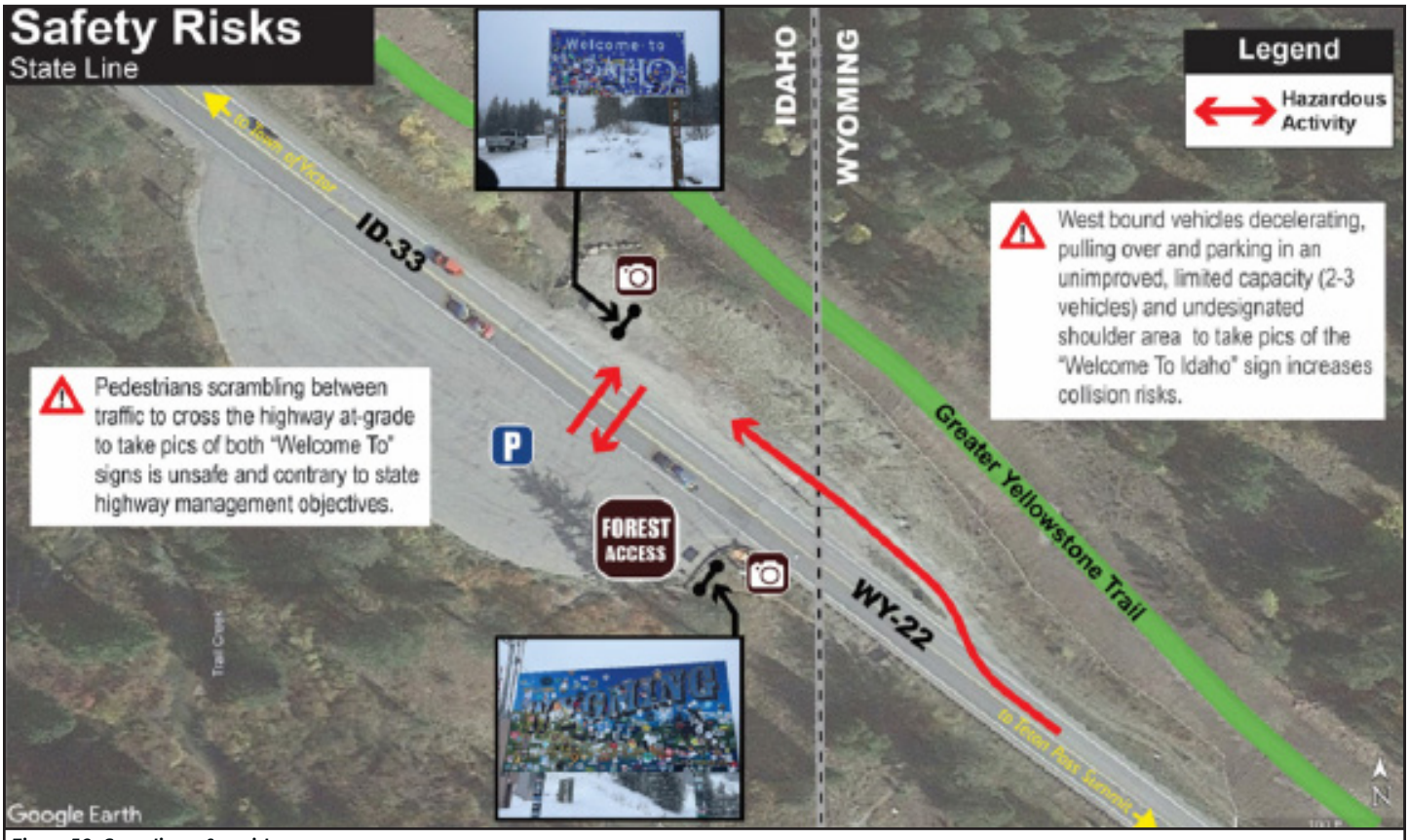


Figure 50: State line safety risks

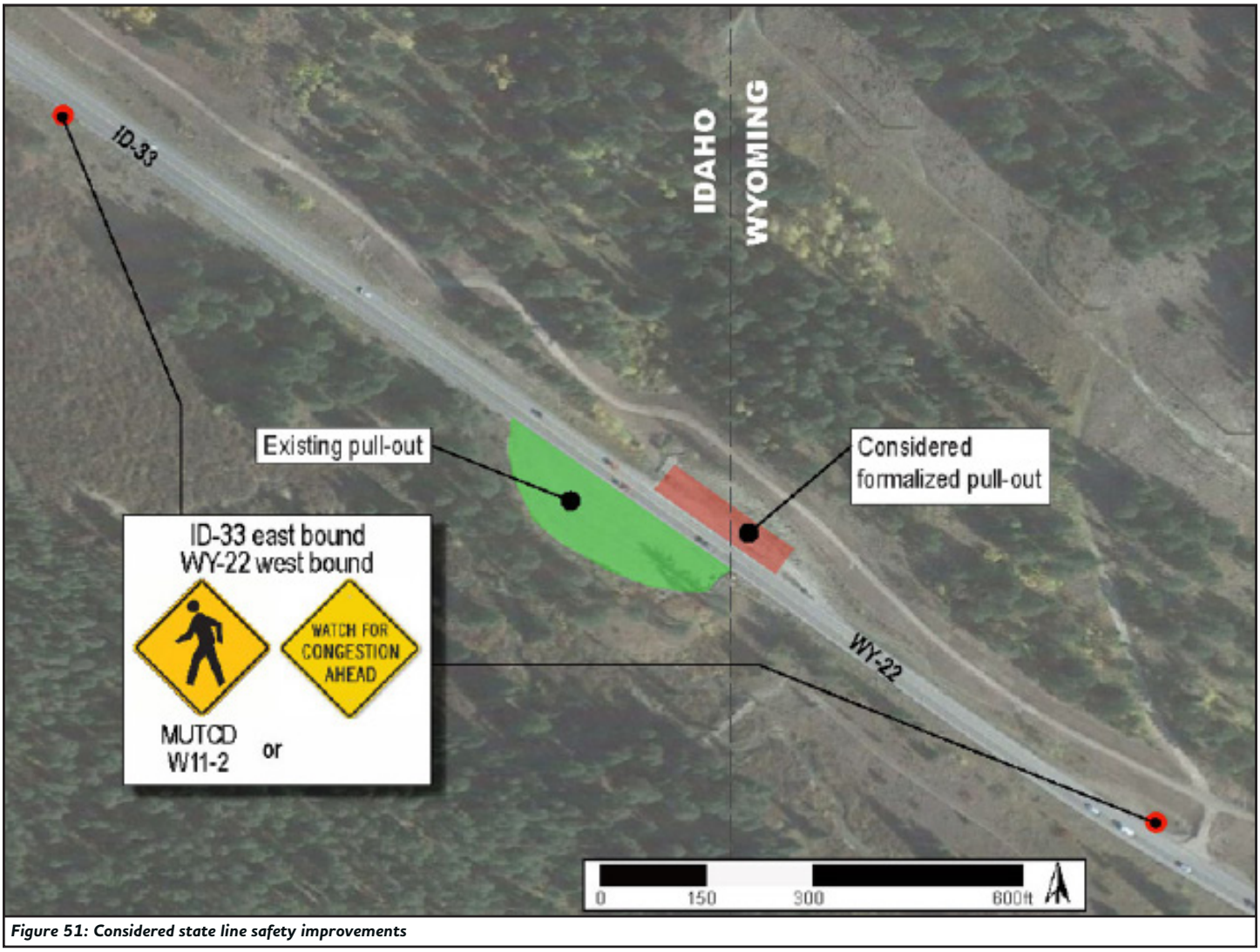


Figure 51: Considered state line safety improvements

Considered Improvements at State Line: As visitation increases along the corridor, so does the likelihood that visitors will want to pull over at the state line to take pictures of the "Welcome To" signs as well as park to recreate in the area. The following considered safety improvements include (Figure 51):

- Adding MUTCD W11-2 or other signage to notify approaching vehicles of roadside activity
- Formalized pullout area on north side of highway
- Considered parking plan with striping and signage on south side of highway

Mike Harris Campground

The Mike Harris Campground, a well-frequented facility under the jurisdiction of the Caribou Targhee National Forest (NF), is situated within the state of Idaho. Positioned in close proximity to Victor, ID, the campground's entrance is located approximately 1.5 miles west of the Idaho-Wyoming state line, adjacent to Idaho Highway 33.

The primary parking area, of approximately 20,000 square feet, is capable of accommodating approximately 45 vehicles. Notably, this area experiences robust visitation throughout the summer and winter seasons and is subject to snow plowing operations during the winter months.

A notable addition to the site's amenities is the inception of a novel mountain biking trail system, introduced around 2020. This trail system offers direct accessibility from the principal parking area and establishes linkages to an extensive network of trails within the surrounding backcountry.

Additionally, the Mike Harris Campground is seamlessly integrated with the Greater Yellowstone Trail. This connectivity is achieved through the construction of a newly established extension, facilitating uninterrupted passage. Noteworthy features of this connection encompass an underpass infrastructure and a dedicated segment linked to the primary entrance road, intersecting Idaho Highway 33 (refer to Image 31).

Image 31: New GYT undercrossing accessing Mike Harris campground

Importantly, this particular trail segment has been situated within the highway's right of way, along both sides of the thoroughfare.

Safety Risks: The safety concerns come from west bound vehicles turning into Mike Harris without a designated turn lane, no acceleration lane leaving Mike Harris, and no deceleration lane entering Mike Harris from the west, all which create backups and queuing onto the highway and potential dangerous situations (Figure 52).

Considered Improvements at Mike Harris Entry: As visitation at Mike Harris continues to rise throughout the year, coupled with increased traffic flow along the highway due to daily commuters, it becomes imperative to contemplate the incorporation of supplementary turn, acceleration, and deceleration lanes. These improvements would alleviate congestion and reduce the risk of accidents at an increasingly popular recreation access area.

- Separate turn lane for west bound travelers entering Mike Harris.
- Deceleration lane for east bound vehicles entering.
- Acceleration lane exiting and east bound.

Opportunities and constraints of these improvements include:

Opportunities:
- Makes for better traffic flow
- Decreases chances for vehicular crashes

Constraints:
- Added turn lanes would require major earthwork on the west side of the highway
- With the newly built Greater Yellowstone Trail segments, aka Centennial Trail, built closely adjacent to both sides of highway, it would be impossible to widen roadway to build these added lanes without ripping up and moving these new GYT segments

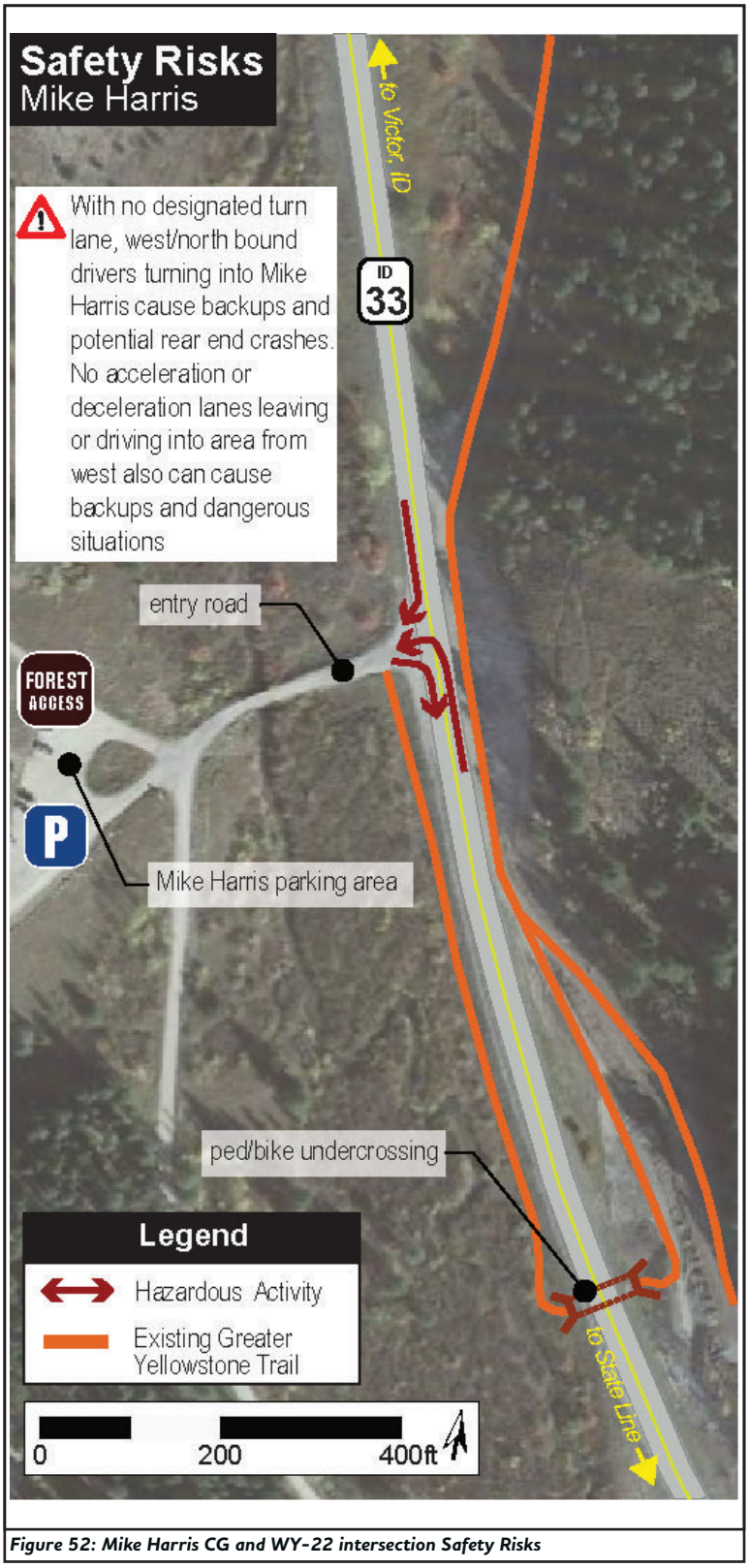


Figure 52: Mike Harris CG and WY-22 intersection Safety Risks

ENVIRONMENTAL RISK MITIGATION

Wildlife Crossings

As shown in Figures 16, 17 & 18 in the Existing Conditions section, wildlife vehicle collisions (WVC) along WY-22 and ID-33 are prevalent along the study corridor. Currently there are wildlife warning signs along the corridor, but they have had little effect in reducing WVC. The Teton County Wildlife Crossings Master Plan, dated May 2018, has identified wildlife fences in combination with grade-separated wildlife crossing structures as the most effective and robust mitigation measures for addressing human safety and biological conservation concerns. Additionally, the plan outlines several priority locations for recommended wildlife crossings within Teton County, Wyoming, and WY-22 within the study corridor is among these identified priorities.

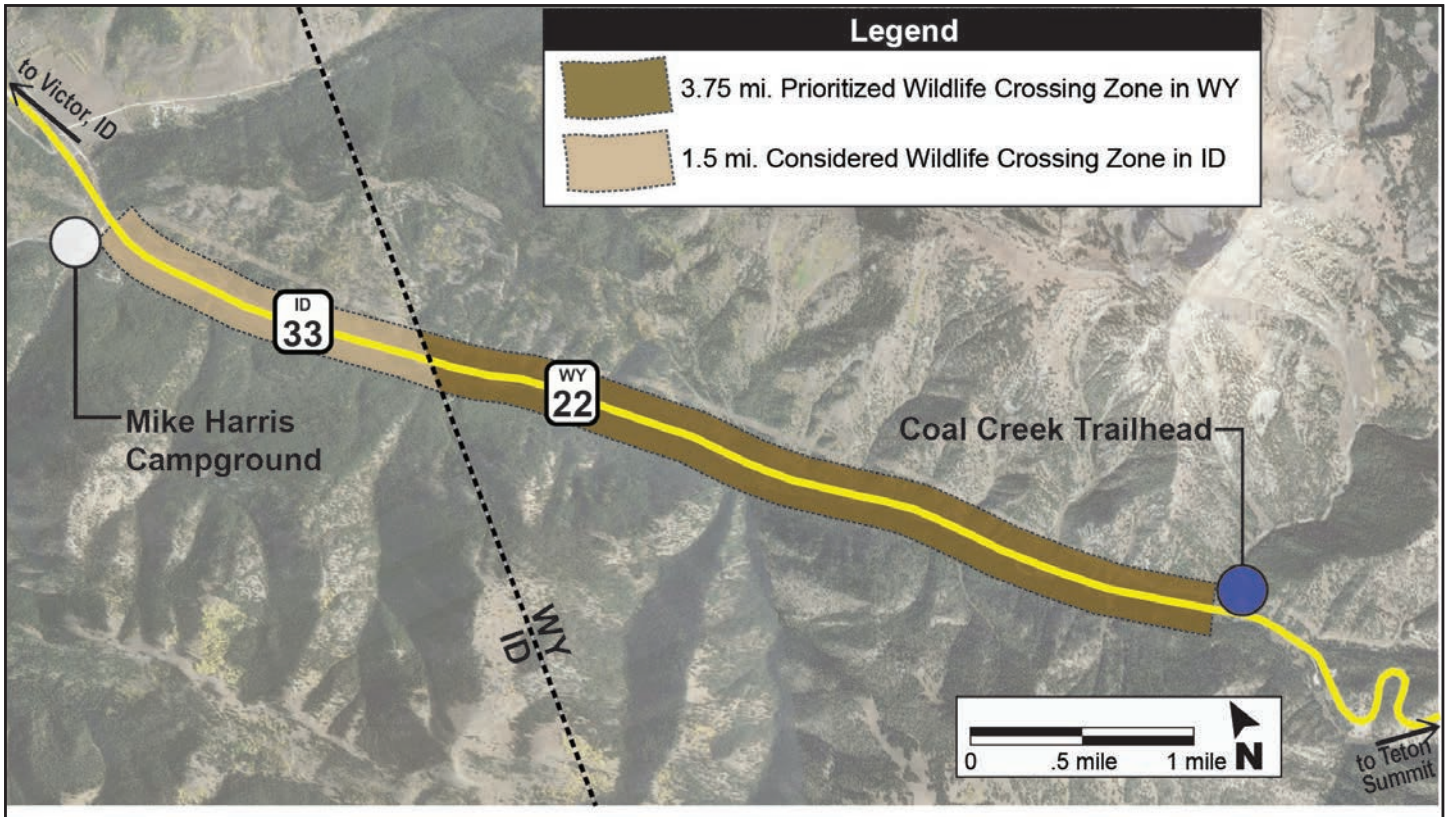


Figure 53: Prioritized and considered wildlife crossing zones

Considered Wildlife Crossing Improvements: The approximate 3.75 mile stretch of WY-22 from Coal Creek Trailhead west to the Idaho state line is chosen through an ongoing 30% Teton County wildlife crossing implementation study as a prioritization area. For this study and based on data provided by Jackson Hole Wildlife Foundation, it is recommended to extend this wildlife crossing prioritization area west into Idaho to the Mike Harris Campground entry area approximately 1.5 miles for a total of a 5.25 mile wildlife crossing prioritization area (Figure 53). Based on the current Teton County, Wyoming implementation study,

this stretch was chosen due to the high number of WVCs, high traffic, and other projects planned in the area. The target species are moose, elk, deer, carnivores, meso mammals, and aquatic species. The mitigation recommendations for this area are a system of multiple wildlife crossings with continuous fencing.

Wildlife crossing structures and fencing are known to be the most effective mitigation, resulting in reductions of collisions with wildlife by up to 90% or more while allowing wildlife to move under or over a roadway. However, crossing structures are not universally feasible due to their cost as well as other terrain or land use considerations, in which case other types of mitigation strategies may be warranted, alone or in combination with crossings. Recommended mitigation solutions will be integrated with community needs and values including highway mobility and safety, recreation, viewsheds and aesthetic concerns, and landowner and stakeholder interests. Wildlife over and undercrossing and fencing examples are shown in Images 32.

Image(s) 32: Wildlife crossing AND FENCING examples

Below are high level cost estimates (2023 USD) for various wildlife crossing types:

- Arch overpass for 2-lane highway: $3-8 Million
- Arch underpass for 2-lane highway: $1.5-2.5 Million
- Box culvert underpass: $1.5 Million
- Wildlife fencing (includes ramps and gates): $130K per Mile
- Wildlife guard: $35K Each

Opportunities & Constraints for Wildlife Crossings

Opportunities:

- Reduces wildlife-vehicle conflicts and improves driver safety
- Increases permeability for wildlife across the highway even as traffic volume increase
- Protects landscape connectivity and wildlife movement paths that are essential to population resilience and adaption to changing conditions
- Coordination with BUILD Grant projects

Constraints:

- Terrain: landslides, steep slopes, waterways, and other natural features can impact constructibility and cost
- Snow depth, snowplowing, and avalanches
- Protecting recreation access while ensuring the functionality of the wildlife mitigation system

Teton County Wildlife Crossings 30% Design Project

The ongoing (as of late January 2024) Teton County (WY) Wildlife Crossings 30% Design Project has taken three priority areas identified from the Wildlife Crossings Master Plan to advance these areas as standalone plans which could be implemented independently or as part of future WYDOT highway improvement projects. In discourse with state and federal agencies, local non-profits, adjacent landowners, and other stakeholders, this project came up with conceptual mitigation plans and 30% design plans for each of the three locations and one of those three priority areas is part of this study just east of Coal Creek to the WY/ID state line (also identified in Figure 53), or from milepost 13.1 to milepost 17.4 at the state line. The recommended mitigation treatments include four dedicated wildlife crossing structures. 8' high wildlife fencing, deer guards and escape ramps (Figure 54).

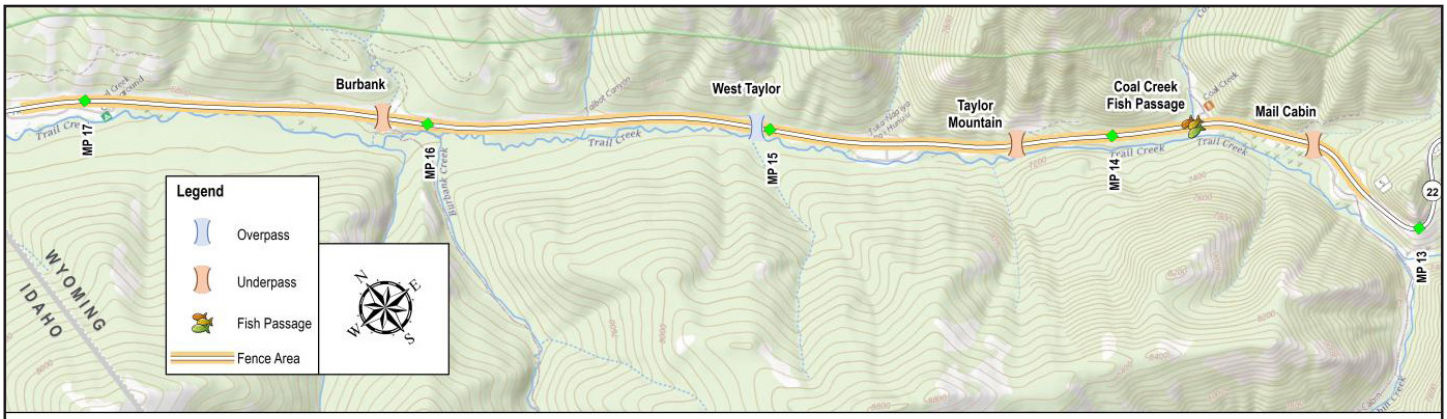


Figure 54: Teton County (WY) Wildlife Crossings 30% Design Project recommended mitigation treatments (https://engagetetoncountywy.com/m6613#tab-37611)

Image 33: West Taylor milepost 15.1 overhead wildlife crossing schematic (https://engagetetoncountywy.com/m6613#tab-37611)

Image 34: Burbank milepost 16.2 wildlife undercrossing schematic (https://engagetetoncountywy.com/m6613#tab-37611)

Taken from the county's 30% Design Project, Images 33 & 34 show design schematics of over and undercrossings at West Taylor and Burbank along the study corridor. For more schematics as well as more detailed information on the 30% Design Project including detailed cost estimation, please visit:
https://engagetetoncountywy.com/m6613#tab-37611

To add, with increased wildlife movement especially with Moose, Jackson Hole WIldlife Foundation states the importance of wildlife crossing treatments be give future priority at the location directly west of Wilson, WY and, more broadly, these structures and treatments should be considered when any highway construction project is planned along areas of increased wildlife movement.

The FHWA Wildlife Crossings Pilot Program (WCPP) is a competitive grant program with the goal of reducing Wildlife Vehicle Collisions (WVCs) while improving habitat connectivity for terrestrial and aquatic species. The WCPP provides funding for construction and non-construction projects. The Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117-58, November 15, 2021) authorized $350 million total in Federal-aid contract authority funding for Federal Fiscal Years (FY) 2022 through 2026 to be awarded by the U.S. Department of Transportation, through the Federal Highway Administration, for the WCPP.

Eligible entities for the WCPP include:

- ***State Departments of Transportation***
- ***Metropolitan Planning Organizations***
- ***Units of local government***
- ***Regional transportation authorities***
- ***Special purpose districts or public authorities with a transportation function***
- ***Indian tribes***
- ***Federal Land Management Agencies***

For more information visit: https://highways.dot.gov/federal-lands/programs/wildlife-crossings

Avalanche Sheds

Avalanches are a reoccurring concern along Teton Pass during the Winter and Spring thaw months. According to WYDOT historical data, there have been a total of 690 avalanches along Teton Pass from 2008 to 2021 with the two most problematic and frequent paths being the Glory and Twin Slides. Since 2008, WY-22 has been closed a total of 582 hours from these avalanche occurrences, with 71 closure hours coming in 2020 and 2021.

Avalanche, or snow, sheds (Images 33 below) have been effectively utilized in similar contexts as the study corridor. They are technically a bridge built over transportation corridors to divert avalanches over the top which can make a transportation corridor safer for the traveling public and minimize highway closures. Avalanche sheds are passive in the sense that they do not, unlike avalanche forecasting and active/explosives control, require human intervention to operate or perform their task during the period of avalanching.

Image(s) 35: Avalanche Shed examples

Opportunities & Constraints for Avalanche Sheds

Opportunities:

- One or two avalanche sheds could be constructed below the two slide hazard areas to maintain free flow of traffic, enhance safety, and mitigate delays caused by roadway obstruction
- Auxiliary parking and transit infrastructure could be incorporated with an avalanche shed near the pass summit (Figure 55)
- The structures offer an opportunity for branding, placemaking, wayfinding, and/or public art

Constraints:

- Costs of construction, operations, and maintenance of the structures can be significant
- The sheds can act as a dam, impeding the function of natural drainages, this could impact vegetation and wildlife at lower elevations

With information gathered from WYDOT's Avalanche Team, there are two major avalanche slide paths that affect the study corridor. They are the Twin Slides and Glory Slides in between Teton Pass Summit and Phillips Bench (Figure 54).

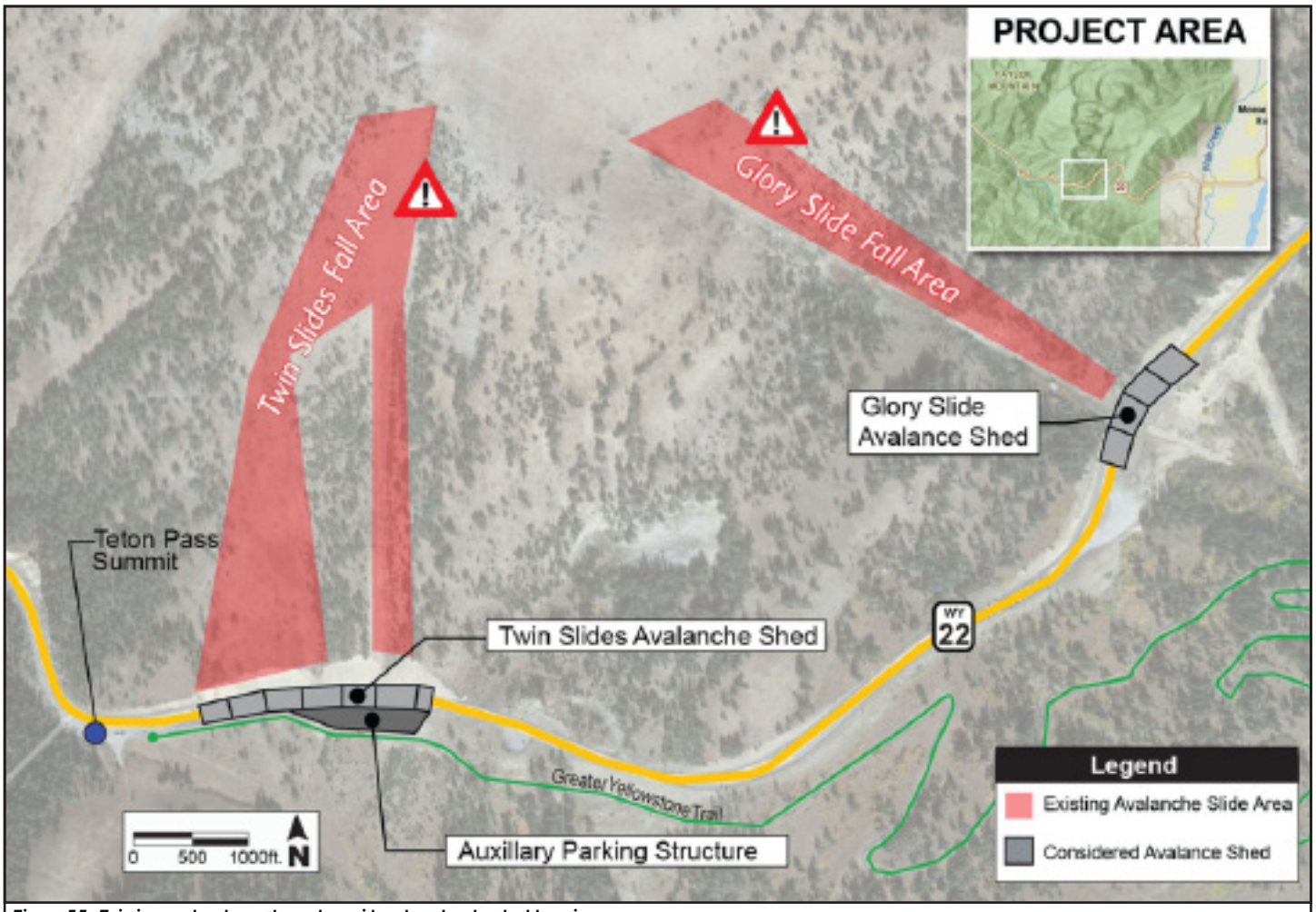


Figure 55: Existing avalanche paths and considered avalanche shed locations

An alternate access area for Teton Pass Summit is considered (Figure 37) but the area is directly in the path of the Twin Slides avalanche path. To improve safety and access for this considered access area, an avalanche shed with a directly adjacent parking structure could be an option as displayed in the conceptual photo-simulation in Figure 55.

Figure 56: Avalanche shed with auxiliary parking structure concept

FHWA's High level cost estimate (2023 USD) for design, engineering and construction for avalanche sheds:

- Twin Slides Avalanche Shed (with no auxiliary parking structure): $23.5 Million
- Twin Slides Avalanche Shed (with auxiliary parking structure): $32.5 Million
- Glory Slide Shed: $20.7 Million

PUBLIC FEEDBACK OVERVIEW

The public participation process included four events and milestones where the public could provide feedback and ask questions. These four events and milestones included:

- Project Kickoff and Virtual Public Meeting- January 25, 2022

- Public Feedback from Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios- Winter 2023
  >included a 3-week window for the public to access an online feedback form to submit questions, comments and concerns related to the technical document

- In Person Public Open House & Poster Presentation- February 15, 2023
  >coincided with relaease of above technical document where the public gave in person comments on considered operational and capital improvements directly on posters that were presented

- Public feedback from 'Teton Pass Corridor Study Final Draft'- Fall 2023
  >included a 2- month window for the public to access an online feedback form to submit questions, comments and concerns related to final study draft

The following are the most common public response feedback themes with responses:

***All proposed capital and operational improvements require further independent investigations beyond and separate from the scope of this study.**

- <u>Greater Yellowstone Trail (GYT) missing link between Teton Summit and Coal Creek:</u>
  The only feasible option to connect the GYT from Teton Pass to Coal Creek is along the WYDOT ROW. Local stakeholders and the public have identified other options to close this gap, mainly the 1.3 mile Bonneville Power Administration gravel road at MP 12.1 along WY Hwy 22, but this option has been determined to be unfeasible and hazardous, and contain a variety of environmental, design, safety, and jurisdictional concerns. Further, this road has a consistent grade of 9-12% for most of its length and the AASHTO 'Guide for the Development of Bicycle Faclities- Fourth Edition" on shared use paths states: "Grades steeper than percent are undesirable because the ascents are difficult for many path users, and the descent cause some users to exceed the speeds at which they are competent or comfortable."

- <u>Who works on this plan and its proposed elements moving forward?</u>
  The Regional Transportation Task Force has agreed to meet quarterly in 2024. Next steps for pursuing recommendations from the Teton Pass Corridor Study may be a

topic of discussion, and additional stakeholders will be invited to relevant Teton Pass Corridor discussions

- Restrooms at the Summit
  Planning for restrooms at the Summit or anywhere along the study corridor is not within the scope of this study

- Lower the speed limit at the summit below 45 MPH
  WYDOT will not entertain a posted reduced speed at the top of the pass. The area already has large pedestrian warning signs enhanced by orange flags to capture motorist's attention. The mountainous horizontal and vertical alignment already controls driver behavior and an established crossing is not warranted as recently analyzed by WYDOT in 2020/2021

- Proposed rumble strips adjacent to shoulder would be dangerous for cyclists|
  Rumble strips can mitigate run-off-the-roadway vehicles into the shoulder by alerting the driver, which make it safer for cyclists traveling along the roadway shoulder and are recommended by the Wyoming Strategic Highway Safety Plan as well as in FHWA's 'Rumble Strip Implementation Guide: Addressing Bicycle Issues on Two-Lane Roads'

- Pedestrian crosswalks across highway
  Crosswalk markings and pedestrian signs do not address or remove the conflict and, according to the MUTCD and WYDOT, crosswalks are not desirable on high speed (45mph and higher) rural highways

- People will not use undercrossings
  Proposed undercrossings would mitigate pedestrian-vehicle conflicts entirely and make it safer especially for seniors and the disabled.

- Passing lane along ID-33: Although significant safety concerns were expressed by the local community in regard to the added passing lane, this is not within the scope of this study. The passing lane project along Idaho State Highway 33 in between Mike Harris Campground and Victor, ID was an integral component of a federal BUILD grant (joint effort between Wyoming and Idaho). A guiding principle in the grant application is related to safety and the passing lane was included by the ITD in the TMCI suite of projects as a safety improvement. When the initial grant application was reviewed by the grantor, the total funding request was required to be reduced and ITD suggested removing the passing lane and several intersection improvements to reduce costs. After discussions with the grantor related to material changes, it was concluded the removal of this full component of the BUILD grant could jeopardize the grant. Therefore, the passing lane project remained in the grant. The posted speed limit for the passing lane will remain the same (55 mph) and will not be posted at 70 MPH.

NEXT STEPS

1. Establishment of a Formal Advisory Board or Steering Committee

Actions:

- Draft and pass a local resolution(s), endorsed by relevant elected bodies in Wyoming and Idaho, to establish a formal advisory board or steering committee.
- Ensure that the committee includes representatives from Wyoming and Idaho, local federal land managers, State Department of Transportation (DOT) officials, and other partners and NGOs as determined at the time of project development.
- Task the committee with overseeing the coordination and execution of the Teton Pass Corridor projects.

Rationale:

A formal advisory board will provide the necessary governance structure to facilitate collaboration among diverse stakeholders. Inclusion of representatives from both states and relevant agencies ensures a comprehensive approach to corridor development.

2. Development of a Shared Vision

Actions:

- Create a charter or foundational document (Statement of Values, etc.) that outlines a shared vision for the Teton Pass Corridor.
- The vision should encompass goals related to safety, sustainability, accessibility, and economic development.

Rationale:

A shared vision serves as a guiding "North Star" for the committee, ensuring alignment among stakeholders and project objectives.

3. Prioritization of Projects

Actions:

- Identify and catalog a portfolio of projects for implementation within the corridor.
- Assess the criticality and potential impact of each project.
- Prioritize projects based on their significance and feasibility.
- Seek funding opportunities at local, state, and national levels for the highest priority projects.

Rationale:

Prioritization allows for efficient allocation of resources and ensures that the most critical projects receive immediate attention. Diverse funding sources enhance financial viability and reduce the burden on a single funding stream.

4. Exploration of Funding Options Including Public/Private Partnerships (P3s)

Actions:

- Identify possible funding sources for priority projects, build local coalitions to apply for state and federal funding programs.
- Evaluate the feasibility of Public/Private Partnerships (P3s) for select Teton Pass Corridor projects, namely the recreational shuttle/parking management system.

Rationale:

P3s can bring innovative financing and operational expertise to corridor projects. Collaboration with private partners can expedite project implementation.

5. Special Use Permitting through the US Forest Service

Actions:

- Collaborate with the U.S. Forest Service to identify projects that require special use permitting within the Teton Pass Corridor.
- Any project that affects federal lands within the corridor, such as road improvements or recreational facilities (such as trailheads), may require a special use permit under the authority of the Grainger-Thye Act (16 U.S.C. §§ 497-497b).
- Participate in consultations and discussions with U.S. Forest Service officials to address any concerns, requirements, or conditions related to the special use permitting process.

Rationale:

Special use permitting is essential for projects that impact federal lands within the corridor. Efficient permitting processes ensure timely project execution.

6. Public Engagement and Communication

Actions:

- Determine the extent of public involvement in Teton Pass Corridor projects, following best practices for community engagement.
- Communicate clearly with the public regarding project goals, timelines, and expected outcomes.
- Seek public input on project priorities and design when appropriate.
- Enhance public education on safely accessing and navigating the Pass from a recreational standpoint.

Rationale:

Public engagement fosters transparency and community support for corridor initiatives. Involving the public in decision-making ensures that projects align with community needs and values.

Appendix A: Winter 2022 Virtual Public Meeting

The following are questions and/or comments from the public (in bold) and answers/comments from FHWA staff from the virtual public meeting held on January 25, 2022, all broken out into themes:

Safety

I would hope that safety would be a priority in decision making- in using and working on the pass since 1980- I believe that we are running on luck when it comes to traffic- recreation- wildlife and overall use.
Safety definitely is a top priority for our study and there are a range of options that we will recommend to make the highway corridor safer for all users

How are you planning on making the pass safer?
As this study focuses on suggested safety improvements along with mitigating congestion along the highway, just some, not all, of the measures that the study will recommend to make the Pass and highway corridor safer include lessening congestion by increasing and enhancing the transit mode share and more pedestrian crossing friendly traffic control devices at popular recreation access areas

Current speed limits are not enforced. Can Speed limits be analyzed in this study because they are currently divorced from safety and wildlife preservation?
WYDOT recently lowered the speed limit from 55 to 45 from Coal Creek parking area east to Old Pass Road. This study is not prescriptive, but could suggest other areas for lower speed limits throughout the Study corridor which include limited site distance areas, and heavy wildlife and pedestrian crossing areas

Speed is not the only issue. can you address passing on double yellow lines and even at the Glory avalanche curve?
Please direct highway related questions and concerns to: https://www.dot.state.wy.us/home/news_info/contact-information.html

Can you stripe the approach to the truck arrestor approach so people do not park there….which happens frequently
Non-authorized vehicles are not allowed to park in this area west adjacent to the truck arrestor, and there are 'No Parking' signs and pavement markings approaching the arrestor that exist

How about speed cameras and enforcement of speed limit for starters! Nothing worse than watching for wildlife and pedestrians and enjoying world class scenery and having a rude person drive up on your rear end
Please direct highway related questions and concerns to: https://www.dot.state.wy.us/home/news_info/contact-information.html

There was a fatal crash about where your map showed a fatality. A commuter died on the way back to Idaho when one vehicle crossed the center line, resulting in a head-on collision.

The WYDOT fatality did not occur during avalanche mitigation. It occurred during summer maintenance operations.

Recreational Access (w/ sub-components)

I think and would hope that the study area includes the Old Pass Road particularly where it starts at the bottom of the road and at the top. One of your slides showed that parking at the top often blocks where the OPR intersects the highway. Parking at the bottom is often an issue in both winter and summer. Some of the recreational use is generating multiple trips to shuttle people up not just during the summer but also during the summer as people make multiple vehicular trips.
Part of our study will include parking issues affecting the Old Pass Road. This includes mitigating conflicts at the top of the Pass where the trail ends as well as considering Transportation Demand Management solutions to mitigate the parking issues at the bottom

Will part of the report look at the feasibility of a non motor vehicle travel corridor (I.e a multi use trail along the road or through forest land)?
Yes, but the approximate 3 mile multi-use trail gap from the top of the Pass to Coal Creek to complete the paved multi-use trail will be very difficult from a landslide, wetland, and engineering standpoint

It seems like there's a lot of mention of alternative transportation options/shuttles for recreationists. Will the study be considering improved public transportation specifically for commuters from Teton County, ID?
No. This Study focuses on integrating recreation access and highway operational and safety needs. For further information on transit commuting, please refer to START and on-going complementary transportation studies in Teton County, Wyoming

Are you guys open minded to private shuttle up Teton pass?
Yes, the Study will consider a variety of public and private operational options

To follow up: it feels like bus access for both recreationalists and commuters should be a priority. All community members and visitors can benefit from shuttles / buses and safe pick up and drop off spots.
The focus of this Study is on integrating recreation access and highway operational and safety needs. We will look at improving bus/shuttle drop-off/pick off areas, especially at high use recreation access areas

Hi there. Thanks for being willing to consider all questions and concerns from locals. My biggest concerns about Teton Pass are related to issues bigger than this Study is probably designed to address… but cannot be ignored. Teton County, Wyoming, is pushing workforce to the Idaho side, and that means that while recreation is an important aspect (I am an avid winter backcounty skier and summer mountain biker and would hate to lose that access), I am concerned with what sort of infrastructure we might be able to provide for public transportation that can address the high likelihood that commuter traffic will only continue to increase.
For further information on planning for commuter transit, please refer to START and on-going complementary transportation studies in Teton County, Wyoming

Parking

Don't assume existing pullouts will be repurposed for parking within highway r/w. need to search for ground on USFS.
At this point in the study, no assumptions are being made. All feasible options will be examined to best meet

current and future highway operation/maintenance needs and recreation access needs within the terrain and legal constraints

Throughout much of the literature I've read, skiing seems to be the only talked about recreation type in the winter. Phillips Canyon is the only access for snowmobilers on the pass, but snowmobiling is also a significant recreation type that should be considered. Has their been any talk about creating additional parking at Phillips to accommodate for new, additional skiing access so that snowmobilers continue to have access to our public lands?
We have documented the need for snowmobile access at Phillips in the assessment of existing conditions. There are several options to address both the summer and winter parking issues at Phillips, each of which has pros and cons. The option of separating skier and snowmobile parking has been brought up and will be considered. That said, with increasing use and terrain limitations, unlimited parking capacity is not realistic for any type of recreation

Has properly grading/paving the Phillips parking lot been explored? It seems with a bit of simple maintenance it's capacity could increase greatly
Even though this area is used for recreation access, it is not technically considered a trailhead, but rather a WYDOT material storage area. However, as noted in the response above, all options to better meet recreation access and highway needs in the Phillips area are being explored, including use of the this area

You mentioned that parking capacity does not meet current needs. Are you suggesting that parking access to trailheads should be increased in a significant way? I would suggest that the more you add, the more people will come, and it will not meet demand.
It is true that current parking capacity does not meet current and future demand for access. The study will examine a scenario with expanded parking where feasible. However, terrain and legal constraints plus the need to provide for highway operational and emergency needs, suggest that parking capacity cannot be realistically expanded significantly. A more realistic scenario for the future will likely involve some mix of re-configured recreation parking plus transit options

Commercial Traffic

Will the study consider whether commercial truck traffic is appropriate through the corridor?
This Study focuses on integrating recreation access and highway operational and safety needs. Studying whether commercial truck traffic is appropriate is outside the scope of the study. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Trucks are prohibited during part of the year. Can trucks be prohibited all year?
As noted, above, restrictions on truck traffic is outside the scope of this study. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Can we improve the enforcement of the seasonal closure to trailers/semis?
Enforcement of current trailer/semi-truck restrictions is outside the scope of this study. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Are there any proposals to enforce the weight limit of trucks? most of truck runaways have involved over weight trucks i believe.
Enforcement of current trailer/semi-truck restrictions is outside the scope of this study. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Every single day i see a tractor trailer truck or trailers going over. There is no enforcement at all. I saw three today.
Enforcement of current trailer/semi-truck restrictions is outside the scope of this study. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

On the topic of signage (the announcement of speed limit change happened long before winter BTW), is there a plan to increase signage/communication along with enforcement for trailer traffic in the winter and weight limits in the summer?
The Study will look into increased signage and communication along the corridor especially around high use recreation access areas to improve the safety of both pedestrian and motorist. This Study will not look into additional enforcement on vehicles. For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Truck Arrestor

The 2nd vehicle arrestor makes no sense because traffic is often backed up past the planned arrestor - why does WYDOT insist on moving forward?
Addressing truck arrestors is not part of our Study. For more information on arrestor issues including the WYDOT public involvement process, please visit: https://www.dot.state.wy.us/arrestor

There has been overwhelming opposition from Wilson residents to the proposed location for WYDOT's second truck arrestor location. At multiple WYDOT meetings they have ignored our concerns. Traffic back up at the bottom of the pass creates a dangerous situation for the entrance position of the arrestor. Why has this not been highlighted in the planning process?
Addressing truck arrestors is not part of our Study. For more information on arrestor issues including the WYDOT public involvement process, please visit: https://www.dot.state.wy.us/arrestor

2nd arrestor location,,,,,
Addressing truck arrestors is not part of our Study. For more information on arrestor issues including the WYDOT public involvement process, please visit: https://www.dot.state.wy.us/arrestor

The arrestor is a big issue! Tory's comments not sufficient!
Addressing truck arrestors is not part of our Study. For more information on arrestor issues please visit: https://www.dot.state.wy.us/arrestor

Question to Tory Thomas: Has WYDOT performed any studies as to the traffic congestion that occurs during the tourist high season at the proposed truck arrestor location? What happens when the entrance is blocked and a truck without brakes is directed to this arrestor location!
Addressing truck arrestors is not part of our Study. For more information on arrestor issues please visit: https://www.dot.state.wy.us/arrestor

Gave comments to wydot and they said the decision on the arrestor has already been made!
Addressing truck arrestors is not part of our Study. For more information on arrestor issues please visit: https://www.dot.state.wy.us/arrestor

How does the arrestor work in relation to the current bike path, that is a huge safety issue on recreationalist.?
Although we understand that the second truck arrestor potential location would likely disrupt the bike path on the south side of the Highway, our Study has no say on where the arrestor should be. If the arrestor is placed at this location, then our Study could look into alternate locations to place the bike path to continue the present seamless connected bike path experience

The idea of a second truck arrestor, however, based on what we as citizens have seen and know, appears to be a very bad idea for a multitude of reasons. I think WYDOT can expect some pushback on that.
Addressing truck arrestors is not part of our Study. For more information on arrestor issues please visit: https://www.dot.state.wy.us/arrestor

Wildlife Crossings and Conflicts

Will this project consider wildlife crossings on the Idaho end of the Pass below the state line?
With the increase in wildlife collisions between the state line and Victor along Hwy 33, we agree that wildlife crossings should be considered, but our study will not include a thorough evaluation of highway needs in Idaho. Please contact Idaho Fish and Game for inquiries: idfg.idaho.gov

Are there examples of an avalanche snow sheds that also serve as wildlife crossings?
We are not aware of any snow sheds that also serve as a wildlife crossing.

Can Speed limits be analyzed in this study because they are currently divorced from safety and wildlife preservation?
Coordinating with WYDOT and IDT, lowering speed limits could be suggested in the suite of alternatives to make the corridor safer based on wildlife collision data we collect

Thank you so much for this good work on this much needed study! Have you collected WVC data from Idaho Fish and Game? Wildlife-vehicle collisions are pretty high right around the state line and their data will be critical in your evaluation of risk and wildlife movement, along with the JHWF WVC data.
Yes, we have collected WVC data from Idaho Fish and Game which could influence our analysis of alternatives to improve safety along the corridor

Attention to wildlife-corridor conflict, and consideration of wildlife crossings sounds excellent.

Avalanche Sheds and Tunnels

Europe has been doing sheds and tunnels for years, have we looked there for benchmarking?
As part of our case study research, we will look into what Europe has done for snow shed implementation

Any thoughts on adding a tunnel for at least the upper portion of the highway?
Although a tunnel through Mt. Glory at the top of the Pass is a hot topic, especially now with the passage of the Bipartisan Infrastructure Law, studying the feasibility of a tunnel is outside the scope of our study

If the BTNF can close thousands of acres of forest to protect winter range for wildlife, why can't they close terrain on the north side of Teton Pass on days when the avalanche danger is Considerable or High to protect motorists on Highway 22?
The Forest Service has worked with WYDOT and the County Sherriff's office to explore options to implement "conditional" closures for the Glory/Twin Slides area. While USFS supports the idea, they have not yet found an enforcement solution. Forest Special Orders, like the one that protects wildlife winter range, have defined start and end dates; they are not meant to be used to implement "on and off" closures that need to be responsive to rapid changes in weather and snowpack stability. In other states, "conditional" closures are implemented through highway departments, since the primary purpose is to protect highway interests. Such an approach has been pursued in Wyoming but has not been adopted. In the interim, the USFS will closely coordinate with WYDOT, the Bridger-Teton Avalanche Center, patrol staff and partner organizations to provide timely information when backcountry recreationists should not ski/ride slopes that could affect the highway.

Miscellaneous

Don't forget summer recreation use
Although Winter recreation has most users, we recognize that Summer recreation is steadily increasing and a big part of why people come to recreate along Teton Pass, so we will definitely not forget Summer recreation

Do you have a list of what implementations you would like to study?
This Study is not a decision document but rather one that will provide alternatives to make the corridor safer, especially at high use recreation access areas along the Highway

Is your study addressing both short-term and longer-term solutions? ie parking/shuttles/turn lanes short-term and for longer term things like a tunnel?
Our Study will evaluate alternatives for safer and more formalized parking, the feasibility of transit/shuttle operations for recreation, and improvements to the highway like added turn lanes to improve traffic flow and safety. The Study will not evaluate any tunnel solutions

Is ITD involved for the ID 33 and Mike Harris crossing mentioned?
Improvements along ID 33 at the Mike Harris intersection are not currently on the State Transportation Improvement Project list but with the increasing recreation access, improvements such as added turn lanes could be considered in the future in coordination with the USFS

In what year will the next road update happen for this highway?
For WYDOT updates please search the following site: https://www.dot.state.wy.us/home.html
For ITD updates please search the following site: https://itd.idaho.gov/

When is the next time that WYDOT will be upgrading this highway?
For additional info go to the following site and use the search function for answers: https://www.dot.state.wy.us/home.html

Appendix A: Winter 2022 Virtual Public Meeting

How does the current and projected traffic use compare to the capacity of the 2-lane road?
The Teton Pass highway is currently a 2-lane road. For comparative roadway analysis, please use the search function in the following sites:
For WYDOT please search through: https://www.dot.state.wy.us/home.html
For ITD please search through: https://itd.idaho.gov/

Would you consider detailed driver education regarding steepness of grade. Similar to the pullouts with tunnel information in advance of entering Zion?
Consideration of improved signing and other means to provide education to people travelling the highway corridor will be considered

Google Maps etc give no warnings about grade. Many tourists especially when towing have no idea of the nature of the pass. Often drivers, especially flatlanders and those towing RVs. do not comprehend what 10% grades mean for their engine and/or brakes.
Better education and awareness that includes real time monitors placed before entering the Pass will be considered

Aren't you required in this enviro analysis to attempt to mitigate climate change and diminish vehicular use?
The Study will include evaluating transit/shuttle use and other multimodal options for recreation purposes to get to sites along the Pass and therefore reducing single occupancy vehicle use and mitigating greenhouse gases

Any thoughts on managing the winter recreational access in a similar fashion to other high use areas with avalanche issues such as Rogers Pass, British Columbia?
Rogers Pass will be considered as a case study as part of our Study

Why not increase the fine for enforcement?
Enforcement of existing and potential future restrictions is outside the scope of this study

Will you keep Dark Skies in mind if any lighting is installed anywhere? The new light at the sand storage building on the east side is very bright, (too bright), unshielded and on all the time even when no-one is working there. It could be motion activated to be on only when workers are using the site
The Study will not include any lighting improvements

Have you looked at how bright those green message lights are at the traffic arrestor? They almost blind drivers and with snow reflectivity in winter, to drive in there would be a leap of faith
If the green message lights have been linked to crashes along the Highway, then this could be included in the safety evaluation and further coordination with WYDOT

Would it be accurate to say that looking at all users if there is a functional priority of users with commercial users #1 (comprised of freight & commuters), tourism, recreational users on the pass, pedestrians, etc.
The highway first and foremost must function for highway travel (for commuters, visitors travelling through area, and commerce). But we also recognize the increasing importance of recreation access and are striving to integrate recreation needs in a way that doesn't fundamentally compromise highway safety.

The Disney-fixation of this place has been proceeding unabated in all of my 44 years here. The latest example is the ID bike path up the Pass. Don't pretend to care about environmental impacts and be a booster for that. Did everyone see the number of healthy trees cut for that project?

There are separate efforts occurring in the Jackson Hole region to address increasing concerns about regional growth. As alternatives to integrate recreation and highway needs are explored, environmental sustainability will be an important factor. In addition, following the Teton Pass Corridor Study, the local project team will need to evaluate the site-specific environmental effects of any construction project

Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

In January 2023 the FHWA-CFL team produced the technical document- 'Teton Pass Corridor Management Concepts: Capital & Operational Options and Scenarios.' The document put forward the initial capital and operational improvement considerations along the corridor to provide decision makers with a range of capital and operational improvements to alleviate safety, access, congestion and parking concerns. All of the considerations reflect what is in the Operational Improvements and Capital Improvements chapters of this document. Concurrent with the release of this technical document to the FHWA Teton Pass Corridor Study website, the project team set up a 3-week window for the public to access a feedback form to submit questions, comments and concerns related to the technical document. The following are the questions posed (in bold) from the feedback form and the answers from the public that was received:

What is your organization?

>Mountain Weekly News
>Backcountry Skier
>Advocates for Multi-Use of Public Lands (AMPL)
>Concerned resident of Wilson
>Friends of Pathways
>Individual citizen of ID
>Hill Electric Inc
>Town of Jackson commuter
>City of Victor
>Love | Schack Architecture
>Sustainable Trades + Housing Partners
>Grand Targhee Ski Education Foundation
>No Organization
>City of Victor
>Teton Strong Communications
>Oldtimers Syndicate
>Teton Valley Trails and Pathways
>Recreationist
>Individual

What feedback do you have for the project team on the Operational Interventions section (the recreational shuttle and parking management program)?

>How are you going to handle dogs on the shuttle? What liabilities are potential if someone pays to take a ski shuttle and the shuttle gets in accident. Seems like a bad idea for a shuttle. Paid parking is even worse idea.

>A shuttle from Stilson Lot to Victor and back makes sense. Paid parking is fine. Both should be reasonably priced and have a season pass option that is $30 to $60 per person. Parking should remain available at all current locations.

>Charging people to park only generates $400,000 per year. What kind of “improvements” can that little money buy? I’d like to see the pass stay just the way it is. It’s self limiting. Why do we want to increase use? All that does is make it more accessible, increase danger and increase the likelihood of someone triggering an avalanche onto the highway. Leave good enough alone. If there is nowhere for someone to park, they can go somewhere else. Save Teton Pass and leave it alone.

>Avalanche sheds are a must !!

>I would support the idea of having transit available during the winter, but do not believe it is necessary as a 7 days per week service. The idea would be to have transit from Stilson to the top of the Pass and then to Coal Creek, available during the weekends, only, and during major holidays, mid December through mid March. I think it is important to have the transit run to Coal Creek as that would enhance ski option off the top of the pass and eliminate some of the congestion caused by people skiing Glory and returning to the top of the pass. My point, take into account the patterns of how people do and could ski the pass. Get input from local guides and other people that are permitted to use the top of the Pass.As for a parking fee, yes, an annual pass makes sense with a daily fee for out of towners. Proceeds to go to supplement the cost of transit.

>The multimodal approach seems the most logical. This would hopefully prevent hitchhikers from hailing rides in unsafe areas as well as urge recreation users to use public transportation, which we all know is better for the environment, by implementing the fee structure for parking which has guaranteed revenue for capital projects. As a west side user, if the shuttle service cannot pick up in Mike Harris or Victor, I would have no other option to recreate but to pay for parking and I would like to have that option.

>The additional bonus of a shuttle is that it would likely not operate on days the pass would be scheduled for avalanche mitigation which would be helpful to keep users out that would otherwise be unaware. Some thought should be given on how to also prevent parking in those scenarios. If the “Pay and Display” option is used as an example, messaging on the kiosk indicating parking is restricted would be helpful. The “iron ranger” option could be simply locked and unlocked as needed - if locked, no parking allowed. Obviously messaging for this would be helpful as well.

>I am opposed to all of these options.

>These options looked well thought out but we would like to see more done around active transportation and giving people the option to bike and walk to the trailhead areas. This can be done with simple things like bike racks at the trailheads and more complex things like completing the Greater Yellowstone Trail and working with the BTNF on e bike access along that corridor.

>Good idea, but will have to run quite often to make it work for people. No one wants to stand around in the blowing cold at the end of a ski tour waiting for a ride to their car.

>I think it is TOTALLY ridiculous for you to even consider a Corridor pass for use of our National Forest when you cannot even provide the adequate enforcement to keep the pass safe from trucker who are continual causing closures and putting lives in danger! Your study says... “Adequate enforcement is key to the success of the program. This would probably require one additional Highway Patrol staff member, averaging 6 hours per day of total enforcement time. Note that enforcement would be needed both within the pay areas as well as nearby shoulder areas where parking is prohibited (but which may well still occur in an unsafe fashion).” Don’t you think you should have an additional Highway Patrol staff to enforce the ILLEGAL truckers going over the pass daily in the winter and causing harm to our community before you just start charging people to recreate (while we already pay taxes for that)?

Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

>Do not add more people to the pass, use the road for what it is, which is a vital link between two cities. Adding more recreationists will add to the congestion for the commuters. If you want to add more the recreationists, repurpose the old pass road.

>Support multimodal access. Vehicular access should require a modest day-use fee ($5 no more than $10; season pass option) with revenue used for parking maintenance, restroom facilities, possibly search and rescue fund. Support transit access with a user fee (easy to use, for example associated with START on demand or Transit apps) to help offset costs.

>Shuttle might work and I might use. but may be schedule dependent. More parking (Like the Philips idea, no tunnel) and paid parking are ideas that will help) fees go to area for enforcement and poop pick up(if they still allow dogs)

>I live and work in Teton County, Idaho and use the Teton Pass Corridor regularly for recreation and in an effort to reach Jackson, WY. I am concerned that the user data analyzed in this report stops at the state line. There are many Idaho and Wyoming users who recreate at Mike Harris and to leave that data out of the report is a massive oversight. I strongly encourage the Idaho Department of Transportation to take a more active role in analyzing the existing data and helping to craft a report that does not leave Idaho as an afterthought in this planning process.

>Vehicular Access Focus only

>After reviewing the document, I think that this report under-estimates the use coming from the Idaho side, which increases every year Getting as many skiers as you can out of their cars into shuttle buses will require a daylong schedule for shuttle buses. I suggest that you should not increase parking spaces at recreation sites but rather, plan to keep spaces limited to encourage skiers to use buses rather than drive. I encourage you to investigate any options that can help to decrease the number of vehicle trips on the pass. This will help increase safety for travelers on the pass and decrease potential wildlife collisions.
Could a transit access site be developed in downtown Jackson close to lodging and where town residents could take a bus and avoid driving to Stiltson? Traffic on HWY 22 west towards the Village and Wilson is over capacity already at many times during the day.

>I do not mind paying a small fee to access the land I grew up in. I appreciate the thought for safety, reducing emissions and traffic. I am a sometimes commuter over the pass. I would much prefer to see multi-modal and transit-focused options over larger parking areas, even if I must pay to get there. I do have some concerns about how limited the shuttle trips seem to be, however. I am concerned it might become extremely complicated to get to the places if the trips are only available on certain days & times (looks like shuttle will be available 42 days/year? - perhaps I read incorrectly)

>Expanded access will only add to existing and future road and ski terrain overcrowding. If you build it MORE will come.

>At some point development and over population will destroy this beautiful area. Unfortunately, Teton Pass is the only roadway that connects Teton County WY to Teton County, ID. Given the housing crisis in both counties, priority must be given to RESIDENTS OF BOTH STATES THAT TRAVEL THE PASS. I would humbly suggest that people who intend to recreate anywhere along the pass be limited; perhaps a reservation system with a small fee.

>I believe your most successful option will be implementation of a shuttle service, along with paid parking to incentivize using the shuttle. Either option independently will likely not work. If there is only the shuttle, without paid parking, the incentive to use the shuttle would be limited and therefore not bring in enough revenue to operate. Yet only having paid parking in the winter and no shuttle would create frustration from locals in paying for parking. Most people already carpool to park on Teton Pass due to the lack of parking, so adding a fee will not reduce the number of cars, but would just cause frustration.

>As a Teton Valley Resident, I'm am extremely in favor of the shuttle running on both the west and east sides in the winter. I could then utilize it to access all skiing options without having to worry about finding a spot for parking. Without westside shuttle access, you will still have a parking issue at all lots on the pass as there are a lot of us who ski from this side. If the shuttle only went to Coal creek on the westside, this wouldn't provide an effective west side option, as coal creek is already full most days with skiers in that area, let alone increasing usage with skiers riding the shuttle up to the pass.

>I do not see a need to have westside shuttle access in the summer though, I have never experienced a parking shortage in the summer, and don't foresee one occurring anytime soon. Many mountain bikers (including me) would use an east side summer shuttle to optimize the downhill biking options, however, even with that use I'm not sure there would be enough usage for a shuttle system to be effective in the summer. Just paid parking in the summer may be a more viable option to encourage carpooling and reduce the impact on the parking areas.

>I would encourage you to discuss the expected shuttle fees with the Teton Valley and Jackson Hole communities. The example fees listed seem very low for the ease of access and reduction of stress that a winter shuttle would provide. I would expect more reasonable fees would be $10/day or $100-150/year. Many residents would be happy to trade the stress of not parking on the pass for significantly more than $30/year. This would also allow a shuttle option to be much more viable as your revenue would be double your current estimates.

>I support and endorse the opinions and recommendations contained in the Joint Letter dated March 13, 2023 from the cities of Driggs, Victor and Tetonia and Teton County, ID

>Public transport is NOT a good idea. That would complicate access for all users! Just expand the parking lot, (which there is ample room to the south) and then add a pedestrian foot bridge or tunnel for crossing the highway.

>I am not in favor of parking fees unless it is part of the Multimodal plan which includes Transit. The proposals for Transit are what many skiers have been suggesting for several years, so they are sound. We Oldtimers do not like Scofflaws!

>I appreciate efforts to incentivize carpooling, especially from Stilson rather than Wilson business parking. The shuttle that ran this winter for Pathways celebration day was unpredictable and took too long to arrive and didn't seem to have a schedule. Ended up hitchhiking instead.

Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

>I would like to ask that you include heat maps and evaluation of the Mike Harris trails area in your planning. The area sees year-round trail use and is very popular. I recognize this area is in Idaho but is along the pass corridor and has a lot of developed services. Furthermore, I ask that you include in your planning more focus for multimodal infrastructure to the pass.

>It appears this study was completed in the summer based on the pictures taken of the pass and cold creek parking areas. Parking is these locations is substantially different in the winter and the number of parking spots is affected by the snow.

>Utilizing the south side of the top of the pass and cold creek parking lot for a shuttle bus will have a substantial impact on existing parking spots. It is understood that the premise of the shuttle bus is to possibly reduce the need for parking, I believe this assumption is flawed. So, I suggest alternative locations be designated for the shuttle bus stops.

>Instead of just addressing highway and parking improvements to improve pedestrian and vehicle safety, the authors of this study are suggesting the creation of new government bureaucracy in the way of parking fees and a shuttle bus system. Currently this bureaucracy does not exist, and the current parking situation is self-regulating and fee free. Current pass recreationists have "figured it out". They know where and when parking is available and how to safely use what's currently available. But safety can always be improved for both pedestrians and vehicles. I do not believe new fees are the answer.

>I am all for having increased shuttle access to Teton Pass as an alternative travel option for users. I think with the extremely high cost of living on both sides of the pass, it will help users the most if the shuttle was free and if parking on Teton Pass did NOT transition to paid parking. There are way too many fees and costs associated with outdoor recreation in today's society and it keeps people from getting outside and enjoying what makes this area so special. I also think that more people will actually utilize the shuttles if it's free. Paid parking also provides a challenge to visitors who just want to stop at the Teton Pass briefly and enjoy the scenic views. Paid parking would create significant challenges for everyone who comes to the area. But I genuinely support a shuttle with stops in high-trafficked areas like Stilson lot and Wilson.

>A shuttle from Stilson Parking lot would be helpful. The parking on the pass is too chaotic and dangerous for commuters and skiers.

>I appreciate all these considerations and the work that has gone into this study.
I would be willing to pay for a pass to park or ride a shuttle.
BUT!!! We have to get real about truck traffic over Teton Pass. WDOT where are you??
Much much higher fines to trucking companies, drivers, businesses involved. We have a viable route around through Alpine Canyon. Truck arrestor money is better spent on enforcing these changes.

>I am strongly opposed to Pay to Play. The solutions should not include parking fees in any manner at any time. Minimal charges for shuttles may be ok but the whole concept of charging people to use our own land is wrong and Pay to Play has been opposed locally and beyond for decades.

>I very much support the project ideas that promote public transit access and reduced vehicle traffic on Teton Pass.

>Yes. this is something I see as having extremely high potential to decrease the overall traffic volume and alleviate parking overflows. Almost all of the considerations and Operational Interventions stem from conflicts of use or volume of use. I support a multimodal approach that includes the vehicular access component of paid parking which would encourage carpooling at the very least. Anecdotally, the figure of 2.4 persons/vehicle seems high.
It would seem that expansion of the Coal Creek lot should also be considered as a Capital Improvement option as well - discussed more below. This lot frequently overflows during peak summer and winter hours.

>Like mentioned above - I believe that the nominal parking fee would help decrease volume, implicitly through encouragement of carpooling. Would the generated revenue be able to offset some of the costs of the Considered Capital Improvements?

>In my opinion the Transit component is the riskiest as it hinges on public buy-in. I do support it, but only if implemented as part of the multimodal plan. As a standalone I don't see many folks opting in.
As a general note I want to express that the pay to play mentality is a necessary realism at present time, and especially when looking into the future. There's no reality where the current infrastructure is sufficient, or will be sufficient for the number of users.

What feedback do you have for the project team on the Considered Capital Improvements section?
a. Improved Access Area: Phillips Bench
b. Considered Access Area: Phillips Bench
c. Considered Access Area: Teton Pass Summit
d. Improved Access Area: Teton Pass Summit
e. Improved Access Area: Coal Creek
f. Environmental Focus: Wildlife Crossings
g. Environmental Focus: Avalanche Sheds

>Please consider wildlife , include overpasses and underpasses on the Idaho side of the pass

>The 2 most important parts wildlife and avalanche sheds were at the very end of this report with very little information. The other areas do not need improvement.

>Coal Creek Parking Lot - The rotary has done a good job enlarging the parking lot between winter storms. I would like to recommend signage to directing cars to pull in diagonally to the snowbank to make more parking spaces instead of of parallel. Now that Covid is waining the sign should suggest that skiers car meet in Victor and Wilson and car pool to the trailheads. The new bike tunnel that is planned will making crossing the road safer for Mail Cabin skiers.

>Modest improvements to all the parking areas seems good. I'm worried about massive alterations to the natural terrain. Wildlife crossings seem like a good idea near Coal Creek. Avalanche sheds make sense, but I'm worried about a massive disturbance of the natural landscape.

>Note that at Phillips, a tunnel won't help snowmobilers as designed. But, maybe one could be constructed similar to the ones on Togwotee pass.

>wildlife crossings and snowsheds connect habitat. I recommend them.

>I think wildlife crossings would be a benefit to both the wildlife and drivers since most people ignore the signs that warn of wildlife crossings. What you call "improvements access" I call increased access that will ruin the area. Do we really want to promote more people commuting over Teton Pass by building snow sheds? Jackson needs to deal with their cost of living and workforce issue without pushing all their workers to drive over a long dangerous pass on a daily basis. This promotes more consumption of petroleum products, which creates climate changing air pollution which will add to climate change and will eventually make it so there is no winter recreation in the Tetons. We need to change our overall problem solving strategies to include resisting the traditional solution of increasing access and making "improvements" and just enjoy it as it is. I strongly urge the team to look for other ways to spend taxpayers money.

>Avalanche sheds are a must !!

>I see improving Phillips bench parking as a summer amenity for hikers and a way of making it safer for snow mobile users in the winter. Improving and increasing parking at the top of the pass is something that should be undertaken. Providing a safe way for people to cross the road to the north side of the Pass is also needed. As for sheds and wild life crossing. Skeptical, but those are more technical issues. As for Coal Creek, yes the place can fill up on a busy weekend, but in general I find it to be adequate and if supplemented with transportation I don't see a need to expand it.

>I have no preference for the improved access areas or considered access areas, some combination of them would be very desirable for recreation; however the addition of wildlife crossings and avalanche sheds seem to be more relevant to the problems on Teton Pass right now.

>Snow sheds are the only thing that should be pursued. Otherwise please leave as is.

>Each of these improvements is important. We especially think a pedestrian underpass at the Phillips Bench area will better utilize the various parking areas there while providing safe access to recreation areas on both sides of the highway.

>Why not make coal Creek Parking bigger?

>a. I agree that Phillips Bench access area needs improvement. It is dangerous to pull in and out in the summer and the parking is not adequate or safe.
e. Another absurd line in your study states: "There are also increasing environmental concerns to the traveling public along the corridor with wildlife collisions happening more frequently particularly along the 3.75 mile stretch between the Coal Creek access area in Wyoming to the Idaho state line." So, when you get to ID then that issue ends? The stretch from the state line to around Mike Harris has the HIGHEST number of WVC in the whole corridor. So building a fence that ends at the state line would only serve to funnel more wildlife into ID and cause MORE collisions and cause more DANGER to humans and wildlife.
g. I think avy sheds are a great idea but are they feasible economically? Especially considering how much

the hwy would be shut down due to construction?

>Avalanche tunnels would be a good upgrade for the pass. Europe has these all over the Alps and they work fine, I do not understand why so many here are against it.

>Support better design of Phillips Bench, Summit, Coal Cr access. Strongly support wildlife crossings. Don't believe avalanche sheds are cost effective, and we shouldn't waste resources on them.
>Paid for all including summit. Snow sheds ye. and more enforcement for speeds and trailers for human and wildlife safety.

>I am extremely concerned that the current proposed wildlife mitigation efforts stop at the state line. As a driver in this area, I know first hand how dangerous the stretch of road between Victor and the state line is when it comes to WVCs. When I drive over the pass, that is the stretch where I regularly see the most animals carcasses and active animal crossings. ITD and Idaho Fish and Game need to be more involved in the process of crafting wildlife mitigation strategy as the current proposed plan is simply unacceptable. The Greater Yellowstone Coalition and Jackson Hole Wildlife Foundation have both expressed serious concerns that the current plan will funnel wildlife into the Idaho side to cross the road where it is most dangerous for them and drivers. This is not acceptable. The wildlife are what make this place so special. We have an obligation to do everything we can to protect them. In addition, funneling wildlife into Idaho will only increase the number of WVCs, which are also extremely dangerous for drivers. ITD has an obligation to protect Idaho drivers and the current plan puts us more at risk, rather than making the roads safer.

>Plowing additional parking at teton pass summit and continuing to allow single passenger vehicles. Consider formalizing additional parking, but not required.

>I would like to make sure that there is consistency between Wyoming and Idaho and that measures to protect wildlife don't end at the state border. We do not need two lanes coming into Victor. We need to make sure we have wildlife crossings. Thank you!

>f: I am vehemently opposed to the proposed 70mph passing lane proposed between Mike Harris campground and Victor at the Idaho base of Teton Pass. ARE YOU CRAZY??? Driving the pass is dangerous enough at the current speeds and increasing the limit only encourages more speeding, more dangerous driving and more accidents. In addition the amount of vehicle / wildlife collisions will increase exponentially as "legal" speeds increase. This is a BAD IDEA ALL AROUND and completely irresponsible. Please remove this from consideration.

>Any shuttle bus will have to access sites on the south side of the road when driving west from Wilson to Victor. You must develop turn lanes to avoid traffic jams and resulting safety issues at any site on the south side where a shuttle bus will need to turn.
Wildlife crossing analysis cannot stop at the state line. You must bring in Idaho Game and Fish and the Idaho DOT into this discussion. As a resident of Teton Valley who commuted over the pass weekly for almost 20 years (I rented in Jackson just so I could avoid risking my life on the pass everyday), I have seen many wildlife collisions on Idaho 33 from Victor to the WY state-line. Once a huge beaver was splattered all over the road near Trail Creek. I saw deer along the roadway almost every trip I made. Moose frequently cross east of Mike Harris up to Trail Creek CG. It was not uncommon to see a live moose in the morning and and find it dead by evening. Please contact Jackson Hole Wildlife Foundation to obtain their vehicle collision data for the entire pass road from Wilson to Victor for future planning and analysis.
I am truly shocked to hear that IDOT is considering a 70 mph passing lane east of Victor. Is this a method to reduce the human population of commuters? It would surely result in more deadly crashes and a higher rate of wildlife collisions. It has been proven many times that to reduce wildlife collisions, you must reduce

vehicle speed limits. This also would reduce human deaths and injuries as well. I think you should consider 1) installing electronic speed signs that could reduce posted speed limits in periods of poor driving conditions (it is crazy to be driving even 55mph on an icy road in a blizzard), and that 2) installing cameras to catch speeding vehicles electronically. I swear every time I drove the pass over the past decade, I would see someone speeding and/or passing over double lines. These drivers not only put themselves at risk but other innocent people.

>As someone who has had a collision with a dear on the pass and seen so many other terrible casualties over the years, I would prefer to see Wildlife crossings above all else. I know it is a hassle that the pass closes every now and then due to avalanches, but this is part of the culture of living in this place - it is generally accepted. As a long-time recreational user of the pass as well as a commuter, I see that (at least some of us) we have created car-pooling strategies that limit traffic to a certain extent & I do not believe that parking on the pass is the greatest issue. There is generally enough parking and if there is not, there are other places to recreate. The more parking and convenient access we build, the more people and impact will follow. Please prioritize our wildlife.

>Expanded access will only add to existing and future road and ski terrain overcrowding. If you build it MORE will come. That said, I do support avalanche sheds as a reasonable means of vehicular protection.

>It appears that only data from Wyoming was used in this study. Before any options are considered, let alone constructed, it is imperative that data from Idaho Fish and Game, Idaho Department of Transportation, the cities of Victor, Driggs and Tetonia, and Teton County ID be collected. Only then can truly viable solutions be found and implemented. To do so without this information risks increasing wildlife collisions in the Idaho portion of this project.

>I'm writing in full support of the letters sent by Renee Seidler and the joint letter from the Teton County, Idaho, Commissioners and mayors re: wildlife considerations for the Idaho side of Teton Pass. This data is critical to be considered in your decision making. Thank you.

>e. I am in support of all wildlife crossing to help reduce wildlife-vehicle interactions. We know they improve driver and wildlife safety and should be a no-brainer in such a high impact area as Teton Pass.

>d. An underpass at Teton pass would be heavily used in the winter and would definitely improve safety in the area. I don't know how much usage it would get in the summer. Maybe animals would learn to use it though?

>Snow sheds seem like overkill to me. With the changing climate and increase in major winter storms, it seems like the pass will continue to be a traffic/commute issue even if Glory and Twin Slides are mitigated. This option seems like it would be a huge amount of money spent to gain back just a few extra hours of the pass being open each year.

>Expand parking areas to accommodate the increased usage. Do NOT rely on public transport. Public

transport would only make the usage of the areas more cumbersome and complicated. Use the public transport for shuttling workers to and from Jackson!!

>I believe Colter Ice Hockey Center should be used rather than Coal Creek. It is also imperative that overhead wildlife crossing structures should be constructed to save wildlife. I have already commented on the dangers of the high speed passing lane.

>The proposals all seem well thought out. As a skier who does not commute over Teton Pass, I would like to see the Access Areas prioritized as follows: 1) d. 2)c. 3)e. 4)a. 5)b. As a person who wants every road user to be safe I want to see the Avalanche Sheds & Wildlife Crossings done first! I don't favor ANY snowmobile access within the study area, so I don't want any consideration made for them.

>I appreciate consideration of avalanche sheds—they are used successfully many places. I also appreciate more formal parking arrangement and underpasses at Phillips Bench. The parking on all areas of the pass is super confusing: I'm never quite sure if the parking is legal. And crossing the road at any point is treacherous.

>f. As someone who lives in Eastern Idaho and frequently drives Teton Pass, I have seen just as many moose on the Idaho side as the Wyoming side. It's paramount to include data from the Idaho side of the pass as it impacts the same populations of people and wildlife as the Wyoming side. At the very minimum, the data should be studied and used to make any informed decisions in the area.

>The current report does not include data on wildlife collisions or wildlife movement in Idaho. There are many wildlife deaths on this section of road, and wildlife use and motorist risks need to be better understood to engage better planning. This is a very unique place with both ungulates moving through and wetland habitat adjacent to the road. Please further study and mitigate collisions and create better wildlife permeability on this Idaho section of highway.

>Wildlife Crossings-The wildlife do not stop crossing at the state line. The current document does not give any indication that there is wildlife on the Idaho side. On the contrary and as this is a corridor study, and again I respect the nature of how this study was funded, those elements need to be included on the Idaho side. Additionally, ITD, much to the dismay of many citizens, plans to put in an east bound passing lane ending .4 miles to the West of Mike Harris.

>Improvements at Cold Creek, the top of the pass, and Philips Canyon parking areas are warranted with respect to pedestrian and vehicle safety. I do not support the bus shuttle, but if implemented it should not reduce the current parking capacity in these locations.

>Highly support paid parking.

>Yes to wildlife crossings!!! That is long overdue for this area. Wildlife and human conflict has continuously increased as we continue to deminish wildlife habitats. Wildlife crossings benefit both wildlife and people who drive/ recreate on the Teton Pass. I am also for avalanche sheds to make the area safer.

>Perhaps some snow fences at the summit near the parking area to keep snow at bay and an above-the-road chute below Glory Bowl to direct avalanches off the road and make clean up quicker. Wildlife crossings near Phillips Bench and Coal Creek could only help. And add large fines to the "No Trailers" signs as we've had quite a few trailers get stuck up there this winter. Perhaps put a turn-around area for trailers near these signs before they get too far up the pass.

Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

>I want to express my support for the wildlife crossings. I would like to see a wildlife overpass installed. Living in Wyoming, I appreciated all the overpasses on I-80 that made me feel safer and made wildlife safer. I would like to know that wildlife-traffic data is being used to inform where these crossing structures go.

ALL
>f and g being the most important. Wildlife under passes and over passes work. Fencing alone does not. Wildlife is a most important stakeholder in this area. As important or more so than access to back country for humans. Avalanche sheds to keep Hwy 22 safe and open.

>There should not be a fee to park. Ever.

>Environmental focus: Wildlife Crossings. The state borders have no meaning to the wildlife or safety of the vehicle users in the Teton Pass corridor. I encourage the group to consider extending the capital improvements to improve wildlife and vehicle user safety beyond the state line into Idaho where high instances of wildlife collisions occur. Joint state capital improvement projects have already taken place on that very stretch of road. It would best serve all users to have the wildlife crossings extend beyond the state line to the Mike Harris Trailhead and beyond.

>a, b, c, d. Acknowledging that funding is certainly available for all listed improvements, I believe that the Summit Access Improvements, and some component of the Phillips Bench Improvement/Considered areas would be the most impact.
e. Why is there no expansion of parking considered for this area?
f. Wildlife Crossings should be a prioritized component of any capital improvement package. On that note, there seems to be a lack of consideration for the section between state line and the mike harris trailhead/ moose creek+trailcreek confluence. It is rare to not see a big game carcass along this stretch and the proposed prioritized area would actually serve to funnel game into this area. I realize that this project is really pertinent to Wyoming/WYDOT, however without extending the priority corridor, it could actually serve to exacerbate the issue (albeit in Idaho).
g. avalanche sheds would certainly mitigate traffic closures and improve public safety. Yet with funding in mind I would put these improvements behind the others listed above. what about road cuts? I assume that the majority of road closures were due to the twin slides and glory slide fall areas, however I also can think of many that were due to slides on unnamed road cuts.

What other comments, questions, or considerations do you have for the project team on the Capital & Operational Options & Scenarios or any other aspect of the project?

>All of this is being done to alleviate parking? There are plenty of other backountry places to ski in the Tetons aside from Teton Pass.

>Avalanche sheds are expensive but would help keep the road open during storm cycles and reduce skier triggered road closures.

>Skiing on Teton Pass has a long history, just as long or longer than commuting. Preserving winter recreation on Teton Pass is the highest priority. The current situation on Teton Pass is not ideal, but it also works pretty well most of the time. Adding a massive amount of new parking may encourage overuse of the resource.

>There is discussion about paid parking and paid shuttles. Overall, I'm in support of paid parking and shuttles, but have a couple of things worth considering. First, there needs to be an option for those who may not have the means to pay for parking etc. Although Teton County is very affluent, there are many folks who live paycheck to paycheck and they should not be restricted from accessing their public lands. So, however the paid system works out, there should be a program to give free passes to low income families/individuals.

>Secondly, I believe snowmobilers shouldn't have to pay for parking at the Phillips Bench, as long as they are displaying their trail sticker on their snowmobiler. Snowmobilers already pay fees to access public lands, so they shouldn't have to pay twice.

>Overall, this project is very exciting as both a commuter and a recreational user. I look forward to helping further develop the plans.

>Bore thru the mountain for the road, leave the rest for wildlife

>The Teton Pass area is a local treasure. Leave it alone.

>No "improvements" other than wildlife crossings.

>Avalanche Sheds are a must !!

>I think a big issue is traffic congestion for those commuting over the Pass. So with each element of any project I think the question should be asked, will this improve traffic or make it worse and can this project be implemented in a way to improve traffic flow. It may be beyond the scope of this study, but ways to improve traffic over the Pass is critical.

>I encourage you to stop this endeavor. Teton Pass is fine as is.

>We are working with the BTNF on some universal design trails at the Trail Creek Trailhead at the base of Old Pass Road which will provide good access for people with adaptive mobility devices. We ask that when looking at trailhead redesign that you also look at dedicated handicap parking spots.

>$60 for a one year parking pass is not enough! You should charge minimum 200! Discourage driving and encourage public transit. And use the revenue for other improvement projects or to subsidize the shuttle. People will gladly pay this amount.

>Before any projects on this study are approved please deal with the increasing number of illegal trailers using the pass in the winter. Someone is going to die! It is unbelievable how often this is happening. The fee is minimal, the drivers don't care. Something else needs to be done and this needs to be addressed before you start any other project. Thanks so much for asking AND listening!

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>A large sign that spans overhead completely across the highway needs installed a half mile West of the state line with a large yellow sign with black letters and flashing yellow lights that says something like "NO TRAILER TRAFFIC WHILE FLASHING " and then smaller text on the sign that says seasonal closure dates and also that weather closures for trailers may happen outside of those dates. It also wouldn't hurt to put the 60,000 weight limit and grade info on the sign. I have noticed that most of the feedback I have seen from the truck drivers that try and illegally cross the pass in the winter that they are unobservant types that have missed every other sign and have no idea about the closure or even where they really are. Rarely is it someone just trying to sneak over (atleast that is the case with the semi traffic) I strongly feel that a more aggressive sign is needed. I think the Idaho side has the most offenders and it should be on that side and after a few years if it proves to drastically reduce incidents then another sign should go just before the sand shed on the Wilson side. They will have a harder time turning around there but atleast it will be easier than retrieving a truck off the mountain. I think having these signs located where I mention will be of an attention getter because truckers will be more aware they are heading up the pass yet they still have one option left to turn around. The new signs should mention turn around information in smaller text. I also strongly oppose the recreation parking on top of the pass. That pull out is supposed to remain clear for brake checking. Even in the winter large delivery trucks without trailers climb the pass. Hundreds a day! It is a huge liability to Wyoming to not keep the pull out open for that need. I feel parking should be lower on the pass and several companies could provide shuttle services with a designated unloading area at the top. Either that or the parking lot at the top needs a major expansion. What is going on up there is very unsafe on busy ski days and is impeding traffic flow. I also think that large signs should be posted at the top with grade info and a grade profile. Many mountain highway passes in Idaho and California have these profile signs and I think they really help with brake failure issues on large trucks. Thank you for your time.

>More needs to be done to improve communications with truckers and trailers, fine increase would be a good start. Signage at both ends that would tell a trucker where to turn around at would be a nice gesture as well.

>Thank you!

>It is important to note that ITD is currently in the process of approving a 70 mph passing lane between Victor and the State Line. The combination of this passing lane and increased animal movement on Idaho side of the corridor will be a death sentence for wildlife and humans alike. This study needs to take into consideration these impending changes and plan accordingly. The Teton Pass Corridor (from Victor to Wilson) is already an extremely dangerous stretch of road for drivers and wildlife. The plan, in its current form, would only serve to increase the level of danger. This is wildly irresponsible transportation planning and needs to be seriously reconsidered with the direct input of ALL agencies responsible for keeping drivers and wildlife safe here, including the Idaho Transportation Department and Idaho Fish and Game. This report states that the Teton Pass Corridor stretches from Wilson, WY to Victor, ID. It is therefore unfathomable to me why Idaho is currently being left out of all major aspects of this plan. You will not have a successful corridor plan if the ENTIRE corridor is not considered, especially as it relates to wildlife mitigation. Half measures will not work here and the communities you serve know it.

>I think having a shuttle continually running between access areas is a great idea and would reduce the need for larger parking areas- larger parking areas(improved access) will just lead to more congestion and more vehicles. (Example- teton river access sites added significantly more vehicles/river use) I also think having an entry booth on each side is a good idea and would help with turning around tractor trailers and/or vehicles not equipped properly during chain law...You could even have ez passes available for vehicles that have passed an 'inspection' for tires/awd vehicles...

>Wildlife protection should be a high priority when addressing traffic mitigation. g. Avalanche Sheds appear to be a great solution. Although expensive to maintain, perhaps a fee basis crossing should be considered to maintain. Bridge crossings in high traffic corridors require fees, why not pass crossings.

>Avalanche sheds seem like a waste of money considering the topography and history of their use. I suggest closing the pass to recreationists during high avalanche conditions. I also think you should consider and identify where wildlife crossings will be needed on the Idaho side of the pass. To protect the environment and wildlife resources that exist in the public lands adjacent to the pass road, do not increase parking for summer recreation.

>I have heard that IDT is considering what seems to be a contradictory plan near the Idaho border that may be somewhat safety-inclined but not wild-life friendly. I would like to see IDT's involvement in this plan.

>The proposed passing lane on Idaho 33 between 9500 and Moose Creek is a travesty. This passing lane is exactly the opposite of what Teton Pass (Idaho 33/Wyoming) needs. For the safety of commuters, first time Teton pass drivers, residents, wildlife, bicyclists we need LOWER speeds on Teton Pass and NOT a high speed passing lane in front of several neighborhoods so that people cant recklessly drive faster. Furthermore, spending the money on the passing lane without a comprehensive study and first completing other more important projects is insane. Please do NOT build a passing lane until a comprehensive Teton Pass and Teton Valley traffic study has been done and higher priority projects have been completed. A turning lane for that location is more appropriate than a passing lane.

>Although I fundamentally disagree with a passing lane in that location, IF it is built the passing lane needs to be shortened and ended before before the eastern entrance to T/C Drive so that residents of 4 subdivisions have an entrance and exit from Highway 33 on a slower two lane section of road. This is very important and a small change to the design of the passing lane that will increase safety for everyone on a very busy and dangerous section of road. Thank you

>The proposed 70 mph passing lane between Mike Harris Campground is absurd .In my humble opinion, this will only serve to increase not only collisions with wildlife but vehicular collisions in total. Residents who access ID33 from side streets already have an extremely difficult time when having to cross traffic during rush hour(s) to enter the highway. And, the highway is currently only 2 lanes with a 55 speed limit.

>Make it safe for travelers and wildlife with passing lanes and pull offs and better management before prioritizing people's recreational needs, this is a highway first.

>Please see below citation and abstract of traffic study
Cafiso, Salvatore & D'Agostino, Carmelo & Kieć, Mariusz. (2017). Investigating the influence of passing relief lane sections on safety and traffic performance. Journal of Transport & Health. 7. 10.1016/j.jth.2017.04.012.
As it is well known, one of the keys to improve traffic performance of two lane rural roads with high traffic volumes is to provide passing sections. However, providing a long segment in which the passing maneuver is allowed, is not always feasible, especially when suburban areas are considered. The retrofitting of some

road sections by adding a passing relief lane can improve traffic performance by reducing platoons, driver delays and increasing speed. Nevertheless, the effects of this measure on safety may be controversial. With higher traffic speed, the diverging and merging conflicts may escalate and deteriorate the safety conditions of the treated sites. The present research seeks to address this dilemma by presenting an operation and safety study based on experimental data from two lane rural roads. Serious crashes with fatalities and injured people were taken into account in the estimation of the Crash Modification Factors. The Empirical Bayes before-after study was performed for a period from 2005 to 2013, with the exclusion of 2009 when road segments were retrofitted by adding a passing relief lane. Certain improvements in safety were observed for both total and target crashes. The research also encompassed traffic performance by way of investigating the changes in speed and platoon size at the beginning and at the end of the treated sections. The results have shown that the platoon reduction value depends on the length of the passing section and the share of heavy vehicles. The obtained operational results proved less beneficial than expected.

>Public transport should be used more readily for shuttling workers not recreationalists!

>Establishing an interim shuttle service could go a long way toward easing congestion at Pass Summit & Coal Cr. Folks are increasingly skiing above/ adjacent to the roadway rather than walking up the highway. That's a prudent idea and should probably be MANDATORY. Establishing and enforcing a 25 MPH speed limit zone 300 feet on both sides of the summit could prevent a soon-to -happen fatality! The worsening issue of illegal trailer traffic and overweight trucks must be dealt with ASAP.

>I have recently heard that the speed limit between the anticipated passing lane from Mike Harris to Victor is to be set at 70 mph. This cannot be true! If so, it is a total disregard for safety and wildlife which you state as a key concerns. It is unfortunate that the passing lane money cannot be better used for the turn lanes at the 1000 roads on highway 33. These turn lanes would provide more safety per dollar. The passing lane decreases safety. It is obvious that the resources for safety, money and infastructure on the Idaho side take second place to the more lucrative Jackson, Wyoming side. 70 mph is the "passhole's" license to kill.

>Unfortunately the document doesn't address what proved to be the biggest snag to access this winter: illegal trailers. Please either find a way to better discourage illegal trailer use before they are on the pass, or accept the daily trailer jams as part of the pass access problem and include turn-around and pull-offs for stalled trailers in your planning. It seems there must be a non-infrastructure solution, but it must be considered in this operations document for the plan to be realistic.

>Thank you for your work on the Teton Pass Corridor Study.
The scope of the Teton Pass Corridor Study says, "The purpose of this Corridor Study is to assess the existing and future conditions of the Teton Pass Highway in Wyoming, with special attention paid to multimodal safety issues…", among other things.
I found it puzzling that I couldn't find any mention of non-motorized transportation in the stated scope of the study, which is clearly a component of any definition of multimodal transportation. Furthermore, the purpose says there will be "special attention paid to multimodal safety issues…".

The existing bicycle activity along Wyoming Highway 22 is already a significant safety concern. The road has narrow shoulders with guard rails abutting the edge of the shoulders forcing bicyclists, including many organized bicycle tours, to ride close to high-speed vehicular traffic and boxed in by guardrails.
There is a 20+ year ongoing effort to build a separated non-motorized pathway along the Highway 33 and Highway 22 corridor. Another segment was completed last year and the next segment, from Trail Creek Campground to Coal Creek has been funded through the Teton County Wyoming BUILD grant. Design and NEPA work for that section has been completed. The missing link is from Coal Creek to the top of Teton Pass. That final link should be relatively easy as most of it could be placed on the Old Pass Road, just like the paved pathway is on the East side of the pass. The vision to complete a safe non-motorized pathway between Victor Idaho and Wilson Wyoming is also part of the Greater Yellowstone Trail, and connecting Victor and Wilson by a separated non-motorized pathway has been strongly supported by the City of Victor and Teton County Wyoming.
My hope is that this TPCS incorporates and prioritizes studying and completing the non-motorized transportation pathway along the corridor and over the top of Teton Pass.
My other concern with the draft plan is with the area prioritized for Wildlife Crossings on the West side, which ends at the state line on the Wyoming side. Of course, wildlife does not recognize jurisdictional boundaries, and the Idaho section, from State Line to roughly Mike Harris Campground is a section of high concern, it's where I most often see Moose tracks and occasionally dead Moose. If that section is not treated along with the Wyoming section, it's likely wildlife will move to that unprotected section and attempt to cross the highway there, exacerbating the wildlife / vehicle collision problem.
Thank you for your consideration.

>At what time of year was the onsite inspection completed by the study's authors? There is a big difference between the parking patterns in the summer and winter.

>Why do the authors believe the Strava data is accurate? I use Strava, but none of my friends use it who I regularly recreate with. So, that's 1 out of 10 who use it based on my experience.

>Are the authors aware that Highway 33 is a major commuter route for workers traveling between Teton Valley ID and Jackson Wy?

>The authors did not seem to take into account winter conditions on Teton Pass in this study. All the travel scenarios seem to be based on ideal conditions. Travel times on the pass are easily impacted by the weather, by commuter traffic year-round and tourist traffic in the summer.

>Highly suggest backcountry skiers put some skin in the game and pay a seasonal fee to use our surrounding open areas which become overly congested and increase traffic danger. In addition, their fees should assist TCSAR. I donate $$$ to Pathways and Search/rescue but ski within resort boundaries for my safety and consideration for rescue operations. How long shall I donate to the rescue of others who take high risk for fun but who may not make a financial contribution to their own rescue?

>Please include an option for constructing a tunnel.

>We have a lot of people skiing up on the pass. It'd be a shame to take that away from us. Please keep the recreationists in mind as well as the commuters.

>Thank you for the hard work you've put into this.

>Do it

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>Teton Pass Corridor Management Concepts study should also include active modes of transportation, like biking and walking.

>A holistic view of the environment as the most important stakeholder of all. I agree parking can be improved but not to the expense of the land. We must learn to live with in the limits of what these spaces can provide. Please don't overbuild.
Thank you for the opportunity to comment.

>Increase the fines for trailers using the Pass when the trailer ban is in effect and you could cover lots of expenses. Make the fine something significant. If the trailer drivers begin to realize they are not allowed so much the better. That's the point in the first place, right? If they continue to use the Pass make them suffer financially. If you consider how many wasted hours there are from trailers stopping or reducing traffic flow it would be staggering! Hundreds of vehicles delayed in both directions is not ok when the drivers are just blatantly ignoring the closure.

>What would it take to build full public transit infrastructure over or through Teton Pass? There are 10s of millions of vehicle trips happening on that pass every year now and I am worried that increased capital investment in the road will lead to reluctance to revolutionize the system with something like a train in the future. The use of that road is rapidly approaching levels that could, in the long term, pay for major infrastructure improvements like a train. Can a working group like this consider such a project?

>I am curious about sources of funding, and prioritization of the above mentioned projects. Also, has there been any discussion regarding a hybrid commuter/recreation START line that could service the 'Full' stops in Victor?

>Please create wildlife overpasses and underpasses on the Idaho side of the pass

The following memo is from key stakeholder Tim Young, Special Projects Director, Wyoming Pathways:

The following memo is from key stakeholder Tim Young, Special Projects Director, Wyoming Pathways:

Thank you for sending the link to the Draft Teton Pass Corridor Management Concepts, dated Feb. 6, 2023.

While I look forward to a meeting with Federal Lands Highway planners, and the Public Open House on Feb 15, I am writing in advance to register my fundamental concerns with this Draft Corridor Management plan.

Principally, the 47-page discussion of the Teton Pass Corridor is wholly lacking what should be a mandatory study topic of Active Transportation. This is a substantial oversight that needs to be addressed BEFORE this is presented to the public at the Feb 15 Open House.

Given the significant miles of pathway and bikeway projects already in place in the Teton Pass Study Corridor between Stilson Transit Center and Victor Idaho, plus all the new Active Transportation investments underway as part of the Teton Mobility Corridor Improvements USDOT BUILD Grant, and considering that detailed information on all of these Active Transportation projects on Teton Pass was provided to you and FLH planners, this oversight is inexplicable.

I also have no idea how Teton County staff could allow FHWA to release such an incomplete plan. I am copying this to Public Works staff and Teton County Commissioners and request their attention to address these mistakes as well.

Here are my primary concerns:

BUILD Grant and Active Transportation. In September 2020, Teton County and six funding partners were awarded a $25 million USDOT BUILD grant for the Teton Mobility Corridor Improvements Project, which is now well underway on a dozen interconnected multi-modal transportation projects between Stilson Transit Center and Driggs ID. With matching funds, the total project is now over $40 million, with nearly $20 million of investments for Active Transportation in the Teton Pass study Corridor, plus over $20m for transit and multi-modal. This is by far the largest single investment in transit and active transportation facilities ever made in Wyoming or eastern Idaho.

Yet a search of the Draft Corridor Management plan shows no match for the word “BUILD”. How can that be?

A summary of the BUILD grant investments should be a part of your presentation here this week. A list of those projects and concerns with the Draft Corridor Plan follows.

Stilson Transit Center BUILD project. Estimated cost: $10 million, plus the value of 5-acres of land owned by JH Mountain Resort deeded to Teton County in perpetuity. Funding is secure through the BUILD grant, land donation, and SPET. The FHWA Corridor plan section on the “Stilson Lot” on p. 5 is substantially out of date and in need of revision.

The Stilson Transit Center project (not ‘Stilson Lot’) includes acquisition of 5.5 acres of land and construction of a 2,700 square-foot 6-bay transit center, with a dedicated 400-space paved public park ‘n ride lot, car-charging stations, pedestrian and bicycle pathway interconnections, covered bicycle parking, bike repair stand, e-bike charging, and a new transit and emergency vehicle priority signal at Beckley Way and WY-390. Surely these improvements merit discussion in the Teton Pass Corridor Plan.

Wilson to Stilson Pathway, Fish Creek Pathway Bridge, Wilson School Underpass, Green Lane Underpass. The Wilson to Stilson Pathway will be the first BUILD-funded project to start construction. The project is actually three connected construction projects underway by Teton County and WYDOT. Design is complete, NEPA approved, and it’s scheduled to go out to bid this winter, with construction to be completed in 2023.

This approximate $8 million investment includes a new 10’ wide paved pathway to connect downtown Wilson 1.5 miles along the south side of WY-22 to Stilson, with a Green Lane underpass and pathway connecting to the Stilson Transit Center and the existing Teton County Pathway system; it includes a second underpass to the Wilson School, and a 200’ span pathway bridge over Fish Creek into downtown Wilson. It connects a significant missing link in the Jackson Hole Pathways envisioned since 1989, and is all part of the Active Transportation network in the study corridor.

Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

Teton Pass Trail BUILD project. This project will extend the Teton Pass Trail another 3.5 miles from the existing pathway just completed in 2022 from the Trail Creek Campground to the Coal Creek Trailhead along WY-22. The Pathway will be located south of the highway along Trail Creek, and will include an underpass at Coal Creek, which should be designed for both summer and winter use due to the safety concerns with that highway crossing.

Teton County is leading the design with construction in 2024-2025. Design is at 50% and moving along. NEPA is fully approved. Estimated cost: $9.5 million. Funding is substantially secured from BUILD and SPET, but some additional funding may be needed for the underpass at Coal Creek.

With this section of the Wilson to Victor Teton Pass Trail well underway, Teton County and partners can start to work on the final 2.5-miles section between Coal Creek and top of Teton Pass. The route proposed will use an existing 2-miles of the Old Pass Road that is in good condition, leaving only about half a mile left to the top. This section is not approved yet, further planning is needed with the CTNF to explore the options.

These Active Transportation elements and the next planning steps should be included in the Corridor Plan. The Figure P on page 43 should be updated to show the planned underpass on the east side of the Trailhead parking lot.

Wildlife Crossings in this Coal Creek section are discussed in detail p.44-45 in the Corridor Plan, but nowhere in that discussion is any mention of the serious safety hazards that elements of these so-called 'safe crossings' create for people on bikes and walking. The double-wide cattle guards commonly used with fencing are especially problematic. If FHWA is going to comply with federal policy to "Promote and improve safety for all road users, particularly vulnerable users", then the significant safety problems crossings create for bicycle and pedestrian modes of transportation must be acknowledged and addressed up front.

Teton Pass is key segment of the Greater Yellowstone Trail. The GYT is barely mentioned and not explained at all in the draft plan.

The Greater Yellowstone Trail Concept Plan was finalized in the Spring of 2015. Since completion, numerous jurisdictions, agencies, advocates, and other partners along the proposed corridor have continued to pursue the vision of developing a 180-mile regional trail. The project would link two national parks, three national forests, two state parks and several municipal and county parks while simultaneously integrating regional economic development and recreation opportunities for all seasons. In 2017, the GYT Concept Plan won an American Trails award for best plan.

Recent progress is substantial, and deserves mention in the Teton Pass Corridor plan, because the Teton Pass Trail is a key component of the GYT, a nationally significant long distance regional active transportation facility. In 2022, along with the new pathway section opened on Teton Pass, the West Yellowstone community and the Custer Gallatin National Forest substantially completed the Yellowstone Shortline rail

trail, a roughly a 9-mile section of the larger Greater Yellowstone Trail that connects to from West to the Idaho border. In addition, Idaho State Parks recently secured a Great American Outdoors grant that will pave the 30-mile existing gravel rail trail between Ashton and Tetonia. Teton Pass is a key missing link in the GYT that's needed to connect Jackson Hole and Teton Valley.

Teton Pass Trail History and Existing Conditions. The Teton Pass Trail from Wilson to Victor has been in development for over 25 years, with substantial progress to show. In 1999, Teton County was awarded a multi year USDOT Millennium Trail Grant for the Teton Pass Millennium Trail, a White House initiative funded through the Public Land Highway Discretionary program. In today's dollars, that investment value would be equal to nearly $10 million. Projects completed include the 1-mile pathway from the town of Wilson to Trail Creek Road, a new Trail Creek Trailhead, full reconstruction of over 3-miles of the Old Jackson Highway from Victor to Moose Creek as a complete street facility, and pathways through the City of Victor connecting to the existing Rail Trail from Victor to Driggs. U.S. Senator Mike Crapo was instrumental in assisting with support for that project, and attended a ribbon cutting in Victor, marking the completion in 2003.

Teton County WY, Idaho agency partners, and Active Transportation NGOs continued planning toward the goal complete the 18-miles with a safe and comfortable pathway and bikeway from Wilson to Victor over Teton Pass. Eventually, a series of 4 separate FLAP grants were approved between 2015-18, two in WY and two in ID. Those grants were eventually combined into one project managed by WFLH, which was finally completed in Sept. 2022. That added about 2.5 miles of paved 10' wide pathway, included two complex underpass structures, and connected two USFS Campgrounds at Trail Creek in Wyoming and Mike Harris in Idaho with a safe route to and from Victor. It also provides safe and comfortable bike access for people in Victor to leave their cars home and bike to the CTNF South Valley Mountain Bike Trails.

In total, there is now over 16 miles of completed pathways and safe bikeways. This includes over 6-miles of bike facilities from Cedron Road Trailhead in Victor to Trail Creek Campground just inside the Wyoming border, plus about 6 miles from the town of Wilson to Teton Pass Summit.

In addition, the 3.5-mile Old Pass Road was recently completed repaved, substantially funded by donations over the last several years. In August, a seal coat top to bottom was applied to preserve the investment. The Old Pass Road is in the best shape ever in its over 100-year rich history.

Federal Policy support. On Dec. 16, 2021, Deputy Administrator Stephanie Pollack issued a new Policy on Using IIJA Resources to Build a Better America. That memo was sent to all Division Administrators, which I believe includes Central Federal Lands Highway Division. As best as I can tell, this is required policy, not optional, for Central Federal Lands Highway Division.

Key sections in the Policy memo include:

- Promote and improve safety for all road users, particularly vulnerable users;
- Make streets and other transportation facilities accessible to all users and compliant with the Americans with Disabilities Act;
- The Conclusion states: "...this Policy will help improve safety and accessibility for all road users, reduce the environmental impact of highway and bridge projects, including curtailing transportation greenhouse gas emissions that contribute to climate change" and "Working together, we can make investments and deliver projects that upgrade the condition of streets, highways, and bridges and make them safe for all users, while at the same time modernizing them so that the transportation network is accessible for all users, provides people with better choices across all modes, is more sustainable and resilient to a changing climate, and is more equitable."

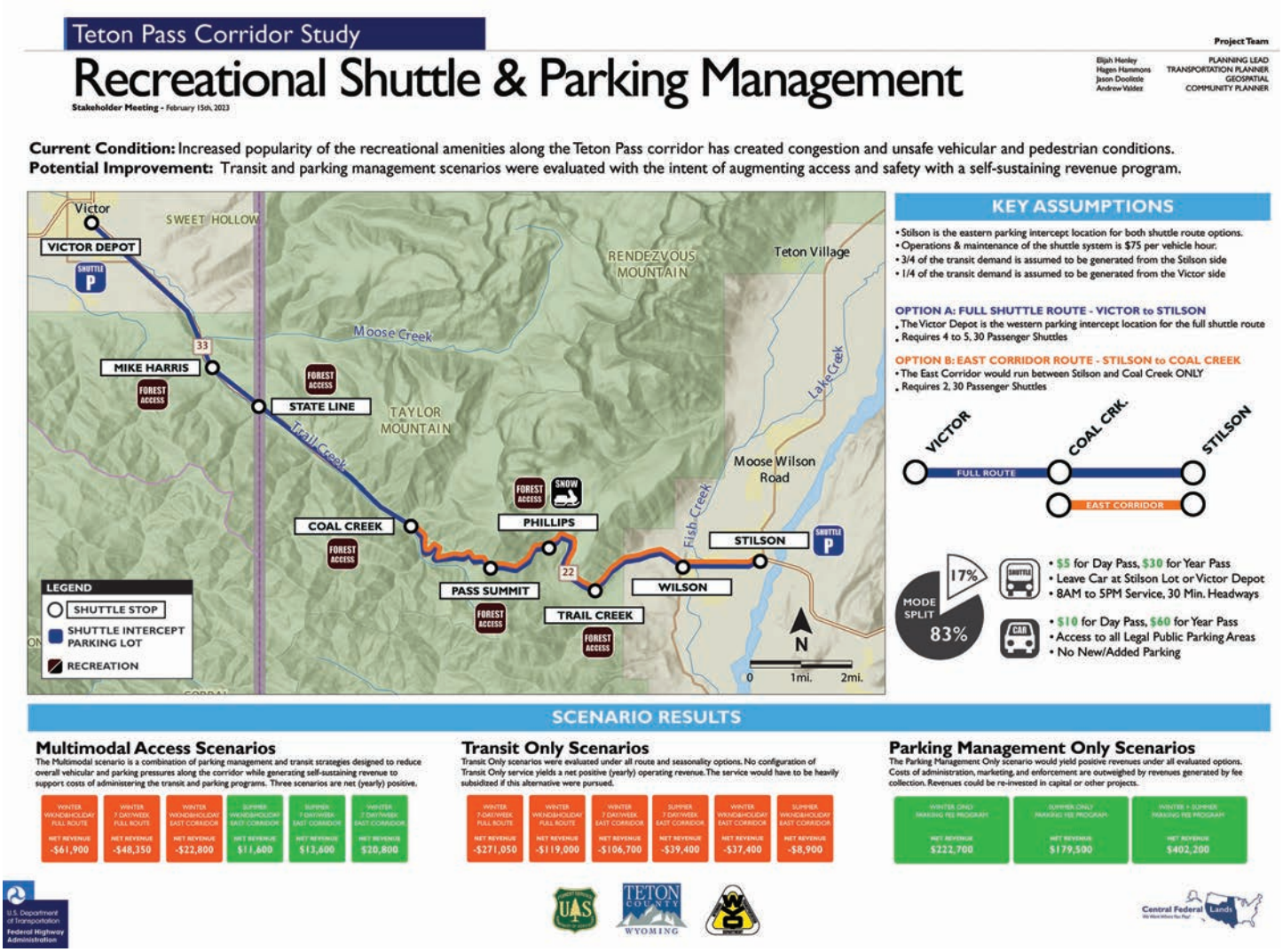
Appendix B: Public Feedback From Technical Document 'Teton Pass Corridor Management Concepts: Capital & Operational Options & Scenarios (January 2023)

Teton County Policy support. In addition, Teton County, through its Comprehensive Plan and Integrated Transportation Plan (ITP), strives to meet future transportation demands through the use of alternative modes, specifically including biking and walking. Chapter 7 of the Teton County Comprehensive Plan states "Residents and visitors will safely, efficiently, and economically move within our community and throughout the region using alternative transportation." Today Teton County is home to a 70+ mile separated pathway system, including substantial miles of existing pathway in the Teton Pass Corridor. The Dec. 2020 ITP, Chapter 3 Active Transportation, states: "This Integrated Transportation Plan places high priority on upgrading and enhancing the infrastructure and related elements needed to support "active transportation" – walking, bicycling and other non-motorized activities."

Likewise, transportation plans and policy for the City of Victor Idaho and Teton County Idaho also contain robust support for bicycling and walking modes of transportation, including a growing pathway system, complete streets, and projects directly underway in the Teton Pass corridor as part of the BUILD grant.

Appendix C: Winter 2023 In Person Public Open House Poster Presentation

The following posters were presented as part of the Public Open House presentation in Wilson, WY on February 15, 2023 that was also captured in the technical review document 'Teton Pass Corridor Management Concepts: Capital & Operational Options and Scenarios.' The public wrote down comments directly on the 36"x48" posters which are captured below each graphic here.



>Happy to pay for a pass, I like it!
>$10 (rather than $5) for a shuttle day pass
>$15 (rather than $10) and $100 (rather than $60) for parking pass
>Please consider ways to separate people from traffic on top of Pass- those crossing to Glory and those hiking up road back to top of Pass and/or car

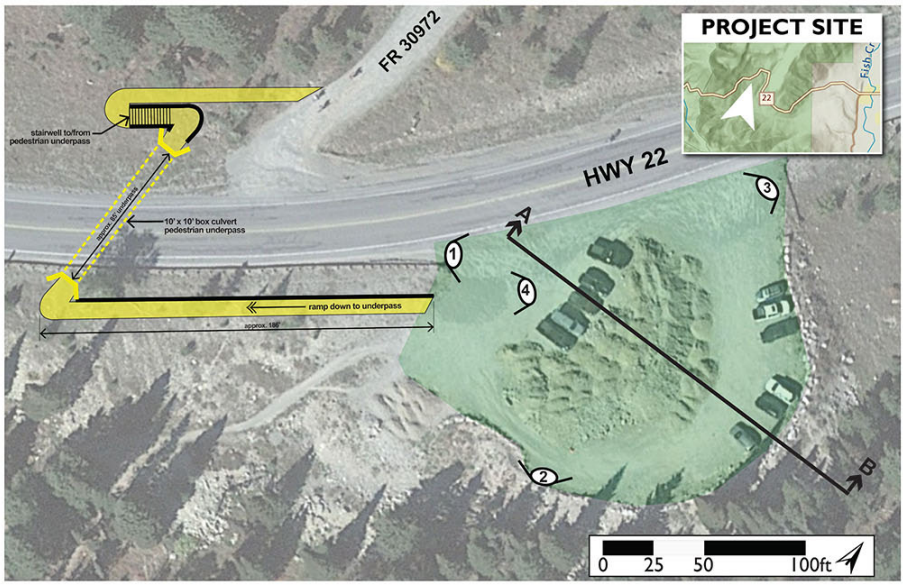
Teton Pass Corridor Study

Phillips Bench Access Area Potential Improvements

Project Team

Elijah Henley	PLANNING LEAD
Hagen Hammons	COMMUNITY PLANNER
Jason Doolittle	GEOSPATIAL
Andrew Valdez	COMMUNITY PLANNER

Current Condition: a WYDOT material staging area used as mostly Summer recreation access
Considered Condition: a recreation access area graded evenly and formalized to accommodate recreational shuttle and maximized parking, and a pedestrian undercrossing



OPPORTUNITIES & CONSTRAINTS

OPPORTUNITIES:
- formalized recreation access area with an even grade across parking area to maximize safety and efficiency for pedestrian, vehicle and shuttle circulation
- with undercrossing, provides safe pedestrian crossing of highway to access all recreation types

CONSTRAINTS:
- as this is a WYDOT material staging area, need another area to store dirt/gravel material
- some environmental damage caused by pedestrian underpass built into side slope

$$$ COST ESTIMATE $$$

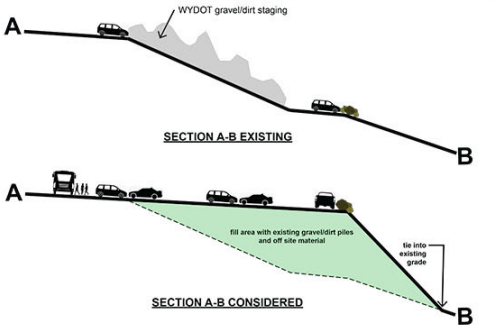
FHWA Central Federal Lands high level Engineer's Estimate for all elements:

$5.7M

Broken out undercrossing associated cost estimate:

$3M

EXISTING & CONSIDERED CROSS SECTIONS



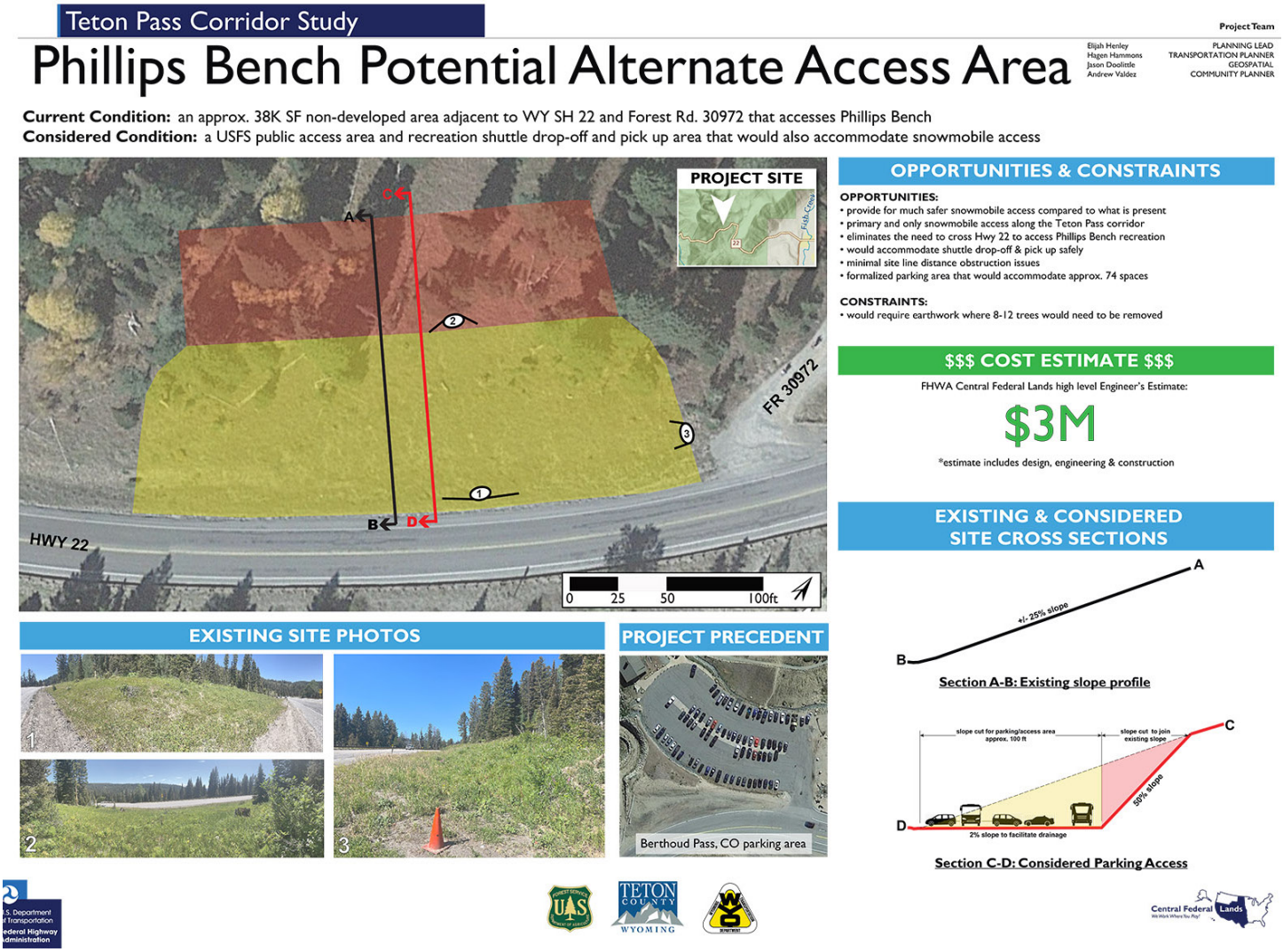
EXISTING SITE IMAGES

U.S. Department of Transportation Federal Highway Administration

Central Federal Lands

>Most cost effective
>Quick, easy improvement

Appendix C: Winter 2023 In Person Public Open House Poster Presentation



>$3 million seems low. This is a big hill side
>What about pit toilets at all of these locations?
>(for opportunities) add skier and biker to "provide for much safer access to what is present
>Do you need this and Phillips Bench?

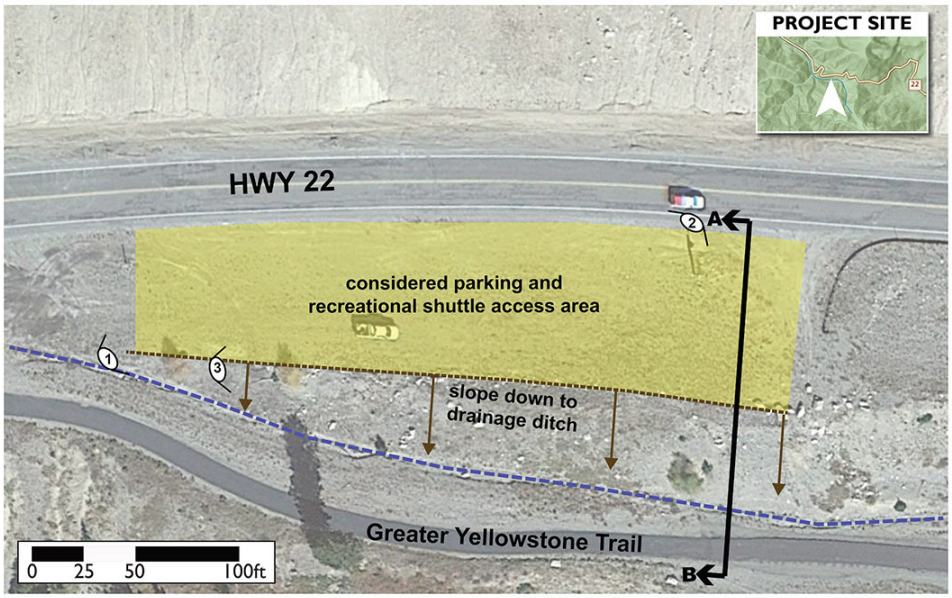
Teton Pass Corridor Study

Pass Summit Potential Alternate Access Area

Project Team

Elijah Henley	PLANNING LEAD
Hagen Hammons	TRANSPORTATION PLANNER
Jason Doolittle	GEOSPATIAL
Andrew Valdez	COMMUNITY PLANNER

Current Condition: an approx. 24 SF non-developed area adjacent to WY 22 and approximately a quarter-mile east of Teton Pass Summit
Considered Condition: an alternate public access and recreation shuttle drop-off and pick up area that would mitigate congestion at the present Summit access area



OPPORTUNITIES & CONSTRAINTS

OPPORTUNITIES:
- approx. 2% cross slope from edge of Highway to south end of considered lot
- minimal grading and earthwork required
- would accommodate shuttle drop-off & pick up safely
- no site line distance obstruction issues
- formalized parking area that would accommodate approx. 62 spaces
- area could be combined with a future avalanche shed and parking structure
- area is only a quarter-mile east of Teton Pass Summit
- directly adjacent to existing Greater Yellowstone Trail that leads to Summit

CONSTRAINTS:
- area is directly in line and below the Twin Slides avalanche path

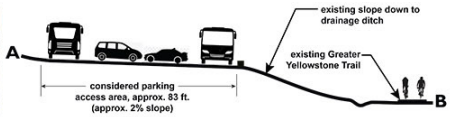
$$$ COST ESTIMATE $$$

FHWA Central Federal Lands high level Engineer's Estimate:

$800K

EXISTING SITE IMAGES

CONSIDERED SITE CROSS SECTION



Section A-B: Considered Parking Access Area to existing GYT

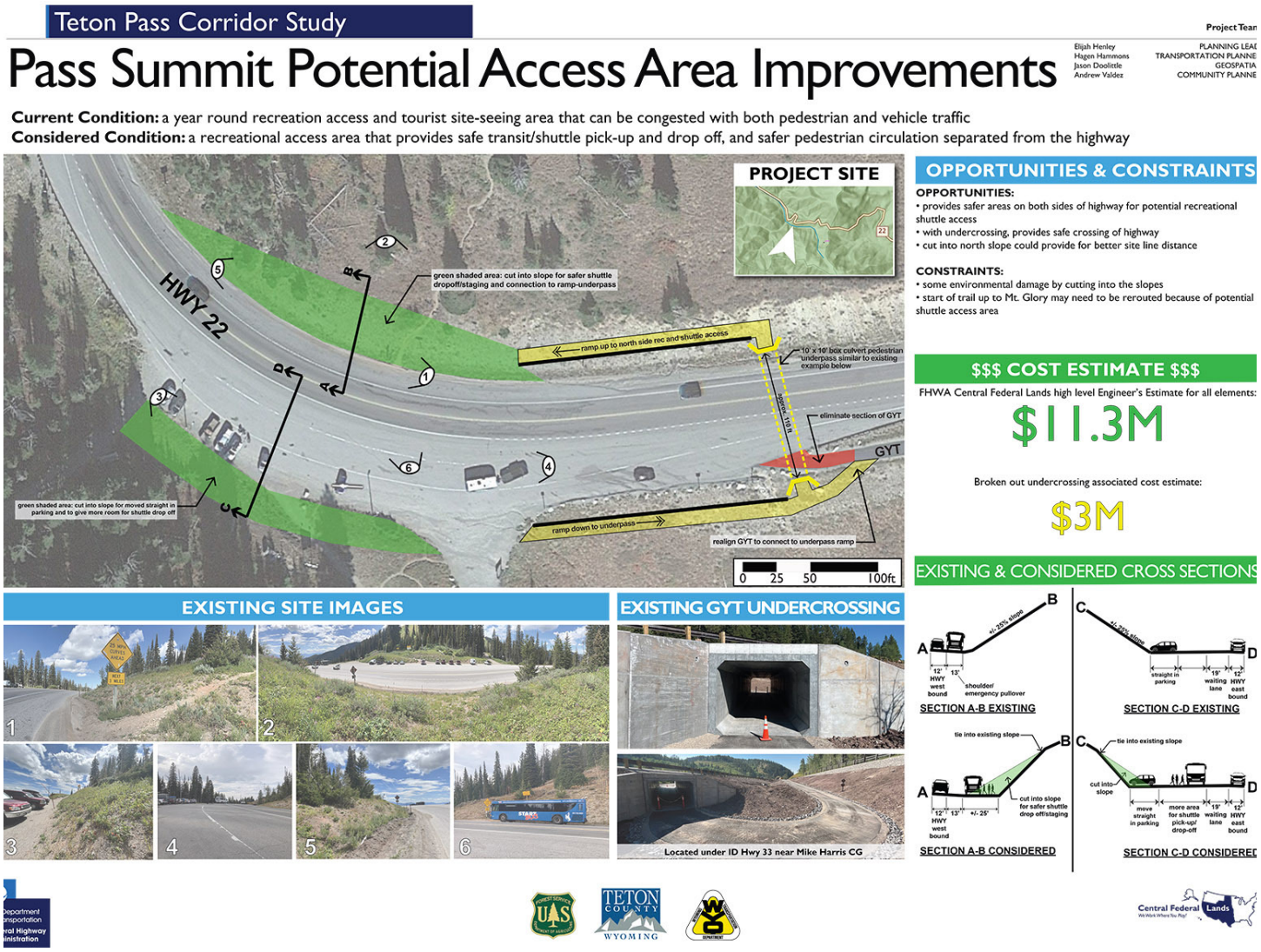
U.S. Department of Transportation Federal Highway Administration

TETON COUNTY WYOMING

Central Federal Lands

>Winter parking?
>Move kiosk from FR 30972 adjacent to undercrossing ramp
>Overpass instead of underpass?
>Stairs on underpass not compatible with bikes and snowmobiles

Appendix C: Winter 2023 In Person Public Open House Poster Presentation



>Pedestrian overpass?
>What about snow removal on underpass ramp paths?
>Does this or can this site improvement add parking spaces? Maybe between existing lot and overflow?
>Consider highway realignment with road moved to south and most parking on north side
>Underpass would get more used if road was realigned

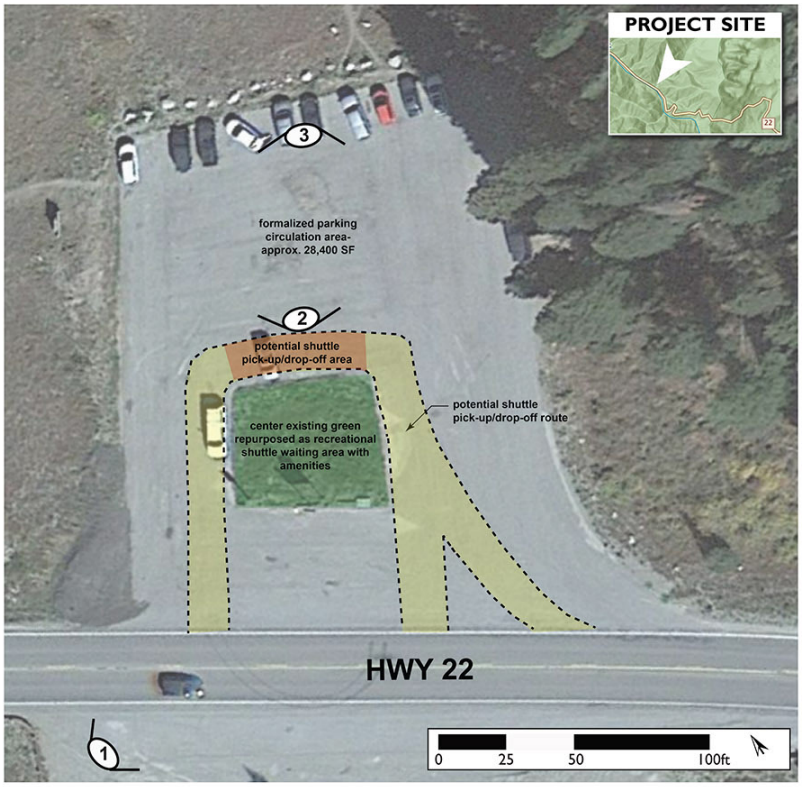
Teton Pass Corridor Study

Coal Creek Potential Access Area Improvements

Project Team

Elijah Henley	PLANNING LEAD
Hagen Hammons	TRANSPORTATION PLANNER
Jason Doolittle	GEOSPATIAL
Andrew Valdez	COMMUNITY PLANNER

Current Condition: an approximate 31.3K SF USFS trailhead that has access to year round recreation
Considered Condition: a more formalized USFS trailhead and primary recreational shuttle pick-up and drop-off with amenities



OPPORTUNITIES & CONSTRAINTS

OPPORTUNITIES:
- serve as the terminus for a potential East Corridor Recreation Shuttle service
- more inviting trailhead with refurbished pavement conditions and more formalized trailhead
- center green area revitalized as shuttle waitng area with amenities
- would accommodate shuttle drop-off & pick up safely

CONSTRAINTS:
- existing pavement surface is not ideal but would suffice, so the cost to repave may be better allocated at other areas along the study corridor

$$$ COST ESTIMATE $$$

FHWA Central Federal Lands high level Engineer's Estimate:

$700K

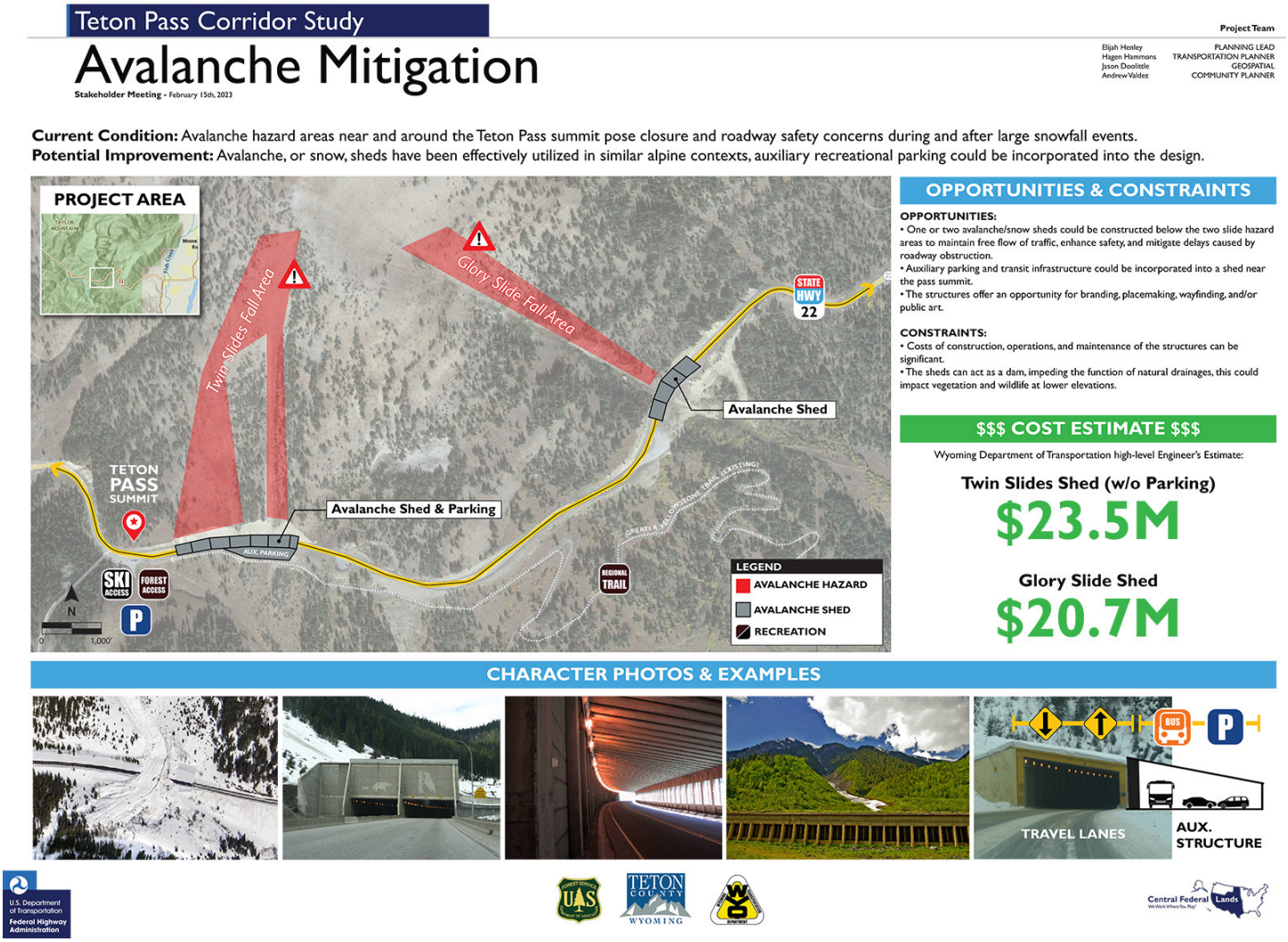
EXISTING SITE IMAGES

U.S. Department of Transportation Federal Highway Administration

Central Federal Lands

>With the low cost, these improvements seem worthwhile

Appendix C: Winter 2023 In Person Public Open House Poster Presentation



>Consider and avalanche shed below the Mt. Taylor avalanche shed also

Teton County Wildlife Crossings Implementation

Wildlife Crossing 30% Design Project

Project Team

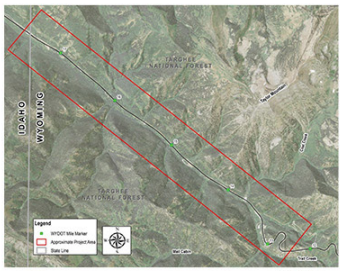
Chris Colligan	TETON COUNTY PROJECT MANAGER
Julia Kintsch	ECOLOGIST
Megan Smith	BIOLOGIST
Jon Altschuld	MODELING
Jorgensen Associates	PROJECT MANAGEMENT, ENGINEERING, GEOTECHNICAL, STRUCTURAL, PLANNING, SURVEY

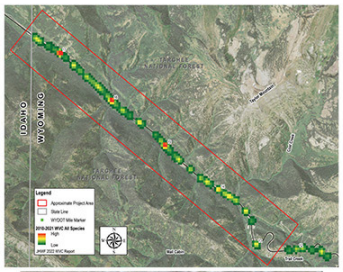
Current Condition: an approx. 5 mile stretch of WY Hwy 22 from Coal Creek to the Idaho stateline with high traffic volumes contributing to wildlife vehicle collisions which affect driver safety and wildlife movement patterns

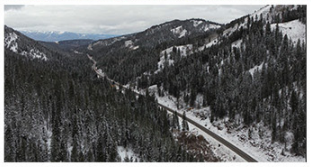
Considered Condition: wildlife mitigation structures and fencing to allow for safe passage of animals while keeping drivers and wildlife separate

PROJECT AREA

This five mile stretch of WY22 was chosen as a priority mitigation site due to the high number of wildlife-vehicle collisions, high traffic, and other projects planned in the area. The target species are: moose, elk, deer, carnivores, mesomammals, and aquatic species. The mitigation recommendations for this area are a system of multiple wildlife crossings with continuous fencing.







OPPORTUNITIES & CONSTRAINTS

OPPORTUNITIES:
- Reduces vehicle-related wildlife mortality and improves driver safety
- Increases permeability for wildlife across the highway even as traffic volumes increase
- Protect landscape connectivity and wildlife movement paths that are essential to population resilience and adaptation to changing conditions
- Coordination with BUILD Grant Projects

CONSTRAINTS:
- Terrain – landslides, steep slopes, waterways, and other natural features can impact constructability and cost
- Snow depth, snowplowing, and avalanches
- Protecting recreation access, while ensuring the functionality of the wildlife mitigation system
- Aesthetic considerations

$$$ COST ESTIMATES $$$

No cost estimates have been performed for this project and are dependent on final design

Recent comparable projects cost as follows:

$1.5-2.5M 2 Lane Arch Underpass	$130K/mile Wildlife Fence (includes ramps & gates)	$35K ea. Wildlife Guard
$1.5-2M Bridge Underpass	$3-8M 2 Lane Overpass	$1.25-2M 2 Lane Box Culvert Underpass

WHY CROSSINGS?

Wildlife crossing structures and fencing on roads in specific locations can result in a reduction of collisions with wildlife by up to 90% or more, while allowing wildlife to move safely under or over a roadway.

U.S. Department of Transportation Federal Highway Administration | JORGENSEN

>Important to include WVC on Idaho side because of high levels of WVC
>Please engage Idaho Transportation Dept. & IDFG. Stopping at state line isn't acceptable
>There needs to be thoughtful access to gates so that fencing protects wildlife and works for rec users, particularly on West side

Appendix D: 'Teton Pass Corridor Study Final Draft' public comments (November 2023)

The FHWA-CFL team prooduced the final Teton Pass Corridor Study Draft document the week of September 4, 2023, with a 2-month public comment period starting on September 8 through November 10. The following are the questions posed (in bold) accessed through the Teton Pass website, and the answers/comments from the public that was received:

What feedback do you have for the project team on the Operational Improvements section (the recreational shuttle and parking management program)?
a. Multimodal Access Focus
b. Vehicular Access Focus
c. Transit Access Focus

>Need for more parking and transit options

>Pull out area for hitchhikers

>I don't support recreational shuttles on the pass. Though I understand that a summer shuttle might help alleviate some summer traffic and be fine. But Adding recreational shuttles up the pass for winter access is a bad idea. The mountains are already crowded and they require a certain level of skill to gain access safely. A shuttle would serve as a sort of "chair lift" to terrain that many are not equipped to navigate. This will greatly stress the mountains and TCSAR. Recreational traffic is not the issue in the winter. Commercial / commuter traffic is the issue.

>Adding a recreational shuttle will just add more traffic

>This winter I recommend additional plowed parking at the Mail Cabin Creek summer trailhead parking lot, mile post 13.5, and the Do It's Woodlot,mile post 15.

>Encourage transit access please

>none

>I have very mixed feelings about the shuttle option. On one hand, I think it would greatly help with the parking situation, however, on the other hand, the limited parking limits how many users can be on the pass at a given time. I think if there's more access for visitors via a shuttle, then there'll obviously be more users at one time, which in turn would make the pass more dangerous. I think tourists will assume that if there's public transportation (a shuttle) accessing a particular location than it must be completely safe to recreate there.

>Shuttle will overcrowd everything. Manage peaking with fees like surrounding states

>Do not implement a paid option for accessing the pass. it should remain free to use

>No paid or user fee parking. Revenue generated will not be enough to mitigate the parking. Also will not deter people from parking. They will just pay. A shuttle system is a priority. You must have one if you are to incentivise people to not park. Need to have shuttles that are convenient, safe and easy or people won't use. Parking at Stilson is great.

>Shuttle would be very useful to relieve some congestion

>not needed...everyone need not have access at all times...the more you accommodate demand the greater future demand will be...this is supposed to be back country not a ski resort

>a. It will be great when the separated bike trail will travel over the pass. The new sections are currently getting a lot of use. From Coal Creek to the top of the pass it should be on the Old Jackson Highway to the weather station.
b. Skier parking in winter is getting difficult at Coal Creek as well as the other trail heads.
c. It would be great to have public transit for skiers from the Stilson Transit Center to the top of the pass, Wilson does not have enough good parking to accommodate this. Someday I could see backcountry skier transit from Victor to Coal Creek as well as the top of the pass, then on to Stilson for Village Skiers.

>I think this plan is a good one overall, given the limited opportunities for additional parking n Teton Pass and the increasing use.

>Charging money to access my public lands is a joke. I already pay taxes for this.

>A variation on all of the above. A, B, C

>My suggestion is paid parking at State line, weigh station, teton pass, and stilson,
Running a shuttle system from Victor to Stilson would be helpful and alleviate congestion. Paid parking will help financial viability of shuttle.

>I honestly don't have much experience using transit for recreational access. I have tried several times to use the Targhee bus system and it has been a less than desirable experience.. bus failing to arrive on schedule.... I am not optimistic about how well a Pass shuttle system would work. Are winter conditions considered in the proposed schedule/transit times? How about commuter traffic? Again, I am not an expert but the operational costs seem low. If there are more subsidies required where is that funding going to come from? Idaho local governments budgets are severely constrained by the State limiting them as a source of funding. What about additional stops on the west side? I personally ski more days from the Weigh Station than I do from the Pass or Coal Creek.

>I do believe a combination of paid parking and transit offers the most feasible option since greatly expanding parking is not feasible given the environmental constraints

>The shuttle system is a great idea for alleviating parking congestion for recreational access. The implementation of a shuttle system could begin soon, using the trailheads that are already deemed safe for a shuttle to stop. As trailhead improvements occur and become safe for shuttle stops, they could then become integrated into the shuttle route.

>If enhancing recreational activity along the corridor is an established goal, then a a shuttle system is excellent, as long as it is frequent enough. Improved parking and access in and out of those areas is important. I would urge a tighter limit on the number of cars at the summit to avoid so many cars in wait until a spot opens up. Perhaps the shuttle will help address this.

Appendix D: 'Teton Pass Corridor Study Final Draft' public comments (November 2023)

>We have no comments on the Operational Improvements section. But, I wanted to let you know that I caught some minor editing needs that are not worth spelling out here. I will send your team an email with a "marked-up" pdf, if you want to use it.

What feedback do you have for the project team on the Considered Capital Improvements section? (pages 46 - 69):
a. East Side of Teton Pass- Phillips Bench area
b. Top of Teton Pass- Summit Area
c. West Side of Teton Pass- Coal Creek Area

>Philips bench summer parking would greatly benefit from improvement on both sides of the road!! The parking lot on top of the pass is sufficient for summer recreation but could benefit from better winter maintenance to allow for easier egress. I don't think the lot needs to be increased in size, just better snow management to allow for vehicles to turn around safely.

>EarthGrid is willing to cover 100% of the cost of twin tunnels between both locations if we can charge a toll to cars & trucks (bike line users would get free access). Is that of interest?

>Snow sheds that wildlife can cross highway on in Glory and twin Slides (possibly Beaver Slide)

>Signage / Ticketing / Turnout Improvements

>SNOW SHEDS!

>A- no START bus to the top; B- leave the summit as is

>Underpasses (unless for wildlife connectivity) are ridiculous expense for recreationists. No need for underpasses at Coal Creek, Top of Pass and Phillips (unless the wildlife would benefit). Snow sheds are used extensively in other communities! Use them! You have to give people a place to park. Upgrading Phillips and Coal Creek makes sense. Make good use of Mike Harris and Stilson lots. Only so much room at the top of the Pass, but could be used more efficiently it seems. A shuttle would help that area tremendously. Do not widen shoulders etc. without considering impacts on wildlife and wildlife connectivity. Safe (non avalanche path) pullouts could be widened and improved to allow for parking, especially with frequent shuttle pickups.

>we need better parking and restrooms

>not needed...everyone need not have access at all times...the more you accommodate demand the greater future demand will be...this is supposed to be back country not a ski resort

>a. Avalanche sheds for the east side of the Pass.
c. If there is a public transportation stop at Coal Creek it needs to be in the chain up area and not reduce current parked vehicle numbers. East of Victor on highway 33 we do not want or need the Idaho

Transportation Departments proposed passing lanes. These will be dangerous for both vehicles and wildlife, and will only serve to increase the speed of vehicles coming into Victor which should be 25mph since it is a pedestrian area. ITD should be spending that money instead on well needed turn lanes off of highway 33 between Victor and Driggs. c. We could use some wildlife crossings between Mike Harris and the top of the Pass.

>I think all of these proposals are sound and needed. But the available terrain for expanding parking in each location is very limited. Thus the virtue of a bus service...

>Top of the Teton Pass- The pedestrian underpass will likely not be used in the winter. It will be difficult to keep the snow off the ramps and for that matter not bury the tunnel entrances entirely. Why would someone deal with that when they can simply walk across the road from the parking lot. In summer people might use it but then again not likely. This same comment is also applicable to the other proposed pedestrian underpass. Winter use is problematic. The underpasses cost millions of dollars to install and may be of limited use.

Avalanche sheds are long overdue and a common sense solution to the major avalanche issues on the Pass. The addition of parking under the sheds is appealing but the cost/per parking space is high. Other options like enlarging the existing overflow lot could be done at considerably less cost.

At Coal Creek, why is no additional parking considered? There is room for increasing the size of the parking lot and for relatively low cost.

>Pg 48-49 (Gravel Lot): this is a WYDOT permitted area (not WYDOT owned). The table on page 29 says vehicle capacity is 30, whereas text on page 49 says capacity is 28.
I believe there has to be some accommodation for parking in the gravel lot due to trail connections on this side of the highway. We could also consider the potential to join the winter parking area with a trail to get to the gravel lot/underpass. The other option that could be considered is to make the paved winter pullout only for emergency use and consolidate all the parking at the gravel lot and new parking area on north side of highway.

>The Phillips bench area needs improvements for both summer and winter recreation access. Currently, the winter parking area is too close to the highway. While this has worked for years without incident, a better, safer access point to the National Forest is needed. AMPL supports moving the trailhead to the north side of the road as shown in Figure 28 as our first choice.

Phillips is the only trailhead in the existing study area where snowmobiles are permitted to access the National Forest. While snowmobiles are capable of crossing the road, it is less than ideal. A lot on the North side of highway 22 would allow snowmobilers a safe place to park, unload, and ride onto the Forest without exposing themselves to traffic.

Primary recreation use, year round, occurs on the North side of Teton Pass, so placing the trailhead on that side of the road makes the most sense. Public recreating on the South side of HWY 22 is primarily downhill mountain bikers accessing the popular “Jimmy’s Mom” trail. An underpass could serve as a safe way for these users to access the trailhead, but may not be necessary if sight-lines are open enough for riders to cross the road.

If the final decision lands on a trailhead for Phillips being located on the South side of the highway, AMPL urges planners to design an underpass that can accommodate snowmobile traffic. These tunnels already exist in many areas around the state, including Togwotee Pass and have proven to be successful in providing safe passage for snowmobilers to access both sides of the road.

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>All very necessary, because they are all daily beyond their limits

F>igure 24: There is a wildlife hotspot in figure 18 that is not represented in figure 24. This hotspot is located directly on the west side of the town of Wilson. While this is not a priority area specifically called out in the county's Wildlife Crossings Master Plan, it shouldn't be ignored in this Study. This is heavy moose country and so likely there is a higher risk for more consequential WVCs (than say, with deer). If crossings are not in the near(ish) future for this location, it is still worthy of other improvements that can address WVC.

What comments, questions, or considerations do you have for the project team on the Additional Considerations section that include Active Transportation, Safety Hotspots and Environmental Risk Mitigations? (pages 70 - 91)

>More pullouts critical

>Unless I am missing something, it doesn't appear that any of the items in this draft plan address the elephant in the room.....traffic congestion, closures due to tractors/trailers when the pass is closed or getting people that drive the pass or live in Wilson or north on Teton Village Road to their homes or businesses in a more efficient manner. What happens between Stilson and the Wyoming/Idaho State line affects traffic all the way to the town of Jackson just as the section from Stilson back towards Jackson affects traffic both ways. I see millions of dollars spent on everything but relieving congestion. Yes, I commute but also know that Wyoming residents are being adversely affected in significant ways by the congestion on this section of highway 22. Businesses are also affected but the economy is so crazy that it is probably difficult to measure.

>I recommend wildlife highway crossings before the next phase of bike path

>Prioritize wildlife !! Every effort to protect wildlife, such as wildlife crossings, should be implemented

>I strongly recommend that any and all efforts to improve the Teton Pass Corridor include an assessment of wildlife connectivity and migration as might be affected/impacted by proposed improvements and developments as well as predicted traffic levels and types. In these assessments I urge the use of wildlife-vehicle collision data, wildlife movement data, and landscape level data and models concerning species habitats, ranges, and connectivity. As a result of these assessments, I would recommend that any and all improvements proposed to the corridor and road include consideration of avoiding impacts to wildlife and wildlife. If impacts cannot be avoided, then I recommend that plans, design, and projects include minimizing impacts to wildlife and full mitigation for any impacts to wildlife connectivity and migration through incorporation of wildlife overpasses, underpasses, fencing, wildlife-vehicle collision data collection and monitoring. and potential offsite mitigation for any and all impacts to landscape scale connectivity.

>Idaho law requires a vehicle blocking more that 3 cars on dangerous roads to pull over at the next available turnout, https://legislature.idaho.gov/statutesrules/idstat/title49/t49ch6/sect49-639/ I would like to see signage that reminds motorists of this law and tickets to those that are not able to abide by our current

traffic laws. Tickets work, and those that are actually causing a serious hazard such as trailering in the winter (killed many on this road) should get a serious infraction.

>Could someone monitor for big trucks in the winter,,, OMG how hard is it not to let them go up and get stuck and screw up the commute

>Teton Pass State Park?

>Wildlife and wildlife habitat must be considered when widening or attempting to widen highways. Adding pathways needs to be evaluated for wildlife concerns as well.

>From Coal Creek to the top of the Pass the Greater Yellowstone Trail should utilize the Old Jackson Highway surface to the weather station, then separated bike lane to the top of the Pass. Next to the highway particularly with just rumble strips is not expectable. If you have ever ridden this old road bed surface you will see how much more esthetic it is then being next to the traffic noise and pollution.

>The original plans called for a passing lane on Hwy. 22 between the Baseline Road and the Moose Creek Road on Hwy. 22/33; this was a profoundly stupid and dangerous idea, given the traffic congestion and existing problems with speeding in the corridor. The extension of the pathway between Mike Harris and Coal creek is long sought and desired. Highway traffic is too heavy and aggressive for most bicyclists to even consider riding on the road shoulder. I used to do that quite a lot in the 1980s and 1990s, but not since then. Breathing exhaust when you are at your aerobic limit and being threatened by vehicles of all sizes just doesn't attract many cyclists...

>We have permits that were purchased many years ago from Mugs and Betty Woolsey at Trail Creek that allow us to camp up at Philips (Gene Linn was the Outfitter at the time - my husband's father). This is a great trip for us to get kids into the backcountry as well as groups like the Coombs Outdoors program.

We don't use the camp much — maybe a week a summer season at most — but love to have this option available to introduce folks to the outdoors / camping / backcountry, in particular youth and young families. This also converts more civilians into advocates for our public lands

There has been difficulty for us on occasion trying to stage our departures away from the highway up in one of the camping spots directly above the lower pull-off and we would like to make sure that this stays available to us in the future. We do need somewhere to safely stage — pack/unpack and also meet clients that does not add to congestion down below where the parking area is. We typically drop the horses in the small pull out on the north side of the road (across from the snow machine unloading zone) and then lead them up to this spot. Then one of us drives up with the gear and we pack and move out. Same with the exit but in reverse.

We would love for you to allow consideration for this process and for us to stage in perpetuity of our permits out of the zone above the road. The bikers need to have more tolerance for this. Our paths don't cross for very long in this scenario.

Lastly, we hope you consider the impact of e-bikes in the Philips Canyon area and their impact on people riding horses. It could be the cause of accidents and injuries

>I recommend implementing a paid permit system, based on the model that the Canadians use on Rogers Pass.

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>Another safety hotspot to consider is the intersection at Trail Creek Road. This is a difficult turn on slick roads and also sees pedestrian crossings and hitchhiking.

>Pg 77: small typo in first sentence (safety)
Pg 82: Stateline is also a key location for snowplow turn-around

>The safe crossing of wildlife is such a huge concern of mine. The extension of a wildlife crossing prioritization area west into ID to Mike Harris is paramount. Protecting and facilitating wildlife movement must be a key goal as this Teton corridor is reviewed. As the study states, wildlife and recreational access must be able to coexist in our Greater Yellowstone Ecosystem. More signage is key, and over and underpasses are critical. As is SPEED LIMITS in these hot zones.

>Blue box on page 71: I love the call-out boxes, thank you for the added info. In my estimation the BUILD project did not do proper/full scoping with wildlife stakeholders and so it is even more important that we ensure the best mitigations possible for animals to move across the highway. Some of the BUILD grant elements are going to have large impacts on wildlife movement and health. Happy to discuss these further. Can you mention that the BUILD grant elements are not beneficial to wildlife and so mitigation along the corridor is even more important?

>Figure 41 Page 72: This figure needs the WY 22 - 390 projects added (they are WYDOT and county funded). I have concerns about the proposed construction at the Stilson Transit Center and its impacts on wildlife so it is important to show that wildlife crossing structures are currently being built here, and not just BUILD grant elements.

Page 80: Under "Weigh Station" you state "This location is sometimes utilized during high avalanche danger as overflow for the Coal Creek parking area to access the backcountry trails in the Winter, south of the highway." As a backcountry skier, I want to clarify this to you and you may want to modify your language. This parking lot is used no matter whether there is high avalanche danger or not. It is usually used by skiers accessing terrain to the north of the parking lot, i.e. skiers are crossing the highway here. I would not describe this location as overflow for Coal Creek. It provides access to its own coveted terrain. (This is more of a personal comment meant to be helpful in your writing; this is not meant to be representative of JH Wildlife Foundation comment).

Top of Page 86: Environmental Risk Mitigation: Wildlife. This section should not be an Additional Consideration, but rather should be listed under the main Considered Capital Improvements.

Bottom of Page 86: "The approximate 3.75 mile stretch of WY-22 from Coal Creek Trailhead west to the Idaho state line is chosen through an ongoing 30% Teton County wildlife crossing implementation study as a prioritization area." This sentence does not seem grammatically correct. Can you clarify what you are saying?

Bottom of Page 86: "Based on the current Teton County, Wyoming implementation study, this stretch was chosen..." Please clarify what the implementation study is

What other feedback would you like to give us on the overall document?

>More options for safe passing zones/vehicle pullouts critical, especially in the zones near the top of the pass where semis get stuck and other vehicles overheat, blocking traffic lanes

>More mass transit and no heavy vehicles. I believe that continuing to allow heavy vehicles on the pass amounts to gross negligence. There is a history of near misses, near kills, from runaway trucks.

>Why do we continue to allow cement or other large trucks travel the pass? Make them go through Alpine. This would create a safer roadway, alleviate a ton of slow-downs, backed up traffic, and speed things up. I observed a car pass a line of traffic, he couldn't get back in causing three oncoming drivers to LEAVE the roadway. Had they not done so, there would have been a head-on collision. This created a DANGEROUS situation.

See above

>Sadly I don't believe any of these actions will truly help with the greater traffic and congestion problems seen on Teton pass. Shuttles are a good idea but due to the our cultural view, people just do not utilize shuttles as much as we would like to think. Additionally, a lot of humans commuting over the pass need their automobiles for work or have schedules that are all over the place. When it comes down to it, congestion will continue to be a problem until either lanes are added or a tunnel is built, it's that simple. More and more of the teton county workforce are being pushed out of jackson and towards victor and driggs which means more and more cars traveling over the pass. Tunnels have been built to travel over or through mountain passes all around the world and they work, look at the mont blanc tunnel in chamonix. If a single lane could be added to the highway then it could be utilized in the morning for travel toward jackson than in the afternoon for travel toward victor.

>1) Build a train system to connect JH to Victor, Idaho Falls, Salt Lake, etc. 2) Build a tunnel

>A tunnel wasn't considered due to cost considerations. With our plasma tunnel boring technology, the cost is lower, so we would therefore be willing to utilize our multi-billion-dollar investment fund backing us to build a toll tunnel (2 lanes each way plus dedicated bike lanes) at our expense if the states and counties are willing to provide the permit(s) needed.

>Winter Parking: similar to Togwotee Pass, Wildlife Highway Crossings: west side (moose, bighorn, grizzly, wolverine, wolf, mule deer, elk) Snowsheds: Glory and Twin

>I would recommend that assessments of the corridor include predicted impacts of climate change on wildlife, wildlife habitats, wildlife movements, and the conservation of native biodiversity within the corridor and surrounding landscape.

>We have laws, enforce them

>Safe hitching spots

>Fine to any bicycle on Pass; No 4 wheelers or e bikes in backcountry; More use of scale bldg.;More spot checks on speed & passing;Important areas with Solar lit signs

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> Any solution will include a shuttle service. Winter is of the highest priority, summer less so because there are fewer safety considerations. Improve the existing parking efficiency and do not drive costs up by adding unnecessary underpasses. Use the best technology for keeping illegal loads off the Pass, and for mitigating avalanche path safety.

>The snow sheds are critical at this point. A tunnel would be nice but is ridiculously expensive. Too many people and cars transit the pass daily for the closures we sometimes have due to snow. Summit parking is at the mercy of the state and the area wasn't designed for that. A shuttle would relive some pressure there.

>Very comprehensive! Thanks you very for your hard work on this project.

>I don't think I have anything additional given the people and groups that were interviewed and whose ideas were incorporated. Looks like you did a great job with that! It would be nice to have some time frames so that the process can move along at least in a pilot phase for items that are the LOW cost, HIGH impact.

>I would hope that you can prevail upon our local USFS forester Jay Pence to allow the use of the Old Teton Pass Road from Coal creek to the weather station not far below the summit of the pass. It is an obvious and available route that has been created long since. You need to separate cyclist and vehicle traffic for safety, health and usage reasons. I understand that the Jed Smith Wilderness boundary is quite close all along the highway corridor, and Jay has abandoned a popular mt bike trail from Moose creek to the Stateline (Rush Hour trail) that would serve multiple users, like walkers and mt bikers, who are less enthused about the paved bike pathway built last year. Let's do this corridor right!!!

>I do not think we should charge a parking fee to access public lands.

>I would like to compliment the study team on the overall study. It is a nice synopsis of the current conditions. However, there are fundamental assumptions on future use and particularly winter use that are not considered. In the section on population growth it considers historic growth patterns. Teton County, WY is currently growing at about a 0.5 percent annual growth rate while Teton Country, ID is growing at 2.5 percent annual growth rate. Additionally, the Idaho Falls/Rexburg region is also growing 2.5 percent +. The study is largely east side of the Pass focused while the future growth in recreational use will be coming from the west and will increase demand for parking and transit on the west side of the Pass. Winter use to the west of Coal Creek is also different. There is not the short transit time parking seen at the summit/Trail Creek/Coal Creek. Skiers don't descend from the summit to the parking at the base of the Pass on either side. Instead they are typically out for longer durations. There is an ideal location for additional parking near the base of the "Do It" chutes. The area is flat and already disturbed with good sight lines for egress. The area could serve as an overflow area for Coal Creek and also serve to disburse use over broader areas. Construction costs would be a fraction of any projects on the summit and probably similar to or less than what is proposed at Coal Creek. At this site you could likely double the amount of parking on the west side of the Pass for relatively little cost compared parking enhancement at the summit.

>Overall the document is well done. I really like the visuals
Pg 13 (Guiding Principles): I think these are excellent and very helpful
Pg 14 (Study Considerations): 3rd bullet - the majority of the corridor is US Forest Service managed lands. it would be more accurate to say "explore relocation of parking areas outside of the WYDOT right-of-way". Last bullet: horse use is also problematic to integrate at Phillips Canyon.
Pg 17 (Stakeholders): Chris Colligan is with Teton County, WY (not GYC). I am not sure why WYDOT is listed as a stakeholder since they are part of the PMT. Other members of PMT are not listed
Pg 19 (Trends): In addition to tourism and commerce/business linkage, the corridor is also an extremely important workforce connection - schools, hospital, police, etc.
Pg 21. I believe the runaway truck ramp at milepost 8.3 is the one that was restored/eliminated
Pg 29: I question some of the vehicle capacity numbers on the CTNF (Mail Cabin, Coal Creek, Waste Pit, Moose Creek). They seem too high.
Pg 30: I think vehicle capacity at Coal Creek is too high and weigh station is too low (12 would be more accurate)
Pg 31: 2nd and 4th bullet - safety is the bigger issue (not conflict)
Pg 38: I would combine statement about miles of trails. Both BTNF and CTNF offer extensive network of trails (BTNF = 2,807 miles, CTNF is similar)
Pg 92 (Next Steps): #1 - need to find mechanism to encourage and support a private-public partnership. #5 - this section isn't clear. The "projects" require environmental analysis. I think the intent was that the permitting applies to potential alternative governance structures

>The plan for a bike path from Victor to Wilson is only a great idea if e-bikes are allowed on the pathway. As discussed in public meetings regarding this study, e-bike technology is rapidly improving and will soon be a viable commuting option. The state should work with Federal agencies to ensure e-bikes are allowed access to this new pathway

>Well, what about addressing commuters?? Can a shuttle or bus system address this growing bottleneck of continuous cars to and from at rush hour. How can some of this be alleviated??? This is critical!!! Also, Keeping trailers off of the corridor in winter is obligatory. Increased policing in Victor and Wilson is paramount. So much time is wasted by trailers that work their way up the pass and block drivers for hours. They should be stopped and fined. Thank you for the thoroughness of this study!

>Next Steps Page 92: This committee needs to include wildlife experts, at the very least, the respective state game agencies.

Next Steps Page 92 Development of a Shared Vision: Please add to this sentence so that the final reads "The vision should encompass goals related to safety, sustainability, accessibility, economic development, and environmental integrity and function." (I added the last item)

Under Next Steps (in general): You might want to include in your outline: Determine who will be responsible for long-term maintenance of capital improvements.

Fantastic work team! Thank you for your incredibly conscientious efforts and excellent team work. I very much appreciated how much outreach you have done with stakeholders and how much you have worked to include Idaho in this planning document.

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Below are emailed comments from various stakeholders on the Teton Pass Corriddor Study Final Draft

Teton County (ID) Planning Department:

>Turn lanes for potential spot improvement areas. This should be considered for safety and to avoid traffic backups.

>Increase the size of the white bubbles for all of Mt Glory problem areas. There are several areas where people are walking across after skiing and then walking the road.

>Formalize the Pull outs throughout the pass for vehicle use. Several fires occur from overheating. The pullouts also need the same surface cover to encourage use.

>Coal Creek - bus entrance and exit getting into the parking lot. Without turn lanes, this seems improbable.
*Bus turnarounds may be tricky, in general

>Concerns about enforcement. Who would enforce any parking/pass plan?

>Concerns on wildlife crossings and feasibility

>Generally speaking, for the benefit of regional collaboration, an "east-side" only plan is not advisable and shortsighted.

>Generally we need to determine who works on this plan moving forward - there is potential for a subset of the regional transportation working group to help form a working group

Greater Yellowstone Coalition (GYC):

>Wildlife crossing structures are proven to enhance transportation safety and to improve the connectivity of terrestrial and aquatic wildlife populations in fragmented landscapes.

>GYC requests that the Final Teton Pass Corridor Study considers wildlife and wildlife vehicle collisions as both a human safety issue and environmental value at risk if the highway poses a barrier to wildlife movement. Please elaborate further on the considered capital improvements of wildlife crossing structures. Since this document has been developed to inform current and future decision-making bodies we request the currently available data, wildlife crossing structure schematics, and estimated prices be included in the Final Study.

>On Page 35, under the Existing Conditions the statement, "WVC are becoming more frequent due to seasonal migratory movements" should be amended to, "WVC are becoming more frequent due to increased traffic volumes and vehicle speeds."

>FHWA-FLH changed statement as per above comment

>At some point WVC will diminish as traffic volumes of the Corridor essentially, make the road a complete barrier to wildlife movement: https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/ch_2.aspx

If we fail to include wildlife crossing structures in future recreation or transportation infrastructure projects in the corridor, wildlife population fragmentation and isolation are all but guaranteed.

>We ask why this Study has failed to include data, details, or recommendations from Teton County Wyoming's contract with Eco-Resolutions for 30% design standards for wildlife crossing structures within the corridor? Eco-Resolutions recently presented that data, proposed wildlife crossing structure designs, proposed wildlife crossing structure locations, and provides current cost estimates for crossing structures on WY22 from the Coal Creek Trailhead west to the state line. Since the Study's intent is to inform current and future decision makers, that material should be fully incorporated into the Final Study documents.

>In conclusion, Greater Yellowstone Coalition is grateful that wildlife populations, landscape connectivity, and the impacts of vehicle traffic along Teton Pass Corridor were acknowledged. We believe that a more comprehensive analysis of measures aimed at reducing Wildlife-Vehicle Collisions should be included in the Final Teton Pass Corridor Study documents.

Tim Young- Wilson Advocacy Group:

>Page 2. A word of thanks. Just a question on how Teton County should be described in the partner paragraph, since Teton County is the lead agency for the FLAP grant, and provided match funding and staffing for the federal FLAP funds. That distinction should be noted.

>P4. Contents page changes. (specific details on these are by page number below)

- Add the topic "History of Teton Pass", either on its own or within Existing Conditions
- Pull Active Transportation out of "Additional Considerations", and make it a standalone content topic on the Contents page.

>P13. Based on USFS comments at Teton County's recent workshop, consider edits on "no parking increase" to note something like, "Improve parking safety while minimizing capacity expansion".

>P14. Key Study Considerations. Edit the 6th bullet on Greater Yellowstone Trail, change to "Evaluating the Greater Yellowstone Trail remaining missing links along the Teton Pass Corridor". The Key Consideration should be to studying how to complete the major regional bicycle/pedestrian trail in the corridor section. The majority of the 20-mile Stilson to Victor GYT section is either in place or construction is programmed. Only 2.5 miles remain to complete the Active Transportation network connection over Teton Pass. This should be referred to as the "final missing link".

>P15. Projects and Improvements

- Correct "Infrastructure West Side" and "East Side", these are mixed up.
  >changed as per above comment
- Add a line in the chart for Active Transportation, below the Transit modes. The Improvement Description should be to "Complete Greater Yellowstone Trail connection over Teton Pass".

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>P16. Clarify in "Establish a formal advisory board" that key NGO stakeholders such as Backcountry Skiing and the Pathway groups need to be included along with the agencies. The NGOs are integral to the success of P3 partnerships.

>P18. It would be helpful to add a brief history of travel on Teton Pass. Maybe add it to the Existing Conditions, local regional context. Here is a summary for you to consider:

"Teton Pass is an ancient travel corridor. People first ventured into the Teton valleys as glaciers receded. The earliest evidence of humans in this area dates back at least 11,000 years. By the time Europeans arrived, tribes such as the Shoshone, Bannock, Blackfoot, Crow, Flathead, Gros Ventre, Nez Perce and others were harvesting the valley's seasonal riches. These earliest travelers were all pedestrians, indigenous tribes traveling via foot over Teton Pass.

European explorers arrived in the early 1800's, including Wilson Price Hunt's party of Astorians crossing Teton Pass, which was then called "Hunt's Pass". In 1832 the Rendezvous of trappers and traders met in Teton Valley, then called "Pierre's Hole", when hundreds of people crossed Teton Pass in each direction. The earliest walking trail actually started up Moose Creek from the west, and circled back to Teton Pass Summit. This trail was used until the late 1880's when settlers felt the need to bring wagons over and started work on a wagon road using Trail Creek, where today's highway goes. The first wagon crossed Teton Pass in 1886, despite steep and treacherous conditions. Demand for a better road increased after the founding of the Town of Wilson in 1895, and by 1905 the route over Teton Pass was used over the winter, and there were road houses for travelers at Coal Creek, Teton Pass, and Trail Creek Ranch on the east side.

Between Wilson and Victor, the Teton National Forest was created in 1897, and the Targhee NF in 1908. In 1913 a new graveled road over Teton Pass was surveyed and constructed using horse drawn equipment from 1913-1917. Today this is known as the Old Pass Road and the Old Jackson Highway. The Oregon Short Line Railroad tracks reached Victor ID at this time also, increasing the importance of Teton Pass for Jackson Hole. The route was widened in 1919, connecting Jackson to the Victor rail depot, and cattle drives moved large herds over the pass to ship to markets. Skiing was a form of transportation back then. In 1939, a CCC crew cleared a recreational ski trail on the east side three miles long, longest in the region at that time. The Old Pass served travelers until about 1970, when today's highway was opened." [History summary is provided with thanks to Doris B. Platts, from her book "The Pass"]

P21. Update the text mid page on Wilson; change to something like, "Within Wilson WY22 commercial zone, the BUILD Active Transportation project is in final design for FY24 construction start. It will provide bike/pedestrian pathways on each side of the highway, with two through lanes and a center turn lane, with several marked crosswalks with RRFBs. Pathways underpasses are in place on the west end of Wilson and east end at the Wilson School."

P27. There needs to be a revision of the statement: "Turnout parking areas within the WYDOT ROW are intended to be used for highway maintenance and operations, but many have evolved into de facto

non permitted parking areas...". This is not correct. Access to public lands along this corridor has existed prior to the highway construction, it has been in used since before the creation of the National Forests, and throughout history of the Pass corridor. The underlying ownership of the highway ROW today is still Public Land, and the public has a right to reasonable access to it. This important public access right is a legal fact should be recognized in this Corridor Study. The Study should focus on minimizing and mitigating the conflicts between legitimate public land access, and highway ROW maintenance issues.

P31. The Study needs to be updated regarding pedestrian crossings, and reference the extensive FHWA research on rural pedestrian crossings, including the 'Guide for improving Pedestrian Safety at Uncontrolled Crossing Locations', see Table 1 from that study copied below, and note that there are solutions proven to work, including RRFBs, that are not expensive and can work in some situations on Teton Pass. In fact, RRFBs have been installed on ID-33 in Victor on the west end of this Study Corridor, and are being used by pedestrians and cyclists daily with good success.

https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/docs/STEP-guide-improving-ped-safety.pdf

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	● 2 4 5 6 7	● 5 6 7 9	○ 5 6 ● ○	● 4 5 6	● 5 6 7 9	○ 5 6 ● ○	● 4 5 6 7	○ 5 6 7 9	○ 5 6 ● ○
3 lanes with raised median (1 lane in each direction)	● 2 3 4 5 7	● 5 9 7 9	○ 5 ● ○	○ 3 4 5 7 9	○ 5 ● ○	○ 5 ● ○	○ 3 4 5 7 9	○ 5 ● ○	○ 5 ● ○
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	● 2 3 4 5 6 7 9	● 5 6 7 9	○ 5 6 ● ○	○ 3 4 5 6 7 9	○ 5 6 ● ○	○ 5 6 ● ○	○ 3 4 5 6 7 9	○ 5 6 ● ○	○ 5 6 ● ○
4+ lanes with raised median (2 or more lanes in each direction)	● 5 7 8 9	● 5 7 8 9	○ 5 ● ○	○ 5 7 8 9	○ 5 ● ○	○ 5 ● ○	○ 5 7 8 9	○ 5 ● ○	○ 5 ● ○
4+ lanes w/o raised median (2 or more lanes in each direction)	● 5 6 7 8 9	○ 5 6 7 8 9	○ 5 6 ● ○	○ 5 6 7 8 9	○ 5 6 ● ○	○ 5 6 ● ○	○ 5 6 7 8 9	○ 5 6 ● ○	○ 5 6 ● ○

Given the set of conditions in a cell,

- * Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

*Refer to Chapter 4, "Using Table 1 and Table 2 to Select Countermeasures," for more information about using multiple countermeasures.

**It should be noted that the PHB and RRFB are not both installed at the same crossing location.

This table was developed using information from Zegeer, C.V., J.R. Stewart, H.H. Huang, P.A. Lagerway, J. Feaganes, and B.J. Campbell. (2005). Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines. FHWA, No. FHWA-HRT-04-100. Washington, D.C.: FHWA. Manual on Uniform Traffic Control Devices, 2009 Edition, (revised 2012). Chapter 4F, Pedestrian Hybrid Beacons. FHWA, Washington, D.C.: FHWA. Crash Modification Factors Clearinghouse. http://www.cmfclearinghouse.org/. FHWA. Pedestrian

Appendix D: 'Teton Pass Corridor Study Final Draft' public comments (November 2023)

>P377. Update language use, change title from 'Trails, Sidepaths and Non-Motorized' to "Trails and Active Transportation Infrastructure". [It's recommended to change to use "Active Transportation" all through the document, unless it is directly quoting law or guidance that uses the term 'Non-Motorized'.]
Then update the first paragraph to note the multiple bicycle routes that currently use Teton Pass. Suggestion: "Additionally, the Teton Pass Corridor serves three major long distance bicycle trails. It includes a significant portion of the Greater Yellowstone Trail (GYT), a multi-use, detached, and grade separated regional trail system that is envisioned to connect Jackson Hole and West Yellowstone MT through eastern Idaho over Teton Pass. The Teton Pass corridor also serves the famous TransAmerica cross-country bicycle route, via the Teton Valley Alternate of the US Bicycle Route 76. In addition, Teton Pass is regularly used by some cyclists on the Great Divide Mountain Bike Route that connects Canada to Mexico.

>Figure 19, page 37. Update the title with "Active Transportation Infrastructure". Now that the Wilson-Stilson Pathway is completed, it may be best to note that is the formal route for the Greater Yellowstone Trail, so it is on the south side of WY22 from Wilson east, and connects directly to Stilson with an underpass. Make that the GYT. The existing pathway north of WY22 is called the Wilson Centennial Trail.

>P38. Bottom of page, the "crosswalks not allowed" statement is not fully accurate, actually there are marked crosswalks on WY22 in Wilson now, and more are approved for construction. A marked crosswalk could be used in other places where speeds are lower, or in combo with a RRFB, which would also still be functional in winter when crosswalks may be snow covered.

>P39. Last bullet, needs to be corrected. E-Bikes are currently allowed on multiple segments of the GYT in the Teton Pass Study corridor. E-Bikes are allowed on the new FHWA FLAP pathway from Moose Creek to Trail Creek CG. They will likely be allowed on the next BUILD section in WYDOT ROW from Trail Creek CG to Coal Creek on the CTNF. They are also allowed on the Jackson Hole pathways from Stilson to the Forest boundary on the east side. The Teton Pass Corridor Study should recommend that this issue be studied to possibly allow e-bikes for commuting use over Teton Pass on the Old Pass Road and future west side pathways. The Old Pass is currently closed to e-bikes but the issue is being studied in an EA underway currently by BTNF. E-Bike travel is feasible and would be used by many commuting from Victor to Wilson area. Some busy commute days, it could be faster to e-bike than driving a motor vehicle.

>Figure 24, page 47. Text on "Potential Safety Enhancements for future study..." Delete the words 'along WYDOT ROW', leave options open to just say 'future studies needed'.

>P63. Add safety opportunity at the Teton Pass Summit - to lower the speed limit to 30mph over the top of the pass. It is 45mph now. Lower speed is warranted due to the congestion, pedestrians, and vehicle parking and pullout area. Then add a marked crosswalk, and a RRFB flashing beacon at-grade crossing there. The Beacon would function in the winter even when the road is snow covered, and be very helpful for safety of all travelers.

>P70. Additional Considerations. Reorganize the document. Pull the Active Transportation out of this Additional Considerations section, and make it a part of the Transportation section of the main document. Adjust the document so that bicycling and walking are treated as formal parts of the multi-modal transportation system, and not some kind of "additional consideration".

>P70. Existing conditions should also recognize the prior investments by USDOT and local government partners. The pathway over Teton Pass was selected by the USDOT as a Millennium Trail Project, with funding provided from the Public Land Highway Discretionary Program in 1999-2001. This marked the first major Teton Pass partnership project between Teton County WY and Teton Valley ID. The project constructed pathways in Victor, reconstructed the Old Jackson Highway as a shared-use route from Victor to Moose Creek, constructed the pathway from Wilson to Trail Creek Road, and rebuilt the Old Pass Road Trailhead on the BTNF.
Correction, bottom P70, the Old Pass Road was reconstructed wider, a minimum of 12' and wider in places, due to high use, grades, and mixed bike and ped traffic.

>P71. Note that the Old Jackson Highway is going to be restriped with Advisory bike/ped lanes in 2024 as part of the BUILD Greater Yellowstone Trail project.

>Figure 41. P72. Change text box, "GYT Summit to Coal Creek Planning studies needed" or similar, but don't limit it to just the ROW analysis. Make the dashed GYT Wilson-Stilson pathway line a solid line, since it is complete and open to the public now.

>P73. "The Rise of E-bike use" blue box. This is good to include, but delete the text about a bill introduced in congress, its unknown if that ever goes anywhere. Instead, update the text as noted above. E-bike use is actually currently allowed on the majority of the Victor to Stilson Teton Pass corridor. Just not on the Old Pass Road section shown in image 21. All the shared use roads allow e-bikes and existing pathways. See note on page 39 above.

P74. Revise this section to be called 'GYT Summit to Coal Creek Analysis.' While the Caribou Targhee National Forest has stated they had an informal meeting and decided to not move forward with that historic Old Jackson Highway segment, that's not sufficient analysis for public land planning. The Corridor Plan should simply state that more planning is needed. It is important to at least mention the existence of the 1.8-mile Old Jackson Highway west of the Summit. That route has been in public use for decades, and is in excellent condition. It is a historic transportation corridor, the highway from 1917 to 1970, and should be described as more than an "existing gravel-dirt road".
The analysis of the ROW is useful, mostly to show how infeasible it is. The Corridor Study should add up what these green, yellow, red, and maroon sections would cost and state that. Don't pretend that this is a reasonable or affordable alternative. Here is that estimate, and it should be noted that this is highly optimistic for costs, considering what FHWA paid for the Moose Creek FLAP section, or the recent Teton County Sagebrush Drive Pathway in Grand Teton National Park, $2.8 million for a one-mile pathway!

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Teton Pass Trail - Coal Creek to Teton Pass Summit				
Approximate 2.5 miles				
FHWA Proposed WY22 ROW Route				
Slope Rating	**Length LF**	**Cost/LF**	**Estimate**	**Notes**
Green	1300	$200	$260,000	
Yellow	7150	$1,000	$7,150,000	Check length
Red	4100	$10,000	$41,000,000	
Maroon	290	$13,000	$3,770,000	
Total	**12840**	**2.42 mile**	**$52,180,000**	**Google = 2.6 miles**
Greater Yellowstone Trail Proposed Old Pass Road West Side Route				
Old Pass Road West Side	**Length LF**	**Cost/LF**	**Estimate**	**Notes**
Coal Creek-OPR	1000	$1,000	$1,000,000	Yellow
Old Pass to Weather	8000	$150	$1,200,000	Green+, Old Road
Old Pass to WY22	800	$200	$160,000	Green, Old Road
Underpass, Turn 2		LS	$2,000,000	Green
Top Section	3200	$1,000	$3,200,000	Yellow
Estimate	**13000**		**$7,560,000**	
FHWA Cost per Mile		**Cost/LF**	**Cost per Mile**	**Notes**
Green		$200	$1,056,000	Sagebrush = $2.8m
Yellow		$1,000	$5,280,000	
Red		$10,000	$52,800,000	
Maroon		$13,000	$68,640,000	
FHWA Route in ROW = Additional Cost Difference			**$44,620,000**	

>P77. The Road Safety Audit is a good idea, the study elements should be extended to include the share-use County Roads, and the Old Pass Road GYT segments.

>P77. Widened Shoulders would be helpful for all modes of travel, but are going to have similar extreme cost impacts, with long Maroon and Red slopes, which would cost more than a separated pathway. That's not a realistic recommendation, with up to a $100 million cost likely. Do the math, and state it's not feasible, if it falls outside reasonable alternatives.
By comparison, the Old Jackson Highway is ready to use and ideal to use for the GYT. The road was built from 1913-1917 and used for decades, and still used today.

>P78. Delete the recommendation to "consider Edgeline Rumble Strips" on Teton Pass. That is a safety nightmare for cyclists – think about it - rumble strips where there are 10 percent grades and high speed on-road bicycle use?

>Figure 46. P80. Unless the Chapman family has agreed to this, delete the green shaded area of Chapman private property. It could be shown conceptually, but its narrow ROW there. In addition, that may not be the best location, since the demand for ride share up the pass will continue to be at the Heidelberg/Trail Creek Road Junction. Adding 1/3 mile out of direction travel, which would be on the highway shoulder because the pathway is not plowed, it will be a challenge to make that work and potentially a safety issue with skier/pedestrian traffic on the WY22 shoulder.

>P84-85. Mike Harris Trailhead and Campground Access. This intersection is one of the more serious safety risk locations along the corridor, with high volume high-speed traffic along ID33 and significant and increasing demand for access to the Trailhead, which lacks a turning lane. As noted on page 85, the location of the newly built GYT pathway conflicts with widening the road with a turn lane.

Need to Acknowledge FHWA Design Failures: It needs to be stated for the public record that the constraints described on page 85, at the Mike Harris Intersection where the GYT pathway is constructed in the borrow pit, that this situation is entirely due to a FHWA Western Federal Lands Highway design failure. The need to plan ahead for a turning lane was pointed out time and again by local stakeholders. Reasonable alternatives existed to accommodate both the Greater Yellowstone Trail and the turn lanes.

>P86. Wildlife Crossings. This section needs to elaborate on the significant safety hazards that Wildlife Crossings present to people bicycling and walking, as well as safety for skiers, also common along this section of highway, which is world famous for backcountry skiing. The most significant concern is forcing people to cross double-cattleguards where fencing is dropped across trailhead parking and access roads. A second major issue is the visual and scenic impacts caused by siting Wildlife 8'

Even standard cattleguards have caused bicycle fatalities, and double wide versions are bound to be more dangerous, with wide gaps common between panels like the photo below, and 4" between the rails, so even a slight skew bike crossing, or wet slippery conditions, could cause a fatal bicycle crash. Side gates when provided tend to be hard to operate and inconvenient, and the temptation to cycle or walk over the barrier itself presents a real safety concern.

Certainly, more study is needed on this topic as FHWA continues to promote these are a cure-all for Wildlife/Vehicle Crashes.
Wildlife crossings are a new frontier for highway design, and while there is a growing body of resources on how to keep wildlife off highways, there is nearly nothing on the impacts that Wildlife Crossings have on public safety of pedestrians and bicyclists. In searching the FHWA link to the WILDLIFE CROSSING STRUCTURE HANDBOOK DESIGN AND EVALUATION IN NORTH AMERICA, I can find nothing at all on these topics.

In addition to the direct safety impacts, there are significant impacts to scenic resources from the extensive 8' fencing required. This is another area not being properly considered, despite the fact scenic views are one of the fundamental values of America's public lands. The 8' fencing on the newest Greater Yellowstone Trail east of Wilson are as close as 3' from the pathway, and tower over a cyclist, clearly impacting the views of the adjacent lands, which ironically were saved from development and protected by conservation easements, to protect the scenic resources.

>P92. Next Steps.
Item 1, second bullet, add NGO representatives to the Advisory Board. The backcountry skiing and pathways groups need to be represented. The goal of creating "P3" Public Private Partnerships hinges on the engagement of these groups, and it is therefore critical they have a seat at the table.

Item 2. That also goes for NGO participation in developing a Shared Vision.

>Item 4. Along with the Transit Shuttle project, add the need to evaluate future P3 partnerships to help support the Greater Yellowstone Trail. There is already a 25-year history of collaboration on the Old Pass Road and the GYT, with NGOs assisting in maintenance and user education efforts to assist agencies. Looking forward, there is a need for ongoing partnership efforts to help support pathway and trail maintenance needs.

Gary Kofinas- Teton Backcountry Alliance:

>First, the TBCA Board of Directors would like to thank the Teton Pass Corridor study team for its herculean effort to produce a report that has great depth and detail. TBCA is confident that the information presented will be useful in the deliberations by agencies, local organizations, and the public to determine the next steps for improving conditions on Teton Pass. THANK YOU!

>TBCA supports the "Guiding Principles" stated in the report. We hope they will serve as a go-to reference for various stakeholders when making decisions about Teton Pass's future.

>The report does not adequately include an account of the historical uses of Teton Pass, particularly recreational uses. This point was made by TBCA on a previous edition of the draft report. Instead, the report makes numerous references to WYDOT's views on turnouts and chain-up areas, as if they were under that agency's jurisdiction since the beginning of time. We ask that you describe the historical uses in more detail. These two images would be helpful additions to the report -- i) the Teton Pass summit lodge and ii) the areas use as a "ski area" (The map was drawn in 1940!).

>The study focuses primarily on the adequacy of existing infrastructure and explores possible changes to infrastructure that address safety and access. That information is indeed important. However, the study does NOT address broader questions related to the greater Teton Pass area, the types and scope of recreational activities occurring, trends in growth in traffic and recreation, and the carrying capacity of the area to allow for various activities. TBCA feels strongly that the options for change examined in this document, as well as other options, such whether e-bikes should be allowed on Teton Pass trails, and the final design of wildlife fencing on Highway 22 should be assessed more holistically, vs being examined piecemeal. Please emphasize the need for coordination and inter-organizational collaboration more strongly.

>The study's suggestion for the formation of a Teton Pass Coordinating Committee is the MOST important proposal of the entire study. We ask that the language of the report be modified to indicate that government entities AND non-government organizations be included in the committee's membership. The report could also elaborate on the specific role of the committee. TBCA suggests that it serve to review and make recommendations to agencies and non-government organizations on all activities, plans, changes, and other issues of the Teton Pass area. In short, it would provide coordinated oversight, not as a decision maker, but as an

advisory body. And as mentioned above, it is better that it not be focused only on roadways and other infrastructure. TBCA would see this group prioritizing needs of Teton Pass and having a role in developing proposals for funding (e.g., should the next FLAP proposal request funds for wildlife fences or new parking infrastructure?)

> The report states "Anecdotal evidence suggests hitchhiking system is safe." In some places that is true, but it is not in others. For example, hitchhiking at the base of Glory Slide can be extremely dangerous when the snowbank is high, the roads are slick, or the visibility is low. Hitching at the Heidelberg can also be particularly risky for those seeking a ride, vehicles stopping, and passing vehicles. These conditions support the need for Ride Share lanes or large pullouts to accommodate hitchhikers and a shuttle system.

> The discussion about a possible Teton Pass shuttle for skiers and bikers is helpful, although the budget is much higher than the budget produced by TBCA. It should be noted that START now indicates it does not have the capacity to run such a shuttle. TBCA is currently exploring the idea of running this operation, given that the Town of Jackson and Teton County WY will contribute to vehicle costs. As noted, starting with a Shuttle from the east is a good way to test the viability of the idea.

>TBCA agrees that paying to park at key parking areas and using the funds to support a shuttle is a good idea. However, the BTFS Supervisor was recently quoted in the paper saying that his agency does not have the capacity to administer a pay-to-park program on Teton Pass. This is surprising and unfortunate since your study indicates that it is a low cost option. If parking fees are not used to cover the cost of a shuttle, it will be necessary to either charge riders OR solicit donations from the private sector so riders can take the shuttle for free. See the Wasatch Backcountry Alliance's free Cottonwood Canyon Shuttle program for ideas on how this could work.

>Regarding speed at the summit and WYDOT's speed limit study, there have been MANY near misses at the Teton Pass summit pedestrian crossing. We suggest that those doing the study put on ski boots and try to cross at 8am (during rush hour) on a day when the road is icy. There is a need to LOWER the summit speed limit at the summit to 25mph and do more (i.e., signage in the middle of the road) to alert drivers that there are pedestrians, before someone is killed (see page 39)

>As the study report states, walking on the road in all seasons can be dangerous to pedestrians, drivers and plow operators. TBCA agrees. There is no mention that many skiers now "skin" up on the snow banks to the north and south of the highway, from Second Turn, First Turn, and the gut of Glory. The number of parties skinning back to their p-lot has increased in recent years, in part as a result of public education programs by BTNF and TBCA. Efforts at public education for continuing this practice should continue.

> In winter the current parking lot at Phillips Ridge off highway 22 is used both by skiers AND snowmobilers, which creates a problem of congestion and safety. Resolving these issues should be a HIGH priority for infrastructure development. Development of a larger lot (now the location of the "gravel lot") is TBCA's preferred option. Snow plowing a gravel lot could be funded by WY's Trails Fund (which currently pays for plowing the Mosquito Creek lot and other areas). However, the study suggested increase of parking 28 vehicles is counter to the Guiding Principles list at the beginning of the report. This would also dramatically increase the number of people using the backcountry in this area. TBCA suggests that in winter 15

parking spaces is enough, designing the lot so trailers can be parked for snowmobilers, and cars for skiers. (More may be needed in summer).

> The pedestrian underpass designs ,as noted (page 64), would require pedestrians/skiers crossing the road to walk a relatively long distance. Since it now takes about 15 seconds to walk across, we believe that most people will not use the underpass. Please re-think this design with human behavior in mind.

>There is no mention of the dire need for bathrooms at the summit parking area. Please include that need.

>The study does not include a left-hand turning lane at Trail Creek Road (WY) for westbound drivers. We understand that WYDOT does not see a need for the lane, based on the fact that here have been no accidents at that location. However, WYDOT may not be aware of the many near misses that have occurred. (NOTE: This turnout lane was included in the original FLAP grant submitted by Teton County). The high speed of eastbound drivers coming down the pass, combined with westbound drivers wanting to build speed for their ascent of the pass, combined further with the positioning of the sun in the eyes of drivers wanting to make the turn and hitchhikers along the roadside...it is a recipe for disaster. A turning lane here is essential.

>TBCA strongly supports establishing a ride-share pick up lane below the Heidelberg, to reduce safety issues and establishing a left-hand turning lane into Trail Creek Road. There are, however, issues related to the high volume of roadside parking at the Trail Creek Nordic Center, that must be addressed as part of a larger review/planning process. Plans to re-design parking at Trail Creek Nordic Center and the options for infrastructure change in this study need to be coordinated.

>The shuttle pick up/drop off at Coal Creek does not need a dedicated pullout for a shuttle as reflected in your proposed design. It simply needs a pullout lane available to all. They currently are located both at the north and south sides.

>Regarding the historical site (spring) near the current Shovel Slide lot, BTNF has indicated that even with disturbance of re-designing that p-lot, it could create a kiosk at the spring location to identify the historical significance to visitors.

>TBCA supports reducing vehicle-wildlife conflicts. However, long stretches of tall fencing to direct wildlife need to allow for recreational access as skiers (and hunters), who descend from the north and south at various locations.

>Clearly, the parking element of avalanche sheds is underdeveloped in this document. More work is needed to explore the various design options of a shed/parking complex.
> During winter, regular plowing and grooming of the bike path between Trail Creek Road and Wilson would allow Wilson resident skiers ski up and down from Wilson, which would help reduce traffic and parking congestion on Trail Creek Road.

Renee Seidler- Jackson Hole Wildlife Foudation:

>Figure 24: There is a wildlife hotspot in figure 18 that is not represented in figure 24. This hotspot is located directly on the west side of the town of Wilson. While this is not a priority area specifically called out in the county's Wildlife Crossings Master Plan, it shouldn't be ignored in this Study. This is heavy moose country and so likely there is a higher risk for more consequential WVCs (than say, with deer). If crossings are not in the near(ish) future for this location, it is still worthy of other improvements that can address WVC.

>Blue box on page 71: I love the call-out boxes, thank you for the added info. In my estimation the BUILD project did not do proper/full scoping with wildlife stakeholders and so it is even more important that we ensure the best mitigations possible for animals to move across the highway. Some of the BUILD grant elements are going to have large impacts on wildlife movement and health. Happy to discuss these further. Can you mention that the BUILD grant elements are not beneficial to wildlife and so mitigation along the corridor is even more important?

>Figure 41 Page 72: This figure needs the WY 22 - 390 projects added (they are WYDOT and county funded). I have concerns about the proposed construction at the Stilson Transit Center and its impacts on wildlife so it is important to show that wildlife crossing structures are currently being built here, and not just BUILD grant elements.

>Page 80: Under "Weigh Station" you state "This location is sometimes utilized during high avalanche danger as overflow for the Coal Creek parking area to access the backcountry trails in the Winter, south of the highway." As a backcountry skier, I want to clarify this to you and you may want to modify your language. This parking lot is used no matter whether there is high avalanche danger or not. It is usually used by skiers accessing terrain to the north of the parking lot, i.e. skiers are crossing the highway here. I would not describe this location as overflow for Coal Creek. It provides access to its own coveted terrain. (This is more of a personal comment meant to be helpful in your writing; this is not meant to be representative of JH Wildlife Foundation comment).

>Top of Page 86: Environmental Risk Mitigation: Wildlife. This section should not be an Additional Consideration, but rather should be listed under the main Considered Capital Improvements.

>Bottom of Page 86: "The approximate 3.75 mile stretch of WY-22 from Coal Creek Trailhead west to the Idaho state line is chosen through an ongoing 30% Teton County wildlife crossing implementation study as a prioritization area." This sentence does not seem grammatically correct. Can you clarify what you are saying?

>Bottom of Page 86: "Based on the current Teton County, Wyoming implementation study, this stretch was chosen..." Please clarify what the implementation study is (you may be able to address this with my above comment).

>Next Steps Page 92: This committee needs to include wildlife experts, at the very least, the respective state game agencies.

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> Next Steps Page 92 Development of a Shared Vision: Please add to this sentence so that the final reads "The vision should encompass goals related to safety, sustainability, accessibility, economic development, and environmental integrity and function." (I added the last item)

>Under Next Steps (in general): You might want to include in your outline: Determine who will be responsible for long-term maintenance of capital improvements.

>Fantastic work team! Thank you for your incredibly conscientious efforts and excellent team work. I very much appreciated how much outreach you have done with stakeholders and how much you have worked to include Idaho in this planning document.

Katherine Dowson- Friends of Pathways:

Thank you for the opportunity to comment on the Teton Pass Corridor Study Final DRAFT as well as the existing and future conditions of the Teton Pass Highway in Wyoming. Friends of Pathways (FOP) is Teton County's nonprofit advocate for sustainable transportation and healthy recreation in Jackson Hole. Our primary interest in this study is active and sustainable transportation, multimodal access to public lands, improved transit options, improved trailhead design, and the Greater Yellowstone Trail. We submit the following comments on the topics most relevant to our priorities:

>Elevate Active Transportation Modes: We appreciate that the Final Draft Study addresses bicycle and pedestrian transportation modes and would like to see them included in the Transportation section of the main document, and not an "additional consideration".

>Transit & Parking Management: FOP supports the concept of paid, managed parking and a shuttle on Teton Pass, but understands the demand for both parking and transit changes with the seasons and weather conditions. While a recreation shuttle sounds like a dream that would reduce congestion, reduce emissions, and help skiers, hikers, and cyclists arrive at trail heads without the need for a car, it could cause unintended consequences, such as creating new parking problems at Coal Creek or Trail Creek parking lots if these are the designated intercept lots. It would be ideal to have a shuttle integrated into the START bus system and then studied and refined to best service recreationists on Teton Pass.
FOP does not support an increase in parking capacity, but would like to see the existing parking legitimized and relocated from WYDOT right of ways (ROW). Many parking areas that are currently intended for WYDOT's use have become de-facto trailheads. It would be an improvement to legitimize these spaces outside of the ROW and manage them with paid parking. The revenues from the paid parking could then help subsidize the shuttle services.

>Safety: FOP supports safe pedestrian and cyclist crossings at the following locations: Phillips Bench, Top of Pass area, and Coal Creek. Underpasses and overpasses both have merit to create safe crossings, but no matter which might be chosen in the future, it's important to design and locate the crossings where it will be obvious and intuitive to cross.

FOP is supportive of the installation of snowsheds at the Twin Slides and Glory Slide areas. At the top of the pass, in the Twin Slides area, improved parking, improved transit stops, and a safe crossing could be incorporated into the snow shed design.

>Greater Yellowstone Trail: Friends of Pathways would like to see the Greater Yellowstone Trail connect over Teton Pass. The best, safest, and most cost-effective route for cyclists from Coal Creek to the top of the Pass is not along Highway 22, but on national forest land adjacent to the highway. FOP would like to see the Greater Yellowstone Trail's route follow a similar path as the Bonneville Power Association (BPA) powerlines, and utilizing the 1.8 mile Old Jackson highway west of the Teton Pass Summit. We encourage continued discussions with BPA authorities and the Caribou-Targhee National Forest to help achieve this goal.

>Steering Committee: FOP supports the formation of a Teton Pass Advisory or Steering Committee and encourages representation from non-government organizations that are a voice for different recreational pursuits on Teton Pass – i.e. hiking, biking and backcountry skiing. FOP would like to have a seat on such a committee if it is formed.

Thank you for all of the hard work you have put into this Study. It is an impressive document that lays out well the challenges and possible solutions for future travel through the Teton Pass Corridor.

Appendix E: 'Teton Pass Federal Lands Access Program Transit and Parking Alternatives' full document

The following is the full document: 'Teton Pass Federal Lands Access Program Transit and Parking Management Alternatives' prepared by LSC Transportation Consultants, Inc. on August 18, 2023

Technical Memorandum

TETON PASS FEDERAL LANDS ACCESS PROGRAM
TRANSIT AND PARKING MANAGEMENT ALTERNATIVES

LSC Transportation Consultants, Inc.
August 18, 2023

INTRODUCTION

The growth in backcountry activities in recent years has impacted many recreational areas and corridors in recent years. These impacts are seen along the Wyoming State Highway 22 /Idaho State Highway 33 corridor across Teton Pass, where shoulder parking impacts snow removal operations in winter and results in potentially unsafe traffic and pedestrian conditions in both winter and summer. An increasingly common strategy in similar recreational areas around the American West is the establishment of a parking management program accompanied by a recreational shuttle service. In broad terms, this approach is intended to address the negative impacts of auto access without reducing (or even potentially expanding) the public's access to recreational amenities.

This technical memo presents an evaluation of such a program for the Teton Pass corridor. First, the required transit operating scenarios are developed, along with costs, ridership, and passenger revenue estimates. Parking management options are then reviewed. Parking revenues and costs are then estimated, and an overall financial forecast for the program identified.

Note that this analysis focuses on four winter service scenarios that differ in two key ways. Winter service scenarios are developed for a program on the east side of Teton Pass only, as well as for the full corridor on both sides of the pass. For both of these, options are developed for a weekend/holiday program only versus a full 7-day-a-week program. For summer service, weekend/holiday and 7-day-a-week scenarios are developed, focusing on the east side connections only.

Transit Service Planning Analysis

This analysis first focuses on potential intercept parking locations. Next, route length and running time are evaluated. The potential ridership is then estimated, in order to define the necessary service capacity and frequency.

Intercept Parking Options

A shuttle program solely between the trailheads would not result in a significant solution to the study issues, but instead would largely shift the issues between the trailheads. Experience in similar corridors indicates that an intercept parking strategy is needed to meet study goals. As such, a key point to start the evaluation of transit options is to define the intercept parking location(s). These options are discussed below.

Downtown Wilson

The Wilson core area consists of multiple businesses with relatively small parking areas. Using this area as intercept parking could quickly impact parking availability for these businesses. Roadway shoulder areas available for parking are also limited and are often unavailable due to snow storage.

Stilson Lot

Using the Stilson Lot east of Wilson has several advantages. It generally has sufficient parking capacity to accommodate Pass parking (as discussed below). It provides the opportunity for direct transfers to the highly used South Teton Area Rapid Transit (START) routes, allowing residents and visitors of Jackson and Teton Village to access Teton Pass without using a car. The planned Stilson Lot Transit Center would also provide an amenity for shuttle passengers to wait for the shuttle bus, as well as to purchase transit passes.

An important question regarding use of the Stilson Lot for Teton Pass visitors is the availability of parking spaces. Information from the Teton Village Association (which manages the skier use of the lot) indicates that it is currently designed for 882 spaces but given the inefficient parking pattern associated with an unstriped gravel lot and the impacts of snow storage, the effective capacity (absent parking attendants) is approximately 735. The available counts indicate that the 2019/20 winter was a period of peak parking activity (prior to COVID). These counts indicate the following:

- Average daily peak parking: 422 vehicles.
- More than 500 cars were parked on 19 individual days, 600 or more cars on 6 days, and 700 or more cars parked (specifically 735) on one day.

In the winter of 2018/19, the average daily parking count was 382. More than 500 cars were parked on 12 days and the busiest overall day saw 592 parked vehicles. It appears from anecdotal information that overall, Jackson Hole Mountain Resort visitation has been lower since the pandemic. From this information it can be concluded that at least 100 and possibly up to 130 vehicles could be parked at the Stilson Lot without limiting the number of vehicles parked for JHMR on all but a peak winter day. As discussed below, parking demand is expected to be well within this number.

Trail Creek Trailhead

The Trail Creek trailhead lot (also known as Old Pass Road) has capacity of 56 spaces, many of which are typically used for trail users. There would not be sufficient capacity to also serve a successful shuttle program, without substantial expansion.

Victor Depot

The parking need on the Idaho side of the pass is expected to be substantially lower. There may be adequate available parking at or adjacent to the Victor Depot for intercept use.

Conclusion

Based on this review, route options are developed that use the Stilson Lot as the east side intercept. If winter service is provided to the Idaho side of the pass, the Victor Depot area is assumed as the intercept location.

Conceptual Route Configurations

Given the relative population and level of visitation, it is estimated that approximately 75 percent of the demand for a winter recreational shuttle program is generated on the Wyoming (east) side of the pass and the remaining 25 percent on the Idaho (west) side. As such, one option would be to provide a shuttle only from the east side of the pass.

A trip between the Stilson Lot and the top of Teton Pass (via Trail Creek Trailhead) is 9.0 miles in length and requires approximately 18 minutes of running time only. Including time spent loading/unloading passengers and gear, this would require approximately 50 minutes to complete a round trip. Including driver break and recovery time (and to address some delays) a 60-minute schedule could be operated with a single vehicle. Turning around a shuttle vehicle at the top of the pass is probably feasible on the south side if snow is plowed and vehicles prohibited from parking in the area.

An option would be to extend the route to the Coal Creek parking area. This would add 9 to 10 minutes of additional running time. It could not be accomplished reliably within an hour round-trip, unless the Trail Creek Trailhead Lot is dropped from the route.

Potential stops were defined based on the following:

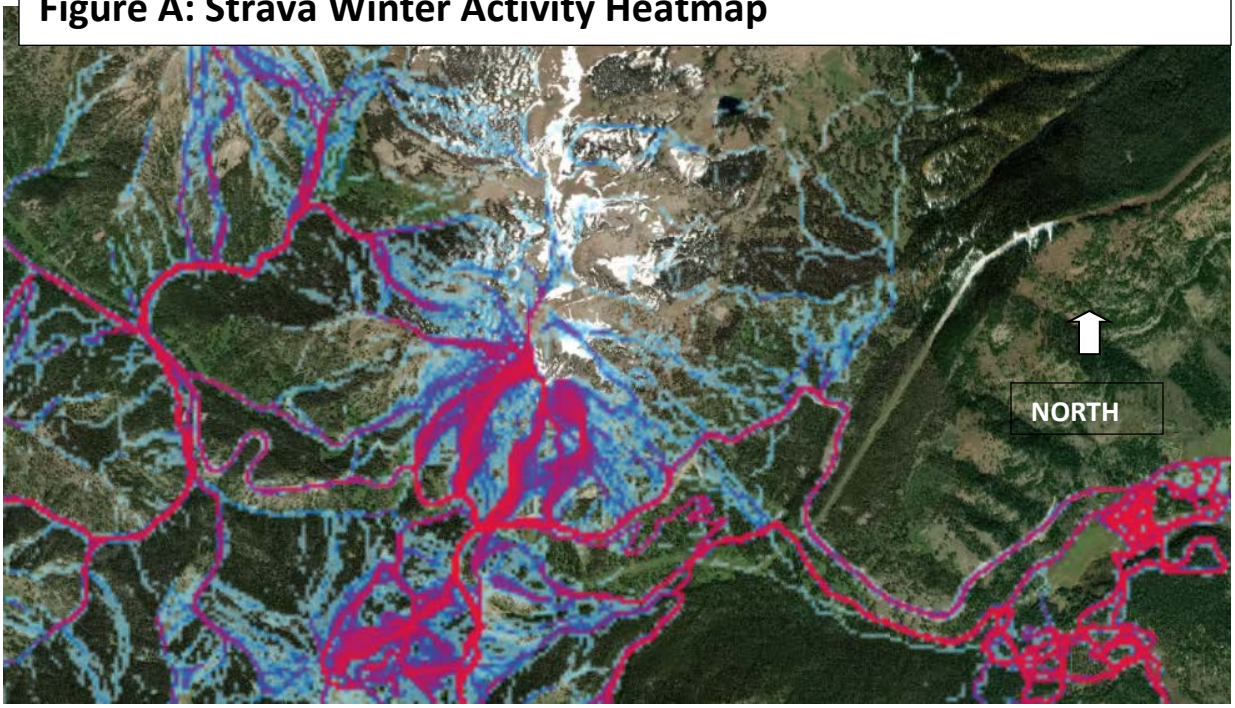
- An inventory of parking locations provided in the *Existing Conditions Assessment: Technical Memorandum #1, Teton Pass Corridor Study* (Federal Highway Administration, April 2022).

- A preliminary review of driver sight distance using Google Street View.

- A review of backcountry user app data generated from the Strava website. While this data does not provide total daily use numbers, it does provide an indication of the relative activity levels among Strava users (which are probably a reasonably valid sample of all recreationalists).[1] A screenshot of the winter user pattern is presented as Figure A. Areas of light device tracking is shown in blue, while heavy use areas are shown in red. These maps indicate that the peak concentrations of winter activity along the highway are at the top of the pass. There are also high levels of activity at two locations on the north side of the highway just to the west of the pass (approximately 0.25 and 0.55 to the west) where there are no defined parking areas. There is also substantial activity on both sides of the road at the Coal Creek North parking lot.

[1] This data can be found and explored at https://www.strava.com/heatmap#12.36/-111.01687/43.52368/hot/all

Figure A: Strava Winter Activity Heatmap



Similar summer Strava maps are shown in Figures B and C for hiking and biking, respectively. These show differing patterns of relative use. Hiking activity is particularly strong from the bottom of Old Pass Road, the Phillips Bench trailhead area, the top of the pass (in both directions) and Coal Creek. Biking is more prevalent between the top of the pass and Old Pass Road trailhead as well as from Phillips Bench both to the north and south. Relatively little biking activity is shown at Coal Creek or north from the top of the pass.

Figure B: Strava Summer Hiking Activity Heatmap

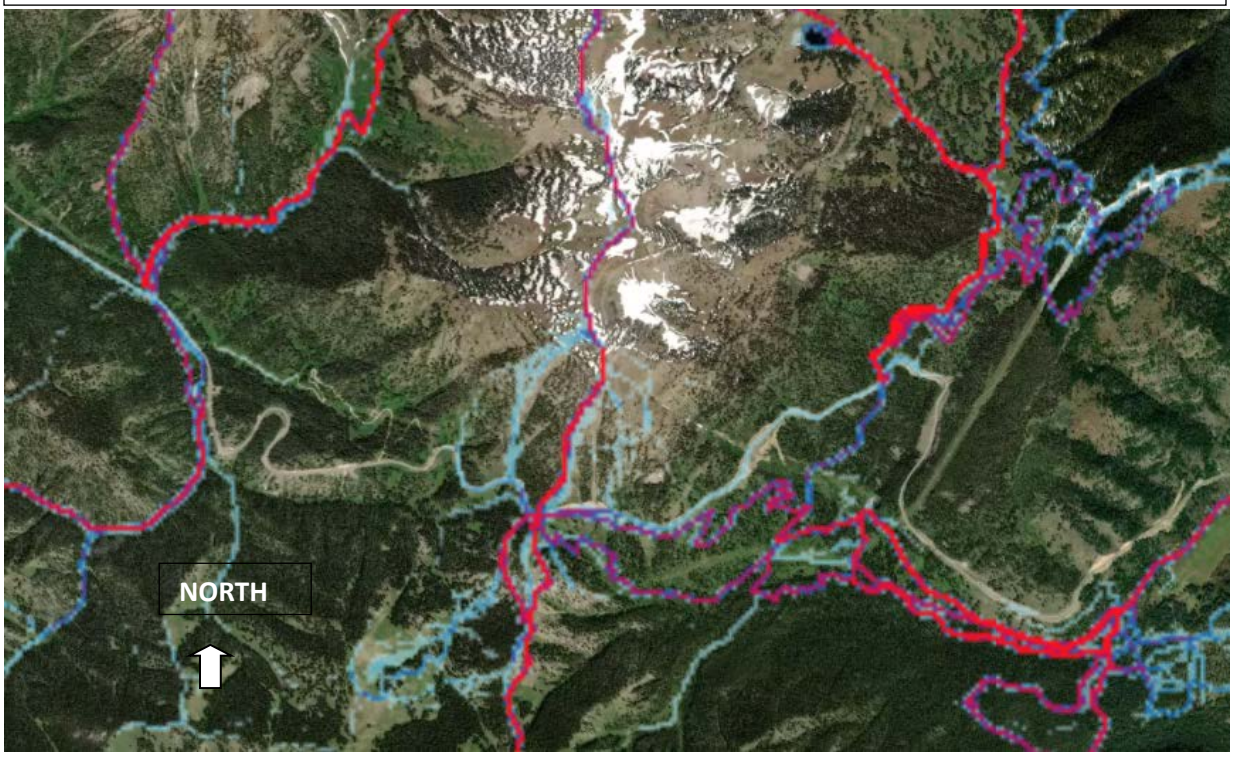
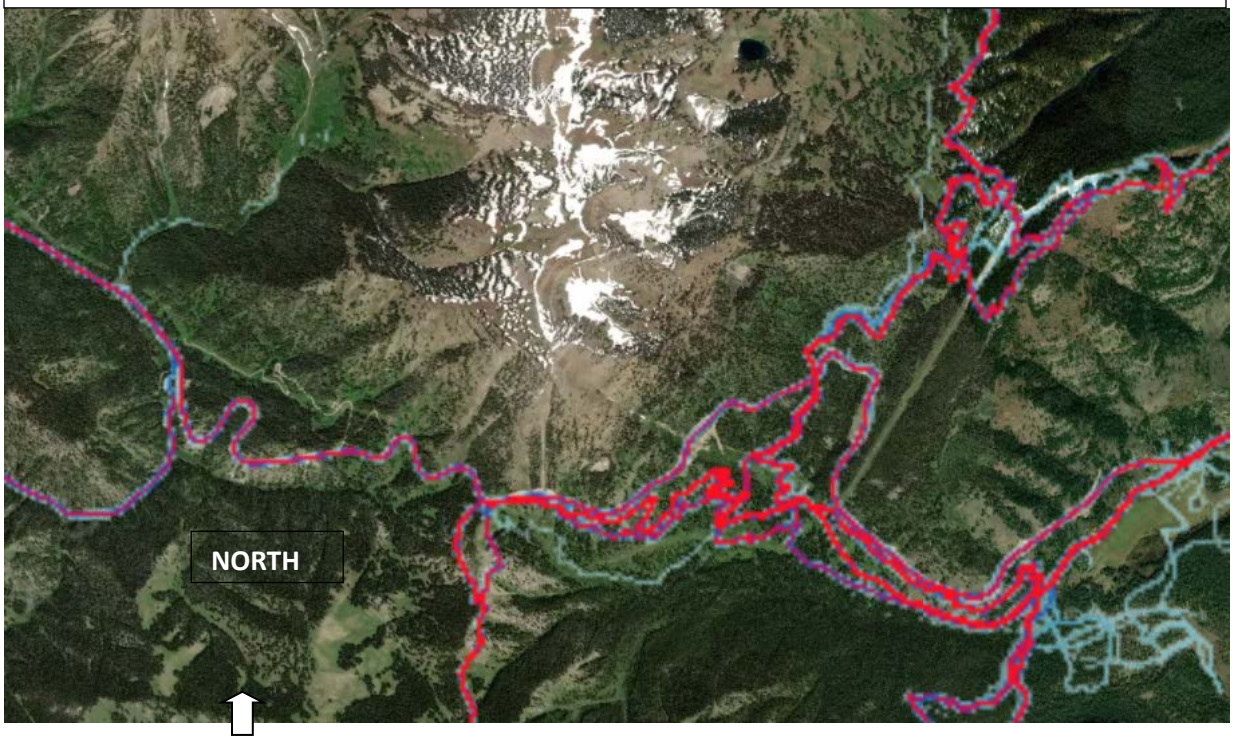


Figure C: Strava Summer Biking Activity Heatmap



There is useful trail use data available for summer activity on the various trails. As summarized in Table A, a series of "spot" counts ranging from a few days to two weeks were conducted in 2018 through 2021. Summarized by major trailhead, they provide some useful indications regarding activity patterns:

- The Phillips Bench area is particularly popular, followed closely by the Old Pass trailhead. While the Teton Pass use levels appear lower, these do not include motorists making quick stops. The area east of the pass has relatively low use according to these counts.

TABLE A: Summary of Recent Summer Use Data by Trailhead

Trailhead/Trail	Count Period Start Date	Count Period End Date	Average Daily Count Weekday	Average Daily Count Weekend	Average Daily Count Total	% in Peak Hour	Estimated Avg. Length of Stay (Hrs)	Hours of Over 5% of Daily Activity in Either Direction From	Hours of Over 5% of Daily Activity in Either Direction To
Phillips Bench									
Arrow	8/8/2021	8/31/2021	39	91	54	15%	1.5	9:00 AM	7:00 PM
Jimmys Mom	8/2/2019	8/9/2019	97	131	105	14%	NA	8:00 AM	7:00 PM
Phillips Connector	8/2/2019	8/9/2019	68	68	68	14%	NA	10:00 AM	5:00 PM
Ski Lake	7/14/2021	8/6/2021	199	285	220	17%	3	8:00 AM	5:00 PM
Overall			403	575	447	16%	2.5	8:00 AM	6:00 PM
Old Pass									
Black Canyon	7/16/2019	7/22/2019	356	409	371	12%	3	9:00 AM	6:00 PM
Black Canyon	8/11/2019	8/18/2019	124	173	143	12%	3	10:00 AM	2:00 PM
Old Pass	7/20/2018	8/5/2018	135	196	157	8%	2	8:00 AM	4:00 PM
Overall			375	487	414	10%	2.5	9:00 AM	4:00 PM
East of Pass									
Fuzzy Bunny	8/28/2019	9/3/2019	14	19	15	20%	NA	8:00 AM	5:00 PM
Teton Pass									
S. Teton Pass	8/11/2019	8/18/2019	150	153	151	10%	NA	9:00 AM	4:00 PM
History Top	8/20/2019	8/26/2019	98	151	113	18%	NA	10:00 AM	3:00 PM
Old Pass Rd Top	8/20/2019	8/26/2019	39	63	46	14%	NA	9:00 AM	7:00 PM
Overall			287	367	310	13%	NA	9:00 AM	5:00 PM

July 1 - Aug 31, 2022 Average Daily Count	
Black Canyon Bottom	272
Ski Lake	212
Old Pass Road	167
History Trail Top	126
Black Canyon Top	125
Antennae Access Road	101
Fish Creek Access	95
BPA Road	87
Jimmys	74
Parallel Trail	63
Old Pass Road Top	57
Arrow Trail	36

Summary By Trailhead Area	
Phillips Bench	409
Old Pass	439
East of Pass	99
Teton Pass	352

Source: Friends of Pathways automated counts.

- Average weekday counts are roughly 25 percent lower than average weekend day counts.

- The period when activity is relatively high (at least 5 *percent* of daily activity per hour, in either direction) is generally from 8 AM to 7 PM overall. This period tends to be longer at Phillips Bench and shorter at the other locations.

- For some trails, it is possible to compare the outbound and inbound trend line to estimate an average length of stay. From the data available, this is generally 2.5 hours on average.

In 2022, the Friends of Pathways maintained a more consistent set of counters on various trails between July 1 and August 31, as shown in the bottom of Table A. This indicates a similar pattern of overall use as seen in the previous years, with the Phillips Bench and Old Pass (bottom) trailheads generating 439 and 409 user counts respectively, followed by Teton Pass at 352 and the area east of the Pass lower at 99. Note that all of these counts are one-way observations, so a trail user making an out-and-back trip would be counted twice.

Based on this review, the route options and stops shown in Figure C were identified. The "East Side Route" option is shown in blue, while the "Full Route" option adds the portion shown in green. The East Side option would serve the following stops:

- **Stilson Lot** – Teton County is leading the planning/construction project that will result in a transit center in the center of the existing gravel lot, as well as paving a portion of the lot and improving access to the state highways. Of note, this facility (with six bus bays) has more than adequate capacity to accommodate a Teton Pass shuttle program, without impacting the other transit services.
- **Wilson** – At the existing START stops adjacent to Nora's Fish Creek Inn on the south side and Hungry Jack's General Store on the north side. These stops are intended to serve residents/guests in Wilson rather than park-and-ride activity, which should be directed to Stilson Ranch.
- **Trail Creek Trailhead**
- **Phillips** – This is a busy area, with moderate activity on the north side of the highway. The optimal location for a stop is at or near the existing Phillips Bench Road. However, a stop at this location may not have adequate sight distance for drivers to turn left (east) given the horizontal curve just to the west that limits the ability to judge an adequate gap in the high-speed downhill eastbound traffic. If the proposed parking area on the north side of the highway at the western end of this area is designed with an access point to the west of this curve, it would be possible to provide drivers exiting the parking area with adequate sight distance in both directions.
- **Quarter Mile East of Pass** – A stop could serve a proposed parking lot on the south side of the highway. There is a substantial level of skier activity at this location, and it also could serve the trail users in the summer. Driver sight lines are good.
- **Teton Pass –** With the vehicle pulling out on the south side of the highway.
- **Coal Creek** – This area sees a substantial level of winter activity and parking capacity. It could provide a suitable location to turn around the bus on the East Side route option.

The Full Route option would add the following stops:

Figure C: Recreational Shuttle Conceptual Route Options With Stops

- **State Line –** Pulling into the parking area on the south side in both directions.

- **Mike Harris** – Also pulling into the parking area off the highway to the south.

- **Victor Depot** – Serving the bus pullout immediately in front of the depot.

This route is 20.9 miles in length (including Trail Creek Trailhead) and requires 33 minutes to drive one-way under good conditions. Including time to serve the 10 stops in each direction, to load/unload passengers and gear, and to provide a driver break, a 2-hour round-trip time would be required.

Ridership Analysis

Winter

The analysis of daily and annual ridership was developed based on the guidance provided in the *Transportation Planning Process for Transit in Federal Land Management Areas* (US DOT Federal Transit Administration, April 2008). This analysis was conducted for both the East Route option and the Full Route option, and also for weekend/holiday service only versus 7-day-a-week service. The days that would be served under weekend/holiday service are shown in Table B. Alternatively, consistent service is assumed to be operated daily from approximately December 14th to the end of March. This analysis is presented in Table C, and consists of the following steps:

TABLE B: Calendar of Limited Service Days

Winter Days

Week Start Date	Sun	Mon	Tue	Wed	Thur	Fri	Sat
12/14							
12/21							
12/28							
1/4							
1/11							
1/18							
1/25							
2/1							
2/8							
2/15							
2/22							
3/1							
3/8							
3/15							
3/22							
3/29							

- The number of trailhead parking spaces served by the route is summed. Note that the proposed Phillips lot is assumed. Reflecting lower utilization, a 50 percent reduction factor is applied to the Mike Harris and State Line trailheads.

- Due to the shortness of a winter day at this latitude and the relatively long duration (several hours or more) of winter backcountry activities, daily parking space turnover is relatively low compared with summer activity. A turnover rate of 1.75 vehicles per space on average is assumed.

- For service options that include weekday (non-holiday) service, a factor was applied to reflect lower weekday use compared with weekend/holiday use. To define this factor, daily downhill skier figures were obtained from a nearby resort, as shown in Figure D[2]. This data reflects the weekly peak in recreational winter activity on the weekends and also reflects the consistently high activity over the Christmas/New Year's holiday period. Analysis of this data indicates that the ratio of average non-holiday weekday ridership to weekend/holiday ridership is 0.75.

- Multiplying the number of served trailhead spaces by the turnover rate and the weekday/weekend ratio yields the total number of vehicles per day in the served parking lots.

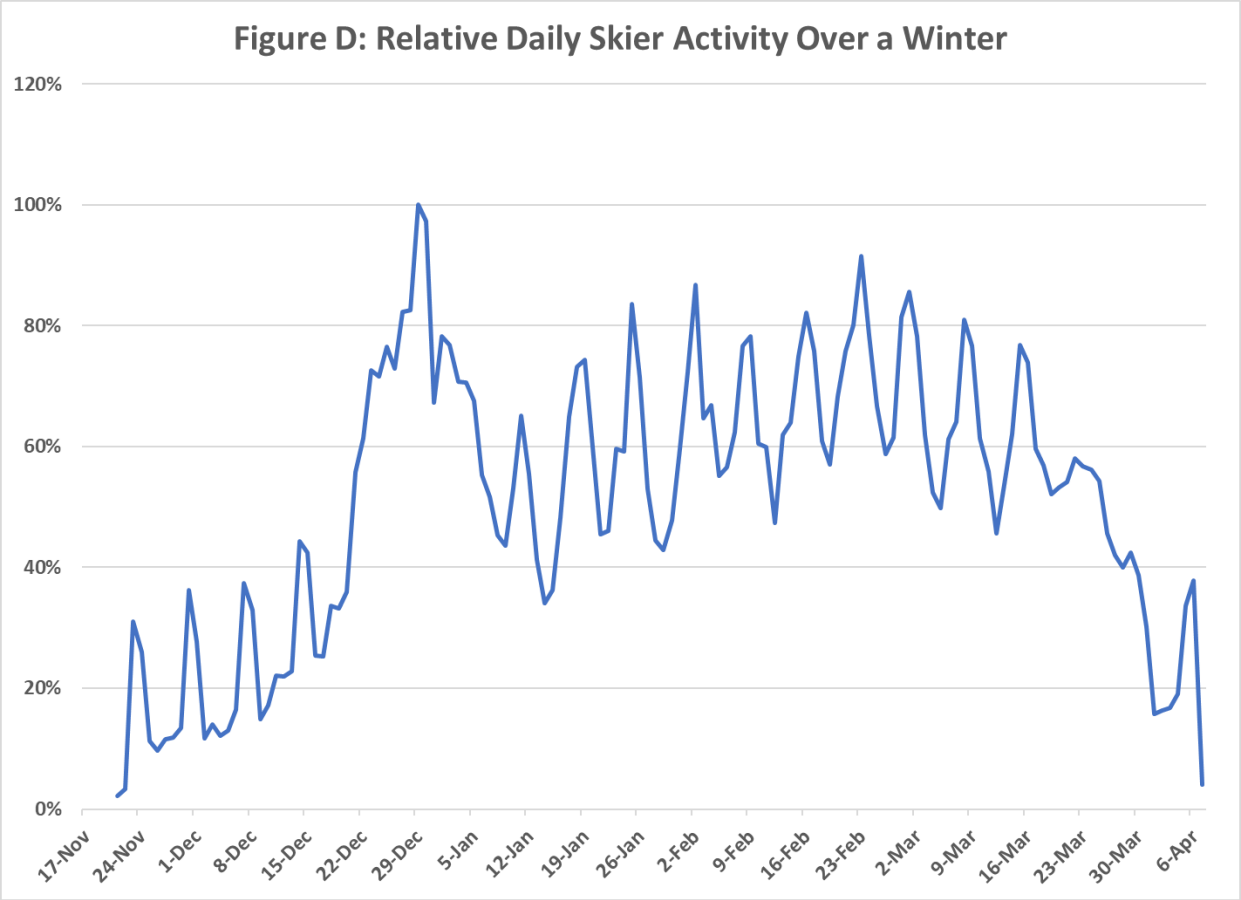
- Per the *Existing Conditions Assessment Technical Memorandum #1 – Teton Pass Corridor Study* (as well as typical occupancy rates seen in other recreational areas), an average vehicle occupancy of 2.4 is applied to identify the number of persons per day parking in the served lots.

[2] The name of the specific resort is proprietary.

TABLE C: Analysis of Ridership, Capacity, Intercept Parking and Fare Revenue

		East Route			Full Route		
		Weekend/ Holiday	Week-day	Total	Weekend/ Holiday	Week-day	Total
Number of Parking Spaces at Trailhead Stops							
Trail Creek Trailhead				30			30
Phillips Proposed Lot				30			30
East of Pass				34			34
Top of Pass				55			55
Coal Creek North				61			61
State Line (1)							63
Mike Harris (1)							45
Total Spaces Served				210			318
Ridership & Capacity Analysis							
Turnover (Vehicles per Space per Day)	1.75						
Weekday/Weekend Use Ratio			0.75			0.75	
Total Vehicle per Day in Served Parking Lots		368	276		557	417	
Avg. Persons per Vehicle	2.4						
Persons per Day in Served Parking Lots		882	662		1336	1002	
Transit Mode Share	20%						
Transit Round Psgr-Trips		176	132		267	200	
Transit 1-Way Psgr-Trips		353	265		534	401	
Percent Directional Demand in Peak Hour	30%						
Percent Demand in Peak Direction		100%	100%		75%	75%	
Required Hourly Directional Capacity		53	40		60	45	
Bus Capacity	30						
# of Bus Departures per Hour		2	2		3	2	
Hourly Directional Capacity		60	60		90	60	
Percent of Peak Hourly Directional Demand Served		113%	151%		150%	133%	
Ratio of Avg Daily to Peak Weekend Daily		0.79		0.67	0.79		0.67
# Days of Service per Year		42		107	42		107
Annual Ridership		11,700		25,300	17,700		38,300
Intercept Parking Analysis							
Ratio of Intercept Parking to Diverted Trailhead Parking	1.2						
Intercept Parking Demand: East Side				50			57
Intercept Parking Demand: West Side				--			19
Transit Fare Revenue Analysis							
Assumed Cost per Transit Day Pass	$5.00						
Annual Transit Revenue		$29,300		$63,250	$44,250		$95,750

Note 1: A 50 percent reduction factor is applied reflecting lower utilization.



- A transit mode split figure of 20 percent is then applied. This figure is based on data presented in the *Transportation Planning Process for Transit in Federal Land Management Areas*. Note that the figure can vary substantially depending on the cost of parking versus the cost of transit fares, as well as the availability of parking at the trailheads, public awareness of the shuttle program and other factors. Applying this figure and multiplying it by 2 to convert rider roundtrips to rider one-way trips yields the estimate of daily one-way passenger-trips. As indicated, this totals 346 passenger-trips on the East Route option over a weekend day and 260 over a weekday, and 601 and 451 respectively for the Full Route option.

- This daily figure can next be used to estimate the peak hourly directional transit capacity needed to serve the ridership. Due to the short length of a winter day, demand can be relatively concentrated in the peak hours, particularly in the morning (around 9 AM to 10 AM). A factor reflecting that 30 percent of transit passengers in one direction need to be accommodated in the peak hour is assumed. For the Full Route option, an additional factor reflecting that 75 percent of this peak-hour demand will be in one direction (to/from the east) is also applied. This yields a required hourly directional capacity of up to 52 passengers for the East Route option and 68 for the Full Route option.

- A bus capacity of 30 passengers is assumed for the purposes of this analysis. This is a realistic seating capacity for a 35-foot-long bus (such as a large cutaway vehicle) that has seating for 4 removed to provide a gear storage rack near the front of the bus.[3]

- The number of departures can then be varied to identify the minimum number of peak hourly departures that is needed to serve the peak hourly directional demand. As shown, 2 departures an hour (or service every half-hour) provides a ratio of capacity to demand that exceeds 100 percent, except that 3 departures per hour is needed on weekends/holidays for the Full Route option.

- The variation in recreational activity data reflected in Figure D was then used to define the ratio of demand for the average day over the course of the winter season, for both weekend/holiday and for full 7-day-a-week options. Specifically, the ratio of the average weekend/holiday activity to the peak weekend/holiday activity was found to be 0.79, while the ratio of the average day (including weekdays) to the peak weekend/holiday was 0.67. Multiplying the daily ridership by these figures and by the days of service yields the following annual ridership estimates:

    - East Route Weekend/Holiday Service – 11,700 passenger-trips per year
    - East Route 7-day-a-week Service – 25,300 passenger-trips per year
    - Full Route Weekend/Holiday Service – 17,700 passenger-trips per year
    - East Route 7-day-a-week Service – 38,300 passenger-trips per year

Table C also presents the estimates of peak parking demand at the intercept lots. With East Side only service, up to 36 vehicles would be parked at the Stilson Lot at the peak time on a peak day (well within the spaces currently available). With Full Corridor service, Stilson Lot peak parking would increase to 57 vehicles, and 19 vehicles would be parked at the Victor Depot.

Summer Analysis

The analysis of ridership potential in summer (for an east side program only) is based on the available trail use counts, and shown in Table D. A transit mode share of 14 percent is applied assuming a paid parking program, and 7 percent assuming no parking management. Both figures assume an hourly service frequency, which tends to reduce the attractiveness of transit service. This indicates daily transit ridership of up to 134 passengers per day without paid parking and 269 with paid parking. The peak hourly transit ridership can be estimated by applying the overall factor of trail use occurring in the peak hour, peak direction (16 percent). This indicates passenger loads up to 10 per hour without paid parking and 21 with paid parking. This is well within the capacity of a single bus operating hourly. This table also indicates that the peak number of intercepted vehicles would range up to 34, at an average occupancy rate of 2.4 persons per vehicle and 60 percent of daily parking demand occurring at the peak time.

[3] Using smaller vehicles is possible but would greatly increase the total operating cost of the service.

TABLE D: Summer Ridership Analysis & Parking Demand

East Side Service Only

Trailhead	Weekday	Weekend Day	Avg Day	Weekday	Weekend Day	Avg Day
Existing Daily Trail Counts						
Phillips Bench	369	526	409			
Old Pass	398	516	439			
East of Pass	92	125	99			
Teton Pass	326	417	352			
Coal Creek	249	333	282			
	Free Parking			Paid Parking		
Transit Mode Split	7%			14%		
Daily Transit Ridership						
Phillips Bench	26	37	29	52	74	57
Old Pass	28	36	31	56	72	61
East of Pass	6	9	7	13	18	14
Teton Pass	23	29	25	46	58	49
Coal Creek	17	23	20	35	47	39
Total	100	134	112	202	269	220
Peak Load	8	10	9	16	21	17

Annual Analysis	Weekend	7-Day/Wk		Weekend	7-Day/Wk
Days per Year	31	98		31	98
Annual Ridership	4,200	11,000		8,300	21,600
Assumed Cost per Transit Day Pass			$5.00		
Summer Transit Revenue	$21,000	$55,000		$41,500	$108,000

Avg Persons per Vehicle	2.4					
Total Intercept Vehicles Per Day						
Total	21	28	23	42	56	46
Estimated Peak Intercept Parked Vehicles						
Total	13	17	14	25	34	28

Service Plan Scenarios, Quantities and Costs

Winter Analysis

The optimal service plan given the ridership demand, required service frequency, route length and round-trip cycle times discussed above would be as follows:

- For the East Side scenarios, two buses would cycle between Stilson Lot and Coal Creek, stopping in each direction at Trail Creek Trailhead. Each bus would make 9 round trips per day, with the first westbound departure at 8:00 AM and the last eastbound departure at 5:00 PM.

- For the Full Corridor scenarios, four buses would be used to provide half-hourly departures over a two-hour cycle length from 8:00 AM to 5:00 PM. This would provide sufficient capacity on weekdays. On weekends and holidays, a fifth bus would operate between Stilson Ranch and

Coal Creek (without stops at Trail Creek) to provide adequate capacity on the east side. This additional bus would not be shown in the schedule as a separate departure time, but rather would be operated flexibly as a "tripper" bus responding on the published half-hourly schedule as needed to accommodate variation in demand.

As an aside, a service model was considered that would operate the buses on an on-demand basis. For instance, scheduled departures could be operated from the intercept locations in the morning, but then return trips in theory could be made based on ride requests from cellphone as recreationalists get back to the trailheads. This, of course, requires cellphone coverage. The nationwide coverage maps by two major wireless providers were reviewed: while AT&T purports to have 100% 5G coverage over the corridor, Verizon indicates only a few spots of service west of the Stilson Lot. Given this uncertain coverage and the issues that could result from passengers not being picked up in winter conditions, an on-demand service plan is not viable.

The calculation of annual service quantities is shown in Table E. The annual vehicle-hours of service ranges from 756 for weekend/holiday East Side service up to 4,230 for consistent service over the entire corridor. Vehicle-miles of service each year ranges from 13,608 up to 87,916.

TABLE E: Teton Pass Transit Service Winter Alternatives

December 14 Through March 31

	# Days of Service	Daily Hours of Service			Route Round Trip Length (Mi)	Daily Round Trips	Annual			Number of Vehicles	Route Cycle Length (Hours)
		Start	End	# Hours			Vehicle-Hours of Service	Vehicle-Miles of Service	Transit Operating Cost		
Weekend Only Alternatives											
East Side Focus											
Half-Hourly Service	42	8 AM	5 PM	9	18	18	756	13,608	$66,200	2	1.00
Full Corridor											
Half-Hourly Service	42	8 AM	5 PM	9	41.8	18	1,512	31,601	$135,500	4	2.00
Tripper Bus - Stilson to Coal Creek	42	8 AM	5 PM	9	19.6	9	378	7,409	$33,500	1	1.00
TOTAL							1,890	39,010	$169,000	5	
7-Days-A-Week Alternatives											
East Side Focus											
Half-Hourly Service	107	8 AM	5 PM	9	18	18	1,926	34,668	$168,700	2	1.00
Full Corridor											
Half-Hourly Service	107	8 AM	5 PM	9	41.8	18	3,852	80,507	$345,300	4	2.00
Tripper Bus - Stilson to Coal Creek	42	8 AM	5 PM	9	19.6	9	378	7,409	$33,500	1	1.00
TOTAL							4,230	87,916	$378,800	5	

A "cost model" was developed based on the marginal costs incurred by the existing East Jackson START microtransit service. That contract includes drivers and dispatcher costs along with the provision of vehicles. For 2022/23, and considering the incremental costs of operating larger vehicles, that cost (based on discussions with the START Interim General Manager) is expected to be $75 per vehicle-hour. In addition, START pays the fuel costs directly. At current (high) fuel prices, that cost is equal to

approximately $0.70 per mile (over the entire fleet). The resulting cost model for the Teton Pass service is as follows:

Annual operating + vehicle costs = $75 X annual vehicle-hours of service +
$0.70 X annual vehicle-miles of service

Applying this equation, the service alternatives range in cost from $66,200 per year up to $378,800 per year. Note that these figures do not include any administrative costs, such as for contract administration.

As an aside, the START Interim General Manager indicates that the public transit START program does not have the capacity to provide Teton Pass service directly using START drivers, given that the organization is already challenged with staffing sufficient drivers to serve the existing winter service plan. There may be the potential, however, for START to take a role in administering a private contract to operate service and/or to help obtain federally funded vehicles to reduce the annual costs.

Summer Analysis

The analysis of summer service options is presented in Table F, using the same methodology as discussed above. One vehicle would be operated hourly between the Stilson Lot and Coal Creek. If operated weekends only, this would incur a cost of $29,900, while expanding to 7-day-a-week service increases the cost to $94,400.

TABLE F: Teton Pass Transit Service Summer Alternatives

June 1 through Labor Day Weekend

	# Days of Service	Daily Hours of Service			Route Round Trip Length (Mi)	Daily Round Trips	Annual			Number of Vehicles	Route Cycle Length (Hours)
		Start	End	# Hours			Vehicle-Hours of Service	Vehicle-Miles of Service	Transit Operating Cost		
Weekend Only Alternatives											
Hourly Service	31	8 AM	7 PM	11	18	11	341	6,138	$29,900	1	1.00
7-Days-A-Week Alternatives											
Hourly Service	98	8 AM	7 PM	11	18	11	1,078	19,404	$94,400	1	1.00

Performance Analysis

Table G presents a performance evaluation of the transit alternatives. A standard measurement of the productivity of a transit service is the passenger trips served per vehicle-hour of service. In this case, a higher value reflects a better alternative. As shown, the most productive is the summer service (assuming a paid parking program) on weekends/holidays only at 24.3. Of the winter alternatives, weekend east-side service would have a productivity of 15/5.

TABLE G: Performance Review of Transit Alternatives

Alternative	Productivity - *Passenger-Trips per Vehicle-Hour*	Cost Effectiveness- *Cost per Passenger-Trip*
Winter		
East Side - Weekend/Holiday	15.5	$5.66
East Side - All Days	13.1	$6.67
Full Corridor - Weekend/Holiday	9.4	$9.55
Full Corridor - All Days	9.1	$9.89
Summer (Assuming Paid Parking)		
Assuming Free Parking		
East Side - Weekend/Holiday	12.3	$7.12
East Side - All Days	10.2	$8.58
Assuming Paid Parking		
East Side - Weekend/Holiday	24.3	$3.60
East Side - All Days	20.0	$4.37

Cost effectiveness is best measured by the cost per passenger trip. In this case, a lower value reflects a better alternative. The best alternative by this measure is also the summer weekend/holiday service, at $3.60 per passenger-trip for eastside service only with paid parking, while the least cost-effective option (winter full corridor service on all days) would require $9.89 per passenger-trip.

Discussion of Fares

The ridership estimates presented above assume that service is provided either free-fare or that fares are modest (on the order of $2- per one-way trip or less). If fares were set to fully cover the operating cost of the service (the values shown in the right-hand column of Table F), the round-trip fare cost for a two-person travel party for winter East Side Weekend/Holiday service would be on the order of $23 … high enough to be a substantial deterrent to ridership, which in turn would reduce farebox revenues. Unlike more constrained situations where all auto access can be controlled (such as Zion National Park), there will always be an option for auto access to Teton Pass trailheads, which in turn makes ridership more sensitive to fares. In sum, financially supporting a transit program wholly on fares is not viable.

A reasonable fare strategy would be to charge $5 for a day pass. As an individual would only have to handle cash (or some other form of payment) once over the course of the day, overall boarding delays would be reduced. These day passes could be pre-purchased (such as at the Stilson Lot transit center and the Victor Depot) and simply validated by the driver, to also speed boarding. In addition, there would only be a need to check for day passes in the uphill direction. At this fare level (and assuming no

discount fares for children, elderly, or other groups), total winter transit revenues would range from $29,300 up to $95,750, as shown in the bottom of Table C, above. For summer service, fare revenues would range from $21,000 up to $108,000, as shown in Table D.

If there is a desire to provide a benefit for "locals" that frequently use the service, a season pass could also be available (such as for $25).

Parking Management Alternatives

Establishing parking fees is an important element of a comprehensive transportation management plan for a recreational corridor. Parking fees are a key driver in a shift in travel mode from auto use to transit use. In addition, parking fees can generate revenue to fund all or a portion of transit operating and capital costs. There are several potential approaches to imposing parking fees, as discussed below.

Entrance Stations

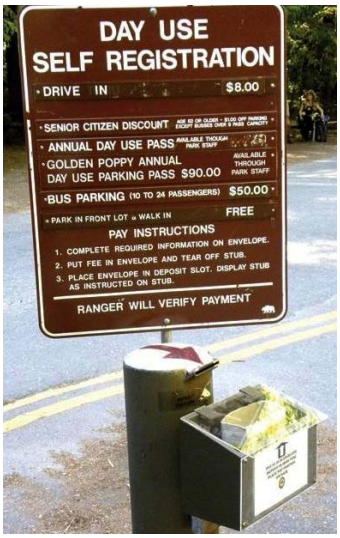
A time-honored tradition at major recreation sites is the staffed entry station, often found at state parks and major national park sites. It can require a substantial footprint for an entry kiosk and associated vehicle queuing area and requires a high level of staffing. This approach works best for a popular activity center with one or two entrance points. In contrast, the Teton Pass area consists of scattered smaller facilities, with little opportunity to accommodate the "footprint" of this approach. For these reasons, this is not considered further.

Pay and Display Paid Parking

"Pay and Display" parking consists of validation machines placed adjacent to a parking lot. These machines typically accept credit and debit cards only (no cash). Motorists either are provided with a paper receipt for placement on their dashboard or enter a vehicle license number. Solar powered models are available that avoid the need to run power lines to each machine. However, a reliable cellphone signal is required, which may be a problem on Teton Pass. While there are many examples of ticket kiosks operating in winter conditions (including Aspen Colorado and Truckee California), they can be easily damaged by snow removal operations outside of a controlled streetscape. In a remote area such as along Highway 22, moreover, it can be expected that vandalism would be an ongoing and serious problem.

One example of an innovative pay and display system is along the Nevada State Route 28 corridor on the East Shore of Lake Tahoe. The profits made from the fees go to maintaining the Tahoe East Shore multipurpose trail, which provides access to the very popular Nevada Lake Tahoe State Park. The specific prices range from $1.00 to $7.00 depending on the hour, day, and season, designed to encourage use in the lower-demand periods. Major plusses to this system are the implementation of mobile payment and using your license plate as a tag instead of using a printable ticket.

Iron Ranger Paid Parking



Another quite common and long-used parking management option is the traditional "iron ranger" by which parkers self-register, place cash into an envelope that is inserted into a sturdy steel pipe and place the receipt on their dashboard. This has the advantage of avoiding the need for internet access and being substantially more able to stand up to difficult snow conditions. Staffing is still needed for snow removal and retrieving/managing the money. However, as cash is the only form of payment and as society is moving away from the common use of cash, this could be a serious inconvenience for users.

Corridor Access Pass Program

National Forests in more populous portions of the American West have implemented regional recreation fee programs. Some examples are discussed below:

- **Northwest Forest Pass (Pacific Northwest)** -- This pass gives access to a large region in the states of Oregon and Washington. This pass costs $30 annually, or $5 for a day pass. All Forest Service operated areas that require a fee recognize the pass. It can be transferred from person to person in the same household. Table H presents data regarding three of the participating National Forests that are most similar to Teton National Forest, in eastern Oregon and eastern Washington. A total of 167 sites are covered by the Northwest Forest Pass program in these National Forests, which generates an average of $15,131 in revenues per site.

TABLE H: Examples of National Forests with Regional Recreational Fee Programs

National Forest	State	Annual Recreation Fee Revenues	Number of Fee Sites	Annual Revenue per Site
Northwest Forest Pass (Partial List of National Forests)				
Wallowa-Whitman	OR	$162,915	17	$9,583
Deschutes	OR	$1,175,385	58	$20,265
Okanogan-Wenatchee	WA	$1,188,573	92	$12,919
Total		$2,526,873	167	$15,131
Southern California Adventure Pass				
Los Padres NF	CA	$180,710	31	$5,829
San Bernardino	CA	$889,285	20	$44,464
Angeles	CA	$218,823	47	$4,656
Cleveland	CA	$1,116,698	4	$279,175
Southern California Avg		$2,405,516	102	$23,583
Total		$4,932,389	269	$17,108

Source: Annual Recreation Fee Reports for individual national forests.

- **Coronado National Forest (AZ) --** Located in southeastern Arizona, Coronado National Forest has various fee options, more than other National Forests, with entry options for one day users,

for a week, and for an annual pass. The prices are $8.00, $10.00, and $40.00 per vehicle, respectively. They accept all Interagency passes. Parking is limited in the forest and has been prohibited in popular areas such as Sabino Canyon and Bear Canyon since 1978. However, to supplement this, shuttles are offered at these two locations in exchange for a per person fee. The shuttles run every day from 9 am to 4 pm. For Sabino Canyon, it costs $15.00 for adults, $8.00 for children under 12, and $8.00 for one-way rides. For Bear Canyon, the prices are $8.00 for adults, $5.00 for children under 12, and $5.00 for one-way rides.

- **White River National Forest (CO)** – This National Forest has two recreational parking management areas:

    - **Maroon Bells Scenic Area** has an Annual Pass, good for only this area at $25, along with a **Day Pass** (single entry) for $10. It is required (along with a trailhead parking reservation) between mid-May and the end of October (and seasonal snow closures limit the number of days outside this period when auto access is possible). Auto access is prohibited between 8 AM and 5 PM, when access is by bus or bike only.

    - **Vail Pass Winter Recreational Area** has a Seasonal Pass, offered from November to April. Daily use is $10 per day and $65 for the entire season (November through April). Children under the age of 15 gain free entry. Passes are available through the ranger district offices or at an on-site kiosk.

- **Southern California Regional Passes**. The "Adventure Pass" is a parking fee requirement for a total of 106 recreational locations in four National Forests in southern California (the Angeles, Cleveland, Los Padres, and San Bernadino National Forests). This Pass allows parking at a variety of campgrounds, trailheads, picnic areas, snow play areas and shooting ranges. A daily pass is $5, with an annual pass at $30. As shown in Table H, a total of 102 sites are included in this fee program. While the revenues per site vary widely between the various National Forests, the overall average is $23,583 per site per year.

A corridor parking fee program could be established for the Teton Pass corridor. To provide a consistent program, it would optimally be applied to all public parking areas along the highway within both the Bridger-Teton National Forest and the Caribou-Targhee National Forest, from Trail Creek Trailhead on the east to the Mike Harris parking area on the west. There is a myriad of potential options that could be considered for this fee program. A reasonable approach would be as follows:

- Provide both a day pass option for $10 per vehicle as well as an annual pass option for $60 per year. (This ratio of 6 is consistent with other National Forest fee programs).

- Passes could be available online (through printing out a pass) or in person at local offices, such as the following:

    - Caribou-Targhee NF Teton Basin Ranger District Station in Driggs
    - Bridger-Teton NF Jackson Ranger District in Jackson
    - Stilson Lot Transit Center

- Victor Depot
- County offices
- Chambers of Commerce

There may also be the possibility of selling passes through retail establishments (outdoor equipment stores, etc.) for a handling fee.

- Adequate enforcement is key to the success of the program. This would probably require one additional Highway Patrol staff member, averaging 6 hours per day of total enforcement time. Note that enforcement would be needed both within the pay areas as well as nearby shoulder areas where parking is prohibited (but which may well still occur in an unsafe fashion).

- One option to the access pass program would be to allow the seasonal pass to be valid both for parking use as well as transit use. This would need to be at a higher rate (such as $80 per year) to offset the loss of transit revenues. It could be used by recreationalists who drive to trailheads on off-peak days but choose to use the shuttle on peak days when parking may not be available at the trailheads.

Parking Revenues

An estimate of parking fee revenues is presented in Table I, for the four scenarios defined above. These estimates utilize the parking turnover rate and ratio of parking demand by day discussed regarding the transit ridership estimate. In addition, the following is assumed:

TABLE I: Estimated Teton Pass Corridor Parking Revenues

		Winter Fee Program -- December 15 through March 31						*Summer Fee Program - June 1 Thru Labor Day*	
		Weekend/Holiday Option			**7 Day a Week Option**				
		East Side	West Side	Total Corridor	East Side	West Side	Total	Weekend/ Holiday	7 Day a Week
Number of Spaces (1)		210	165	375	210	165	375	572	572
Peak Day Turnover Rate	1.75								
Peak Day Total Vehicles		367.5	289	656	368	289	656		
Ratio of Avg Daily to Peak Weekend Daily	0.67								
Average Daily Total Vehicles		246	193	440	290	193	440		
Days per Season	42							31	98
Total Seasonal Vehicles		10,332	8,106	18,480	31,030	20,651	47,080	10,664	27,832

Assumed Parking Fee Structure	Winter	Summer
Daypass	$10	$10
Season Pass	$60	$60
Percent Using Season Pass	25%	20%
Average Days of Use per Season Passholder	10	8
Percent Scofflaws	20%	20%
Average Revenue per Vehicle	$7.20	$7.60

Total Seasonal Revenue	$74,400	$58,400	$133,100	$223,400	$148,700	$339,000	$81,000	$211,500

Note 1: A 50 percent reduction is applied to the Mike Harris and State Line parking area reflecting lower utilization.

- Absent available information, it is assumed that 25 percent of winter parking occurs using season pass. Anecdotally, a high proportion of the use of the trailheads in winter consists of "locals" that would tend to access the area multiple times per season. However, some locals will not access the pass the necessary six days per winter needed to make a season pass the economical choice. In summer, there are more recreational options for local residents, indicating that a lower proportion would use a pass and that the average use per passholder would be lower.

- In addition, a proportion of parking activity will consist of "scofflaws" that do not pay. This proportion will depend on the level of enforcement as well as signage. A 20 percent scofflaw rate is assumed.

Applying these factors, an overall parking revenue of $7.20 per parking vehicle is defined for winter and $7.60 for summer. As shown, the resulting winter parking revenues range from $74,400 for a weekend/holiday program on the east side only up to $339,000 for a 7-day-a-week program over the whole corridor. In summer, revenues of $81,000 for weekend/holiday and $211,500 for 7-day-a-week service are estimated.

Parking Program Costs

A parking management program incurs substantial costs. As indicated in Table J, these costs are estimated as follows:

Table J: Annual Teton Pass Parking Fee Operating Costs

		Winter				Summer	
		Weekend/Holiday Option		7-Day-a-Week Option		Weekend/ Holiday	7 Day a Week
		East Side	Full Corridor	East Side	Full Corridor		
Total Days of Season		42	42	107	107	31	98
Average Daily Hours of Enforcement		4	6	4	6	4	4
Annual Hours of Enforcement		168	252	428	642	124	392
Cost per Hour of Enforcement (1)	$50						
Total Cost of Enforcement		$8,400	$12,600	$21,400	$32,100	$6,200	$19,600
Administrative/Legal Fees		$20,000	$30,000	$20,000	$30,000	$20,000	$20,000
Marketing/Website		$20,000	$20,000	$20,000	$20,000	$10,000	$10,000
Credit Card Processing Fees	3.5%	$2,300	$4,300	$6,800	$11,100	$2,800	$7,400
Total Costs		$50,700	$66,900	$68,200	$93,200	$39,000	$57,000

Note 1: Includes enforcement vehicle operating costs

- The additional enforcement staff is estimated to work an average of 4 hours per day (more on peak days, less on off peak days) for the East Side options, and 6 hours per day for the Full Corridor options. An hourly cost of $50 per hour (including enforcement vehicle operating costs) is assumed, based on typical rates. Over the course of the winter season, this incurs a cost ranging from $8,400 to $32,100. In summer, the full program would incur a cost of $19,600.

- Costs are incurred for administrative functions (contracting, fund reconciliation, etc.) as well as for court costs and staff time for attending court. These are estimated to range from $20,000 to $30,000 per winter season, and $20,000 per summer.

- The program will incur marketing costs, such as advertising in local papers and on radio, social media posting, etc. In addition, website costs will be incurred. A budget of $20,000 is assumed for this function in winter, regardless of the scope of the program, and an additional $10,000 in summer.

- A 3.5 percent credit card processing fee is assumed.

In total, parking fee program costs will range from $50,700 up to $93,200 in winter, and $39,000 to $57,000 in summer.

Impact on Stilson Lot

As discussed above, the Stilson Lot would be the primary intercept facility for visitors arriving from the east. A new transit center is currently under design that will provide six bus bays. While START buses and ski area shuttles require up to four bus bays at peak times, there would always be available space for the one Teton Pass shuttle vehicle onsite at any one time.

As discussed above and shown in Table C, in winter up to 50 private vehicles would be parked at Stilson Lot if service is provided on the east side only, and 57 if the full route is served. Available counts indicate that there is adequate available parking to accommodate this additional parking demand.

Summer use of the Stilson Lot is relatively low, limited largely to informal use by rafting companies and other tourist services, leaving hundreds of available spaces. As shown in Table D, up to 56 intercept parked vehicles would use this lot, well within capacity.

Total Coordinated Shuttle/Parking Program Financials

Finally, the various cost and revenue figures can be combined to define the overall ability of the coordinated shuttle/parking program to "self-fund" without additional revenues. As shown in Table K, in winter the Weekend/Holiday Only options are forecast to operate at a net deficit ($13,500 for the East Side only and $58,95000 for the Full Corridor option). The 7-Day-A-Week winter option would also yield a deficit for the Full Corridor option. However, the 7-Day-A-Week option for the East Side service option generates a net revenue of $48,750. The relatively good financial performance of the 7-Day-A-Week options reflects that the fixed costs are spread over a larger program, and that the trailhead activity (and associated parking and shuttle revenues) are not dramatically lower on non-holiday weekdays than on weekends and holidays. In summer, both weekend/holiday and 7-day-a-week options yield a modest net revenue ($11,600 and $13,600, respectively).

TABLE K: Summary of Coordinated Shuttle/Parking Program
Annual Operating Costs and Revenues

	Winter				Summer East Side	
	Weekend/Holiday Option		7-Day-a-Week Option		Weekend/ Holiday	7 Day a Week
	East Side	Full Corridor	East Side	Full Corridor		
Revenues						
Parking Revenues	$74,400	$133,100	$223,400	$339,000	$39,000	$57,000
Transit Revenues (1)	$29,300	$44,250	$63,250	$95,750	$41,500	$108,000
Total Revenues	$103,700	$177,350	$286,650	$434,750	$80,500	$165,000
Costs						
Parking Program Costs	$51,000	$67,300	$69,200	$94,000	$39,000	$57,000
Transit Costs	$66,200	$169,000	$168,700	$378,800	$29,900	$94,400
Total Costs	$117,200	$236,300	$237,900	$472,800	$68,900	$151,400
Net Revenues	-$13,500	-$58,950	$48,750	-$38,050	$11,600	$13,600

Note 1: Assuming paid parking.

Sensitivity Analysis of Higher Fares

Using the discussion regarding a $5 day pass fare level as a basis, an "elasticity analysis" can be conducted to assess ridership and revenues of higher fares. Elasticity analysis is derived from the field of microeconomics and compares the change in demand (in this case, ridership) with respect to a change in costs (in this case, the fare level). There are many sources of data regarding how transit use varies with fares[4], though there has not been extensive study of the elasticity of recreational trip demand. In general, however, "discretionary" riders (those that have access to a vehicle) are more sensitive to changes in fares than persons that are more dependent on transit service. In addition, trips that must be completed (such as work trips) have a lower elasticity than trips (such as recreational trips) that a traveler has a choice of completing or not.

This factor is used in the following equation:

$$\text{Ridership with New Fare} = \text{Existing Ridership} \times (\text{Future Fare} / \text{Existing Fare})^{\text{Elasticity Value}}$$

A typically observed elasticity value is approximately -0.35. Given the discretionary/recreational nature of this specific service a higher value of -0.6 is applied.

Using this equation and factor, transit ridership was re-analyzed at three higher fare levels: a $10 day pass ($50 season pass), a $20 day pass ($100 season pass) and $30 day pass ($150 season pass). Service levels were kept unchanged, as they would still be warranted to serve the remaining ridership. While increases in fare levels could lead to a modest increase in parking fee revenues, to be conservative this

[4] For example, see *Transit Price Elasticities and Cross-Elasticities* (Victoria Transport Policy Institute, April 2023) and *Transit Pricing and Fares (Report 95)*

factor was not included. The resulting ridership, cost and revenue figures are shown in Table L. This indicates the following:

- A $10 day pass rate would result in a similar pattern to the $5 day pass regarding those options that generate a new revenue, with both summer options generating a net revenue as well as the 7-day-a-week east side winter option.

- A $20 day pass rate would also result in annual operating revenues exceeding costs for the winter 7-day-a-week full corridor option.

- The winter weekend/holiday option for the east side yields a net positive revenue at the $30 day pass level, though the full corridor option still yields a net deficit.

- At the $30 day pass level, ridership (and associated benefits) would be approximately only one-third of that at the $5 day pass level.

TABLE L: Summary of Coordinated Program at Higher Fares

	Winter				Summer East Side	
	Weekend/Holiday Option		7-Day-a-Week Option		Weekend / Holiday	7 Day a Week
	East Side	Full Corridor	East Side	Full Corridor		
$10 Day Pass						
Transit Ridership	7,600	13,200	16,400	28,400	5,500	14,400
Total Revenues	$103,300	$190,000	$277,700	$457,900	$94,200	$201,400
Total Costs	$116,900	$235,900	$236,900	$472,000	$69,100	$151,800
Net Revenues	-$13,600	-$45,900	$40,800	-$14,100	$25,100	$49,600
$20 Day Pass						
Transit Ridership	5,000	8,700	10,800	18,800	3,600	9,400
Total Revenues	$115,300	$211,000	$303,700	$503,900	$111,300	$245,700
Total Costs	$116,900	$235,900	$236,900	$472,000	$69,200	$152,100
Net Revenues	-$1,600	-$24,900	$66,800	$31,900	$42,100	$93,600
$30 Day Pass						
Transit Ridership	3,900	6,800	8,500	14,700	2,900	7,400
Total Revenues	$123,800	226,000	$323,200	$536,400	$126,300	$279,800
Total Costs	$116,900	$235,900	$236,900	$472,000	$69,200	$152,200
Net Revenues	$6,900	-$9,900	$86,300	$64,400	$57,100	$127,600

Implementation Steps

As an introduction to this topic, it is useful to review examples of existing similar programs:

- The **Maroon Bells** shuttle service near Aspen, Colorado is operated between May and October by the Roaring Fork Transportation Authority using funds provided by the US Forest Service. Reservations are required, and fares are as high as $15 per round-trip.

- In 2019 prior to the pandemic, the **Hanging Lake** shuttle provided service between Glenwood Springs (Colorado) and the nearby Hanging Lake recreation area. It operated between May and October. Reservations were required along with $12 per round trip fee. Since the pandemic, the shuttle has not been operated, with a parking reservation system in its place.

- **Lake Tahoe Nevada State Park** is served by the "East Shore Express" shuttle service connecting the popular Sand Harbor State Park with intercept parking areas in nearby Incline Village, Nevada during the peak summer season. The service is operated by the Tahoe Transportation District and is free to the rider. Service has been limited in recent years due to driver shortages.

- The **Devils Postpile National Monument** is served by a shuttle service (mandatory, with limited exceptions) from mid-June through mid-September. A $15 round-trip fare is charged, with discounts for children. It is operated by the Eastern Sierra Transit Authority and funded by the US Forest Service as well as substantial fare revenues.

- **Muir Woods National Monument** is served by a Marin Transit shuttle providing connections to Sausalito and Larkspur. Service is provided year-round on weekends, expanding to seven days a week in summer. Reservations are required, along with a $3.50 round-trip fare. A parking reservation system is also in place.

- **Mount Batchelor** winter resort is served by a public shuttle service from nearby Bend, Oregon, operated by the Cascades East Transit service. Fares are $7 one-way and $12 round-trip, and 3 round-trips are operated per day.

- Year-round seven-day-a-week shuttle service between **Mt. Hood** and the Portland metro area is provided by Clackamas County. Fares are only $2 per passenger. Up to 8 runs per day are provided.

There are many elements needed to provide a successful recreational shuttle program, as discussed below.

Management

Given the relatively modest scope of the shuttle program and the seasonal nature, the costs associated with a new organization (such as for legal fees, accounting, personnel, grant management, etc.) would not be warranted. Rather, this service should be provided through an existing entity, such as Teton County (WY) or START. A standing advisory committee made up of stakeholders with interests in the corridor should be considered.

Even if day-to-day operations are contracted, a public entity needs to be responsible for the fiscal management of the service, including grants management, contract management, monitoring and reporting. As the use of public transit funds is a complicated field, this is typically best provided by an entity with expertise in the subject. In the Teton area, the South Teton Area Rapid Transit (START) system has proven to be effective in this role (as shown by the contracts managed for the seasonal skier

services and the START On-Demand service) and is a logical choice for managing a seasonal recreation shuttle service.

Operations

There are two general approaches to the actual operations of a seasonal transit service:

- **Direct (In-House) Service**: Service could be operated using transit agency staff. This has the advantage of more direct accountability for services. However, it can be difficult and/or more costly for a public organization to hire seasonal workers.

- **Contracted Service**: There are many private firms that contract with public agencies to provide transit operators and day-to-day management, either for seasonal service or ongoing service. They can typically more easily adjust staffing levels for changes in seasonal needs, which is particularly important for a demonstration service that may well change over time. Contracted service is typically (though not always) less expensive than directly operated service, due in large part to lower benefit rates.

Overall, a contracted service would make more sense for an initial new seasonal service, at least while a consistent service plan evolves.

Vehicles

Between one and five vehicles would be needed for the service, depending on the service plan and the potential need for a backup vehicle (if vehicles are not provided by an organization with available backup vehicles). A short-term strategy would be to lease vehicles, either from the public entity directly or as part of a service contract. Over the longer term (once the service ridership and associated service plan is clearly defined), it is preferable for vehicles to be purchased by the public organization operating the service. This makes the vehicle costs eligible for Federal Transit Administration funding (such as through the 5311 or 5339 funding programs), and also allows the vehicles to be modified specifically for the Teton Pass program, including provision of luggage racks.

Bus Stops

Clearly designated bus stops would need to be established and maintained. This should include steps (such as regulatory signage) to prohibit private vehicle parking in the bus stop area and the approaches. Stop design should strive to meet the requirements of the Americans with Disabilities Act, including provision of a level, firm wheelchair loading area. Provision of stops requires collaboration between the public entity implementing the transit service and the various landowners (notably the two state DOTs).

Marketing

Building public awareness of a new shuttle service can be a substantial effort, including the following:

- Developing a unique brand for the service (including name and logo).
- Preparing traditional print advertisements and flyers/posters for distribution around the community.
- Development of a separate website and social media program.
- Outreach to regional recreationalist groups.
- Preparation of press releases
- Organization of a ribbon-cutting program.
- Ongoing upkeep of online information and revisions to marketing materials.

As with the management of the program, these efforts are best conducted by staff with experience in transit services.

Monitoring

Particularly in the first few years as the program stabilizes, it is crucial that the program be monitored in order to (1) provide the information needed to intelligently modify services and (2) provide funding partners with the information needed to ensure that the program is meeting their individual goals. This monitoring program should include the following:

- Recording of passenger activity, including ridership by day and run for all service, as well as ridership boarding and alighting by stop for representative sample periods.
- Seasonal surveys of passengers, collecting data regarding the passenger characteristics (resident vs. visitor, age, activities), trip patterns (mode to the shuttle service, parking location, length of stay), perceptions of the service and their recreational experience.
- Daily service vehicle-hours, vehicle-miles, and fare revenues.
- Seasonal service and capital costs.
- A log of incidents/accidents/complaints. If a contractor is used, it is important for passengers to be provided with a means of registering complaints directly to the public entity.

This data should be analyzed at the end of each season to identify key performance indicators (such as passengers per vehicle-hour and cost per passenger). Reports should be prepared and provided to the funding partners (and the public) that provide the data and analysis, as well as a discussion of how well the service met various program goals and recommendations for future modifications.

Conclusion

In sum, this evaluation indicates that a winter shuttle and parking fee program is viable for the Teton Pass corridor, particularly if operated 7 days a week and particularly if focused on the East Side only. A summer shuttle and fee program is also viable. Between transit passenger revenues and parking fees, the operational costs of the program (both transit and parking management costs) could be funded. With a relatively modest level of additional funding ($48,500 per year), the winter program could be implemented for the full corridor. It should also be noted that a consistent 7-day-a-week service would be easier for a transit service contractor to staff, as it would provide a more consistent position over the course of the season.