

FHWA Office of Federal Lands Highway

West Yellowstone Trail Planning and Design

Existing Conditions



Custer Gallatin National Forest

To: West Yellowstone Trail Planning and Design Project Management Team
From: FHWA Western Federal Lands Highway Division
Subject: Memo 2: Existing Conditions
Project Name: West Yellowstone Trail Planning and Design
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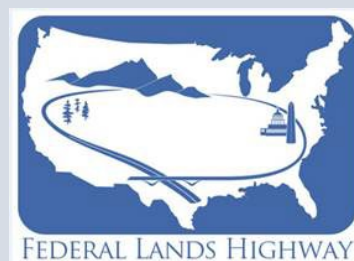


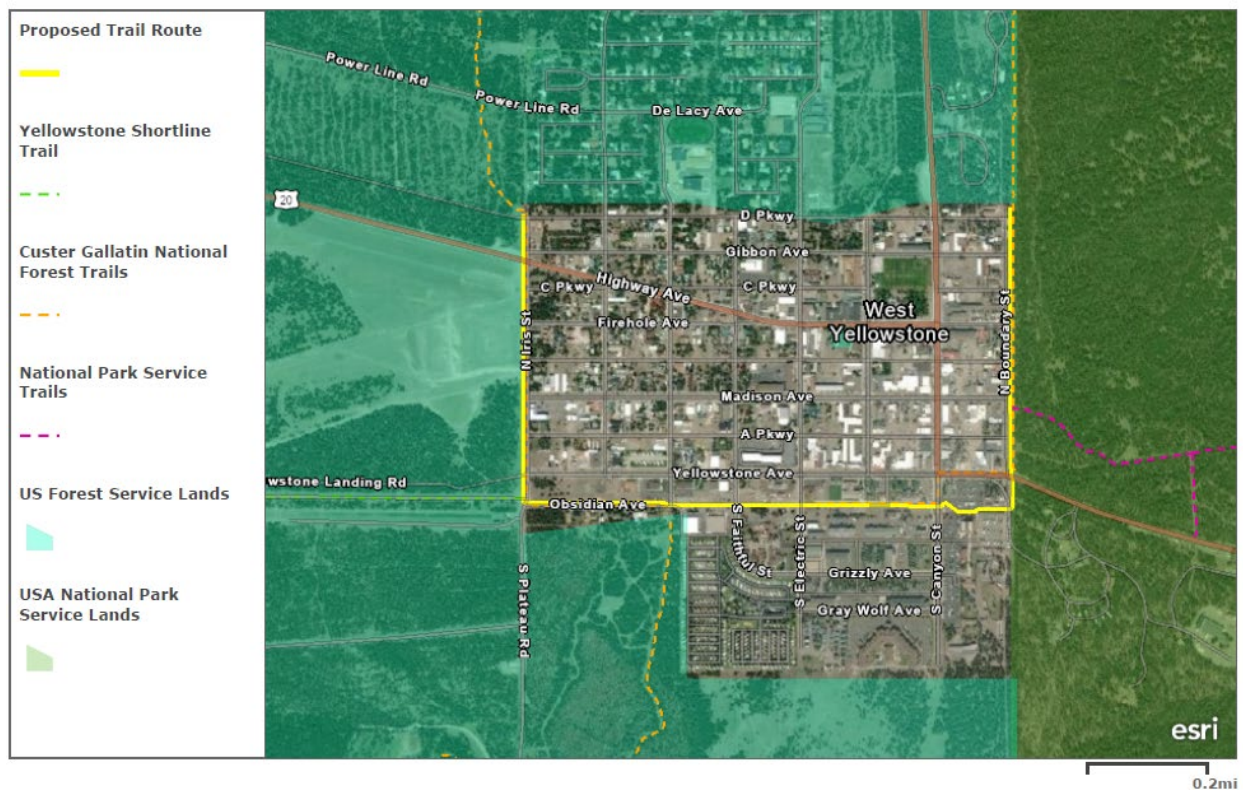
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Introduction

The Town of West Yellowstone Trail Network Planning and Design project is a Federal Lands Access Program (FLAP) funded project to develop a trail network connecting the currently separate Yellowstone Shortline, Frontier, Boundary, Rendezvous Nordic Ski, and Riverside Trails with a goal of creating a complete network for users to recreate or commute on while in West Yellowstone. The project will therefore develop a plan to engage and gather public input, an analysis of existing conditions, and conceptual designs and costs for the proposed trail system through the Town of West Yellowstone. Figure 1 below shows the project area.

Figure 1. Approximate project area with proposed trail route shown in yellow solid line. Adjoining trails shown in dashed lines.



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The scope of this study is divided into the following:

1. Develop an engagement plan to gather stakeholder input on proposed trail network that is focused on key project milestones
2. Document existing conditions as related to current and future potential use of the project area
3. Develop conceptual designs and construction cost estimates for proposed trail network

4. Summarize findings in a final report that includes any limitations, applicable future work, and future opportunities

The outcome from this project is to create a connection of trails for the Town of West Yellowstone where residents, visitors, and people recreating can safely navigate all the different trails in the Town. This project will allow the Town of West Yellowstone and its partners to proceed from planning and design to the construction phase. This project will provide background and research as it further defines the needs and existing conditions of the area.

Planning Context

This section analyzes relevant plans and studies that could inform the West Yellowstone Trail Planning and Design project's outcome, which we term the 'planning context.' The project team seeks to understand any existing plans, opportunities, and constraints developed through partners' work that might strengthen this project's findings. Analysis of the planning context includes the document's purpose, scope, and findings as relevant to this project's outcomes. Documents reviewed are shown in Table 1 below.

Table 1. Planning documents reviewed.

Plan	Year	Agency
West Yellowstone Gateway Study	2019	Town of West Yellowstone
Town of West Yellowstone's 80 Acre Expansion Planning Report	2019	Town of West Yellowstone
West Yellowstone, Montana Growth Policy Update 2017	2017	Town of West Yellowstone
Envision Gallatin: Gallatin County Growth Policy	2021	Gallatin County
Connecting Communities: Gallatin County Trails Report and Plan	2002	Gallatin County
Oregon Short Line Rail Trail Decision Memo	2019	USFS
Custer Gallatin Land Management Plan - (Forest Plan Revision)	2022	USFS

Common themes throughout the plans included enhancing bike, pedestrian, and trail access throughout Gallatin County to Federal lands, and planning transportation systems to address current issues and future travel, especially as visitation and tourism increases to Yellowstone National Park and therefore, the Town of West Yellowstone.

West Yellowstone Gateway Study¹

The West Yellowstone Gateway Study is a study "designed to help the Town of West Yellowstone and Yellowstone National Park (YNP) officials better understand the current and future issues related to transportation in the area and provide recommendations for system improvements within the community that enhance mobility and encourage economic growth".² The study's stated goals include:

- Improving circulation through and within the Town for residents, visitors, & pass-through traffic.

¹ Town of West Yellowstone. (2019). *West Yellowstone Gateway Study*.

² Ibid.

- Providing safe and efficient networks for all modes of transportation, including automobiles, bicycles, and pedestrians.
- Ensuring transportation improvements compliment the Town’s economic development strategies and support the economic viability of new and existing businesses.
- Enhancing parking management strategies and wayfinding signage to make it easier for visitors to find their way to their destinations and nearby available parking.³

The West Yellowstone Gateway Study is a transportation study, therefore there are several ways this study relates to the project. The study provided recommendations for bicycle and pedestrian facilities which may be important when considering trail designs for this project. Recommendations include enhancing north-south connections across US-20, enhancing pedestrian crossings with high-visibility crosswalk markings, rectangular rapid flashing beacons (RRFB), and adding curb extensions. The study also recommended specific locations for bike and pedestrian paths including in places identified for the proposed trail alignment, such as at the intersection of US-20 and Iris Street, as well as the intersection of Yellowstone Ave. and Boundary Street. The study also looked at improving transportation circulation and wayfinding signage, both of which may end up interacting with the proposed trail.

Town of West Yellowstone’s 80 Acre Expansion Planning Report⁴

The Town of West Yellowstone’s 80 Acre Expansion Planning Report considers alternatives and potential for the recently acquired 80 acres of land located on the western boundary of the town. The study primarily considers the impact of different housing and economic development alternatives for developing the newly acquired 80 acres. The Town of West Yellowstone has worked with US Forest Service, and they have identified easements that can be accessed or may need to be relocated as they relate to development. How the 80 acres are developed is important because the location and development will directly interact with the proposed alignment (along Iris Street) of the West Yellowstone Trail Design and Planning project.

West Yellowstone, Montana Growth Policy Update 2017⁵

The West Yellowstone Growth Policy Update 2017 provides direction towards managing growth within the Town. The growth policy update includes chapters on key issues like housing affordability and availability, short-term commercial rentals, developing the recently annexed 80 acres, and the economy. The policy update also includes chapters on implementation, coordination, and the wildland-urban interface. Increasing recreation opportunities, in coordination with Custer-Gallatin Nation Forest, were identified as possible recreational growth

³ Ibid.

⁴ *Town of West Yellowstone’s 80 Acre Expansion Planning Report*. (2019). Town of West Yellowstone, https://www.townofwestyellowstone.com/wp-content/uploads/2019/08/WY-80-Acres-Expansion_Planning-Report_FINAL_2.25.19-source-added-to-page-15.pdf. Accessed 23 November 2022.

⁵ *West Yellowstone, Montana Growth Policy Update*. (2017). Town of West Yellowstone, <https://www.townofwestyellowstone.com/wp-content/uploads/2017/12/Adopted-West-Yellowstone-Growth-Policy-12-1-17.pdf>. Accessed 23 November 2022.

opportunities around West Yellowstone. Specific recreation opportunities included creating longer non-motorized routes to Driggs, Idaho, and Reas Pass, Idaho.

Envision Gallatin: Gallatin County Growth Policy⁶

The Gallatin County Growth Policy 2021 document is an overarching document that guides Gallatin County's land use decisions and how the county will plan for growth. Gallatin County includes the cities of Bozeman, Belgrade, and Three Forks, as well as the towns of Manhattan and West Yellowstone, and has a population of 118,960 people. The Gallatin County Growth Policy document includes several goals and policies that align with other plans reviewed for this project, especially in relation to Gallatin County's recreation and transportation goals and policies. For example, a stated recreation goal of Gallatin County is to "support creation of a regional recreation network" with supporting policies that include promoting design and development that connects multimodal facilities and trails to meaningful destinations, as well as encouraging public access to trails, parks, and recreation.⁷ Additionally, a transportation goal of Gallatin County is to "plan for a safe and efficient transportation system" by promoting connectivity, multimodal opportunities, and pedestrian-friendly opportunities.⁸ These themes and goals compliment the Town of West Yellowstone's Growth Policy Update 2017.

Connecting Communities: Gallatin County Trails Report and Plan⁹

The Connecting Communities: Gallatin County Trails Report and Plan serves as a guide and vision creating a countywide trails network. The Plan further identifies trails in Gallatin County, a plan for a countywide trail network, and explains how trails can connect communities while providing an alternative to motorized travel. Although not directly discussing trail planning in West Yellowstone, the Gallatin County Trails Report and Plan speaks to the overall vision of trail planning in the county and may therefore be useful to consider when planning trails in the Town of West Yellowstone. Potential partners that have been identified from this plan are Gallatin County Planning and Bozeman Planning Departments, which review subdivision proposals for potential and open space and public trails, and Gallatin County Trails Advisory Committee, who prepared this report.

Oregon Short Line Rail Trail Decision Memo¹⁰

This memo documents the decision made by the US Forest Service in 2019 to move forward with implementing the Oregon Short Line Rail Trail, a 9.25 mile trail that would be part of a the larger, 104-mile long Greater Yellowstone Rail Trail project. This section of the trail is in the

⁶ *Envision Gallatin: Tomorrow Together - Gallatin County Growth Policy*. (September 2021). Gallatin County, https://gallatincomt.virtualltownhall.net/sites/g/files/vyhlif606/f/pages/growth_policy_-_final_full_document_9.1.21.pdf. Accessed 23 November 2022.

⁷ Ibid.

⁸ Ibid.

⁹ *Connecting Communities: Gallatin County Trails Report and Plan*. (January 2002). Gallatin County Trails Advisory Committee, https://gallatincomt.virtualltownhall.net/sites/g/files/vyhlif606/f/pages/trailsplancombined_0.pdf. Accessed 23 November 2022.

¹⁰ USDA Forest Service. (June 2019). *Oregon Short Line Rail Trail Decision Memo*.

Town of West Yellowstone. The addition of this trail allows for more opportunities for visitors and tourists staying in the Town of West Yellowstone to recreate safely and experience the town. The document finds that neither environmental assessment nor an environmental impact statement needed to be completed.

Land Management Plan for the Custer Gallatin National Forest¹¹

The Land Management Plan for the Custer Gallatin National Forest “sets the overall context for informed decision making by evaluating and integrating social, economic, and ecological considerations relevant to management of the national forest”.¹² The Plan does not look at site-specific prohibitions or activities, instead focusing on the direction and vision for the Forest as a whole.⁷ West Yellowstone is referenced within the Land Management Plan in relation to its accessibility to Yellowstone National Park, tourism, and desirability as a snowmobiling and cross-country skiing destination during winter months.¹³ West Yellowstone falls within the Madison, Henrys Lake, and Gallatin Mountains Geographic Area of the National Forest and the Hebgen Winter Recreation Emphasis AREA (HWREA).

1. The Custer Gallatin National Forest works with the community of West Yellowstone to achieve a national and international destination for winter recreation.
2. The Custer Gallatin National Forest seeks partnerships for sustainable operation of the Rendezvous Ski Area and the groomed snowmobile trail system of this recreation emphasis area.
3. The Custer Gallatin National Forest seeks partnerships and interagency cooperation to emphasize winter recreation safety.¹⁴

Plan recommendations for roads and trails that inform the proposed trail include:

- Desired Conditions: Connected to partner transportation systems (02); provides for the health and safety of users, are cost effective, preserve the integrity of road or trail, and protect adjoining natural, cultural, and aesthetic qualities (04); accommodates current and foreseeable recreation demand (05).¹⁵
- Goals: Coordination with partner transportation system managers (01, 02, 03).

Plan recommendations for recreation that informs the proposed trail include:¹⁶

- Desired Conditions: Recreation activities contribute to jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area (01);

¹¹ *Land Management Plan – Custer Gallatin National Forest*. (January 2022). USDA Forest Service, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1008515.pdf. Accessed 23 November 2022.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

promote physical and mental health (02); are adaptable changing trends and demands (03); and support both summer and winter recreation activities.

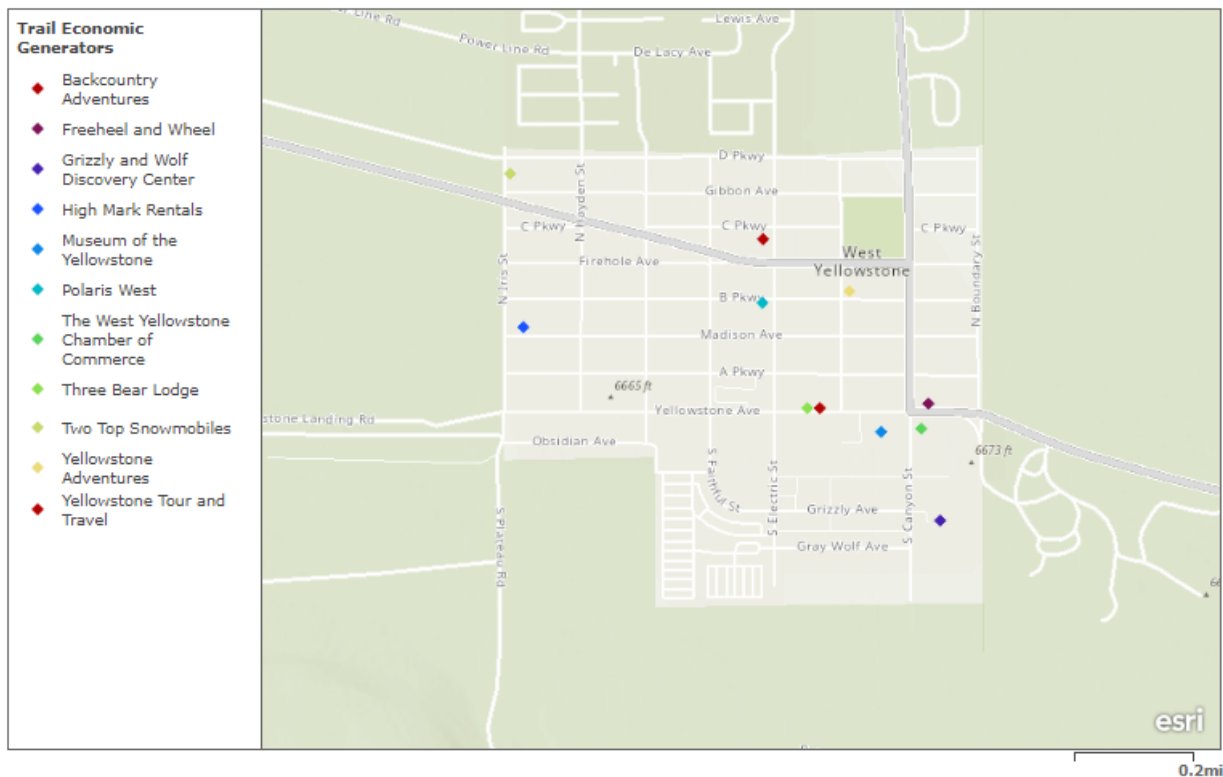
Planning Context Findings

The planning documents reviewed suggest broad but overlapping considerations for this project’s purposes. There are general themes of increased tourism and visitation mentioned the planning documents due to desirable recreation opportunities around West Yellowstone, Yellowstone National Park, and Custer Gallatin National Forest. This increase in visitors suggests a need for better functioning transportation systems including safer facilities for bike users and pedestrians, enhanced wayfinding, and connectivity between meaningful places. Within the Town of West Yellowstone’s 80 Acre Expansion Planning Report there is a focus on affordable housing, development, and connectivity to the rest of the Town to create a vibrant community that can continue to welcome new residents and tourism for years to come.

Economic Generators

The project team identified a number of economic generators that may impact the proposed trails use and/or be impacted by its development. While not exhaustive, this list is meant to highlight businesses and organizations that have a clear relationship with the trail’s potential use. Figure 2 shows each listed organization in relationship to the proposed trail.

Figure 2. Selected economic generators related to the trail’s expected use.



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Museum of the Yellowstone, founded in 1998, is focused on the history of Yellowstone National Park. The museum is managed by the non-profit Yellowstone Historic Center and the YHC is an active partner in this project. The Museum is a fixture in the community and will continue to be a tourist site and economic generator with the location of the proposed trail. The Museum is located on Yellowstone Avenue and would adjoin the proposed trail. Museum management indicated an interest in hosting trail education features and being a possible “hub” or “start” of the trail and related amenities.

The West Yellowstone Chamber of Commerce, located on Yellowstone Avenue, not only supports local businesses in West Yellowstone, but are also a destination marketing organization. This means that they are actively working to target and attract visitors to the area by branding West Yellowstone as a vacation destination. The Chamber is located in the southeast corner of the proposed trail route, with the trail assumed to follow existing sidewalk facilities in the Chamber parking lot.

Grizzly & Wolf Discovery Center, located just south of the West Entrance to Yellowstone National Park, is a not-for-profit wildlife park and educational facility where visitors can see grizzly bears, gray wolves, otters, birds of prey, and other animals. The center offers different opportunities to learn about and experience the animals native to the Yellowstone area. The trail is not planned to adjoin Discovery Center property but will cross Canyon Street just north.

Freeheel and Wheel is an outdoor recreation shop located near the West Entrance of Yellowstone National Park. They offer bike, ski, and snowshoe rentals and services, as well as coffee and gear for sale. Freeheel and Wheel is an active part of the West Yellowstone community and partner of this project. Freeheel and Wheel is located across from the Chamber.

Polaris West is a snowmobile and ATV store in West Yellowstone that offers vehicles for purchase, as well as rentals. The Town of West Yellowstone attracts snowmobile enthusiasts from all over the world which makes Polaris West a resource and economic generator for the community. Polaris West is not located on the trail.

Yellowstone Adventures offers snowmobiles and ATVs for purchase and rental, as well as guided snowmobile tours. Yellowstone Adventures also sells customizable vacation packages for visitors to West Yellowstone. Polaris West is not located on the trail.

Backcountry Adventures is a snowmobile shop that offers rentals, snowmobile tours, and snowcoach tours through Yellowstone National Park and Gallatin National Forest. Backcountry Adventures is not located on the trail.

High Mark Rental provides rentals for a broad range of outdoor gear including ATVs and UTVS, snowmobiles, jackets, boots, helmets, and gloves. High Mark Rental also provides

servicing for ATV, UTV, and snowmobiles. They are located near the corner of Iris Street and Madison Avenue on the west side of the Town and would adjoin the proposed trail.

Two Top Snowmobile Rentals and Tours is a private company providing snowmobile and tours within Yellowstone National Park. The company is located on North Iris Street where the proposed trail connects with the Frontier Trail and Powerline Road and would adjoin the proposed trail

Yellowstone Tour and Travel is a guided tours company associated with Three Bear Lodge, providing users access to Yellowstone National Park by snowmobile, snowcoach, and van in winter and summer seasons. The company is located on Yellowstone Street, across from the historic Union Pacific Dining Lodge.

Three Bear Lodge is a hotel associated with Yellowstone Tour and Travel, providing residents access to Yellowstone National Park and US Forest Service lands. The company is located on Yellowstone Street, across from the historic Union Pacific Dining Lodge.

Site Conditions and Considerations

This section summarizes the site conditions that inform future alignment, design, and construction of any proposed improvements. We outline the considerations for the proposed trail route, safety, trailheads and connections, ADA accessibility, design, right of way and easements, drainage and culverts, utilities, and any gaps in site condition information. Where possible, we include information and images gathered during the May 2nd, 2022, site visit.

Proposed Trail Route

The project team assumes the trail route will follow the rights of way adjoining North Boundary Street, Obsidian Avenue, and North Iris Street as shown in Figure 3 below.

Figure 3. Approximate project area with proposed trail route shown in solid yellow line. Adjoining trails shown in dashed lines.



Current and Anticipated Uses

Trail users in West Yellowstone and surrounding areas consist of recreation hikers, bikers, and runners; daily users (such as dog walkers); and winter recreation users (such as cross-country skiing). Other users are likely, but the three groups noted were the primary users identified by project partners. Partners noted that users of the Frontier and Boundary Trails (north of Town) are primarily dog walkers and similar activities. Users of the Riverside Ski Trail are typically day

users accessing the western areas of Yellowstone National Park and, in winter months, cross country skiers.¹⁷ Rendezvous Ski Trail sees year round use but is most known for cross country skiing and snowshoeing in winter months. Indeed, the trail is host to many winter recreation events like the Yellowstone Rendezvous Race and Yellowstone Ski Festival.¹⁸ The Yellowstone Shortline Trail sees daily as well as recreation users, such as hikers and bicyclists and connects to the wider Greater Yellowstone Trail network.

The proposed trail is intended to connect the current users of each existing trail as they travel from one system to the other within the Town. To that end, the trail is expected to serve bicyclists, pedestrians, and, in winter months, motorized and non-motorized recreation as well.

Feedback received from stakeholder and the public through the project webinar January 18th, 2023, requested greater clarity on whether and how snowmobiles can use the proposed trail in winter months. Motorized use of the trail during winter months is governed by the West Yellowstone Municipal Code under sections 10.12 (Snowmobiles) and 12.20 (Snow Removal). In summary, snowmobiles would be allowed on the proposed trail during the winter months when enough snow has accumulated to allow snowmobiles to operate on the trail without damaging the underlying trail infrastructure, similar to the Town regulations for snowmobiles on roadways.^{19,20}

Safety

The project team evaluated safety concerns that may be applicable to the project, summarized in Table 2 and Figure 4 below. In the Town of West Yellowstone from 2011-2020 there has been one fatal motor vehicle crash in 2019.²¹ During 2016-2018, there was one crash with a pedal cyclist each year in West Yellowstone.²² According to federal Motor Vehicle Crash Data (2011-2020), there have not been any pedal cyclists killed in fatal crashes.²³ Using spatial information from the Montana Department of Transportation (MDT), we can also see groupings of traffic incidents on or adjacent to the proposed trail route.

¹⁷ NPS. 2020. Yellowstone National Park: Riverside Ski Trail. Retrieved December 2022 from: <https://www.nps.gov/thingstodo/yell-riverside-ski-trail.htm>

¹⁸ Rendezvous Ski Trails. 2022. Come ski the Rendezvous Trails! Retrieved December 2022 from: <http://www.skirunbikemt.com/ski.html>

¹⁹ Town of West Yellowstone Municipal Code, Chapter 10.12 (Snowmobiles). <https://www.codepublishing.com/MT/WestYellowstone/#!/WestYellowstone10/WestYellowstone1012.html#10.12>

²⁰ Town of West Yellowstone Municipal Code, Chapter 12.20 (Snow Removal). <https://www.codepublishing.com/MT/WestYellowstone/#!/WestYellowstone12/WestYellowstone1220.html#12.20>

²¹ Montana DOT (2021). All Montana crashes (Data from 2011-2020). MDT. <https://www.mdt.mt.gov/publications/datastats/crashdata.aspx>

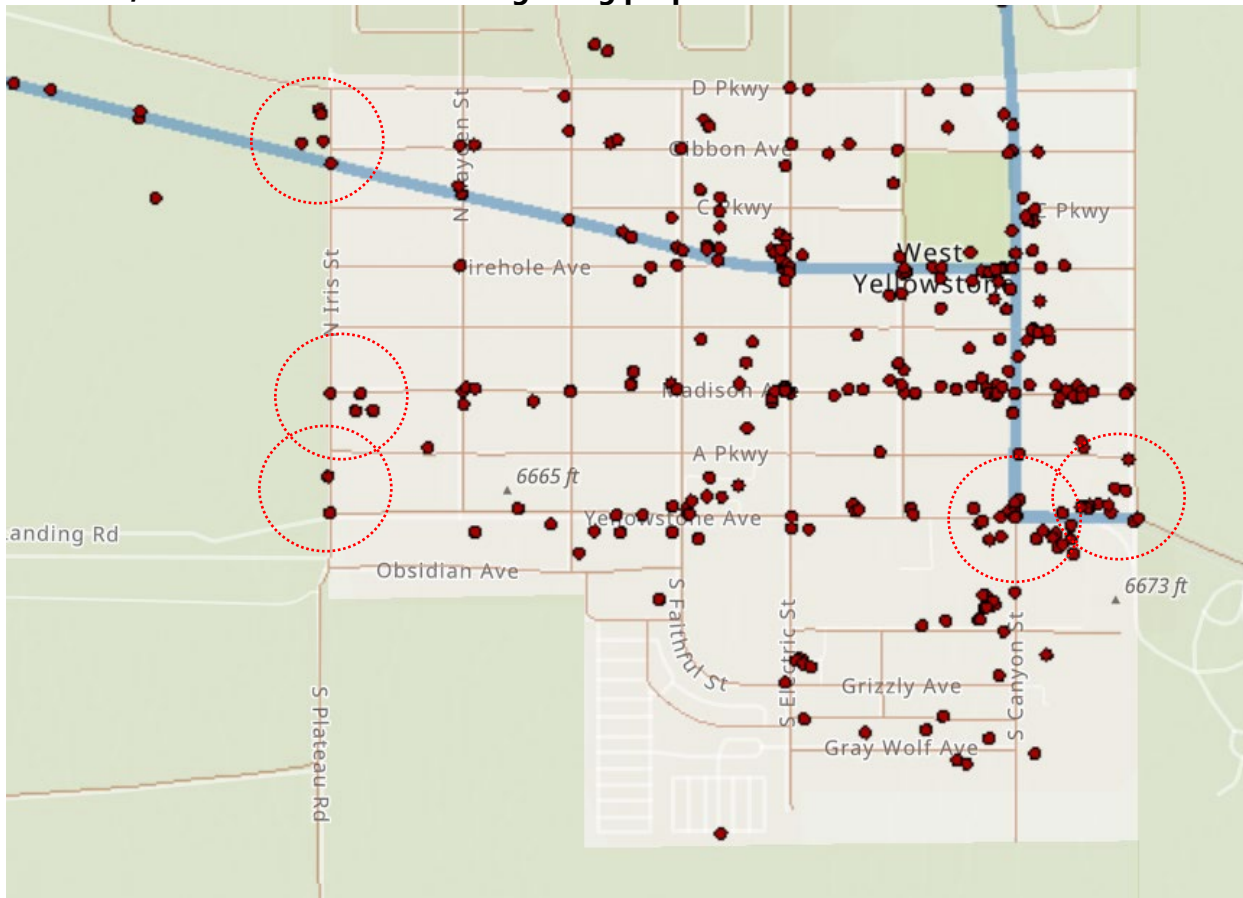
²² Ibid.

²³ National Highway Traffic Safety Administration (NHTSA). (2022). *National Highway Traffic Safety Administration (NHTSA) Motor Vehicle Crash Data Querying and Reporting*. (Fatality and Injury Reporting System Tool (FIRST)). NHTSA. <https://cdan.nhtsa.gov/query>

Table 2. Summary of vehicle crashes in West Yellowstone, Montana, between 2011-2020.

Year	Total Crashes	Fatal Crashes	Crashes Involving Cyclists
2011	12	0	0
2012	11	0	0
2013	12	0	0
2014	9	0	0
2015	25	0	0
2016	58	0	1
2017	68	0	1
2018	67	0	1
2019	64	1	0
2020	55	0	0

Figure 4. Approximate locations of reported vehicle crashes near West Yellowstone, Montana, 2016-2020. Crash clustering along proposed route are circled in red.²⁴



²⁴ Montana DOT. 2023. Montana Crash Data: Statewide Data Map. Retrieved December 2022 from: <https://www.mdt.mt.gov/publications/datastats/crashdata.aspx>

While the number of fatal crashes in West Yellowstone is low, there has been a focus on making facilities safer for drivers, pedestrians, cyclists, and all users. For example, goals for the proposed trail include grade separation for cyclists and pedestrians from vehicles, safe intersection crossing for users, and utilization of traffic calming features at intersections to eliminate conflicts.

Figure 5. Bicycle and Pedestrian Crashes between 2011-2020.²⁵



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Examination of bicycle and pedestrian crashes show incidents primarily occurring off the proposed route and on state highway facilities. Public feedback during the January 18th, 2023, webinar suggested rerouting the Iris Street trail segment further west into the 80-acre public lands. The concern from the project team is, regardless of whether the Iris Street segment moves or remains, that the actual highway crossing remains at Iris Street and not further west on the highway. As the map shows, there have been at least two pedestrian crashes further west of the intersection. Montana Department of Transportation shows the facility speed for this highway as 70 MPH, dropping to 55 and then 45 MPH at about the location of the known pedestrian crashes, and then 25 MPH in town.²⁶ This high-to-low speed transition makes any potential

²⁵ Vision Zero Suite 2022, available through ArcGIS Online open data.

²⁶ Montana Department of Transportation. MDT Speed Studies Database. Retrieved January 2023 from: <https://experience.arcgis.com/experience/8995b56fcac04914a171c3f63b85b85f/>

pedestrian crossing more dangerous the further west it is placed on the highway facility from Iris Street.

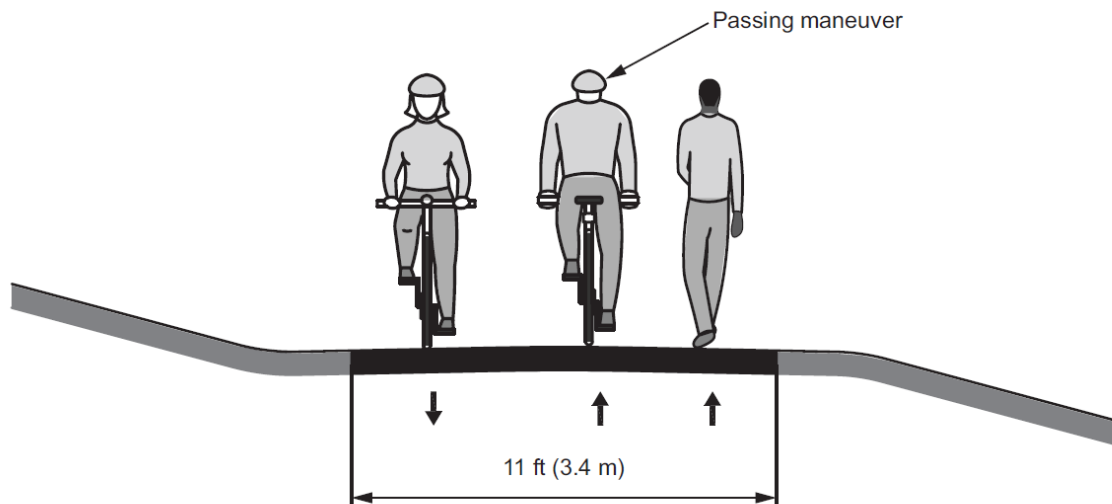
The project team also noted trail specific safety concerns on the Yellowstone Shortline Trail during the team's site visit, including bears in the area in the springtime, as well as some 'out-of-bounds' camping in US Forest Service lands along the trail on day-use-only areas.

Design Considerations

The proposed route shall be designed in accordance with *AASHTO Guide for the Development of Bicycle Facilities (4th Edition)*, Chapter 5: Shared Use Paths. For the purposes of design, the proposed route is considered a "shared use path" instead of a "trail," due to the latter generally indicated unpaved surface. Where the trail connects to USFS and NPS trail systems, the project team shall also incorporate USFS Standard Trail Plans and Specifications.²⁷ Considerations for the project team's design include the following elements.

Typical Cross Section. The minimum paved width for shared use path is 10 feet. The width can vary 10-14 feet, depending on context. A reduced width down to 8 feet is allowed if bicycle traffic is low enough, pedestrian traffic is occasional, passing is easy, and low vehicle-use for maintenance is expected. For the proposed route the project team assumes with a 10 foot paved surface throughout. Figure 6 below provides a typical cross section of shared use path with space for passing.

Figure 6. Shared use path cross section with passing space.²⁸



²⁷ USFS. 2022. *Standard Trail Plans and Specifications*. Retrieved December 2022 from: <https://www.fs.usda.gov/managing-land/trails/trail-management-tools/trailplans>

²⁸ AASHTO. 2012. *Guide for the Development of Bicycle Facilities (4th Edition)*, Chapter 5.

Materials. Best practices for shared use paths in city contexts is to use cement or asphalt paved surfaces. Advantages of cement include longer service life, reduced susceptibility to cracking and deformation from roots and weeds, and a more consistent riding surface after years of use and exposure to the elements. The disadvantages include higher cost and lower contrast for pavement markings than asphalt. Asphalt provides a lower construction cost, generally softer surface for runners and walkers, and greater contrast for pavement markings than cement. The disadvantage is a generally less durable surface compared to cement, leading to repair or replacement after 15-20 years.²⁹

Signage and Wayfinding. The project team shall follow best practices for signage on and along shared use paths as described in the *AASHTO Guide for the Development of Bicycle Facilities (4th Edition)* and *Manual on Uniform Traffic Control Devices for Streets and Highways*. Considerations for the proposed route signage and wayfinding include:

- Designate a system of routes in the Town
- Connection to important origins and destinations, such as:
 - Economic generators
 - Transit connections
 - Other intermodal connections
- Provide wayfinding guidance and connectivity between two or more major bicycle facilities, such as a street with bike lanes and a shared use path
- Provide guidance and continuity in a gap between existing sections of a bikeway, such as a bike lane or shared use path.
- Provide location-specific guidance for bicyclists such as:
 - How to navigate through an area with a complex street layout.
 - Where the route diverges from a way used by motorists.
 - How bicyclists can navigate through a neighborhood to an internal destination, or to a through route that would otherwise be difficult to find.

Additionally, the signage and wayfinding shall align with those developed by Sea Reach for the Yellowstone Shortline Trail.

Alignment with Historic and Trail Corridor Design. In addition to the plans cited in the Planning Context section, the proposed trails design is informed by the parallel design work for the Yellowstone Shortline Trail. The project team intends for aesthetic, signage, and wayfinding elements to align with the same elements in the Yellowstone Shortline Trail. Figures 7a-7c provide examples of design elements from draft design concepts for the Yellowstone Shortline Trail, prepared by Sea Reach Ltd in the Fall of 2022.

²⁹ Ibid.

Figure 7a. Example color palette and logo.



Figure 7b. Example trail markers and distance design.

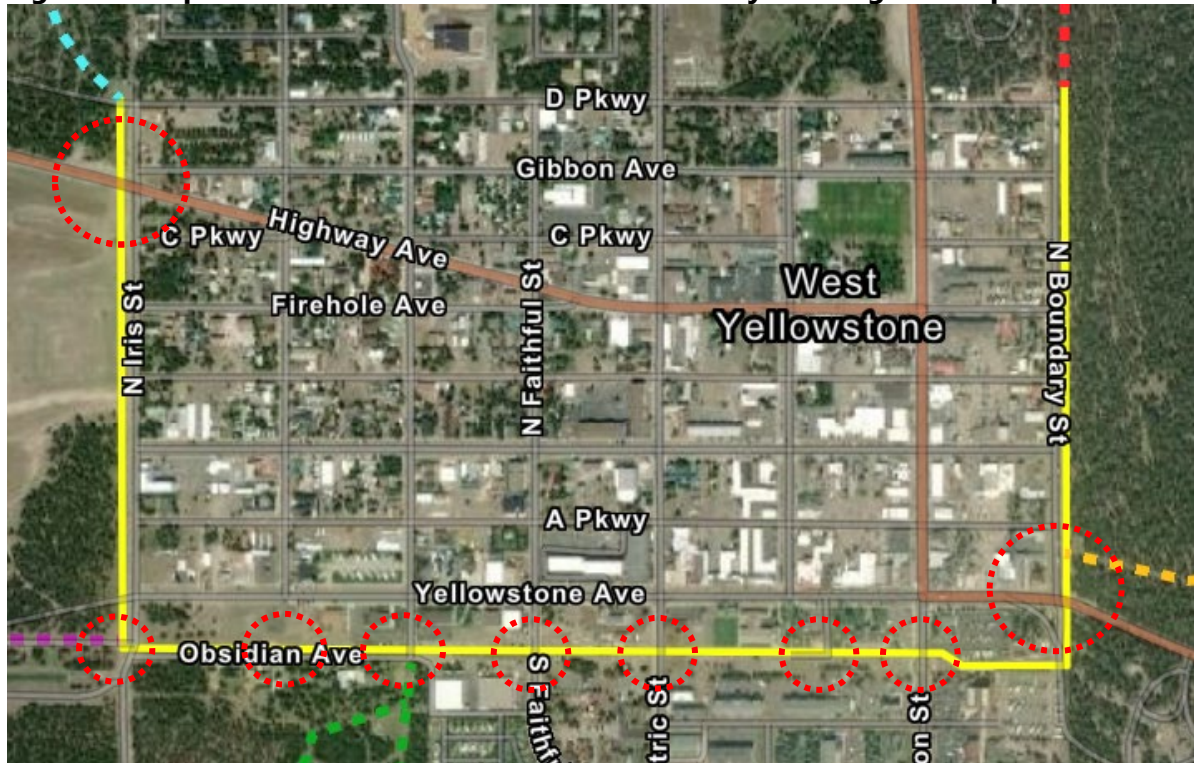


Figure 7c. Example trail amenities design.



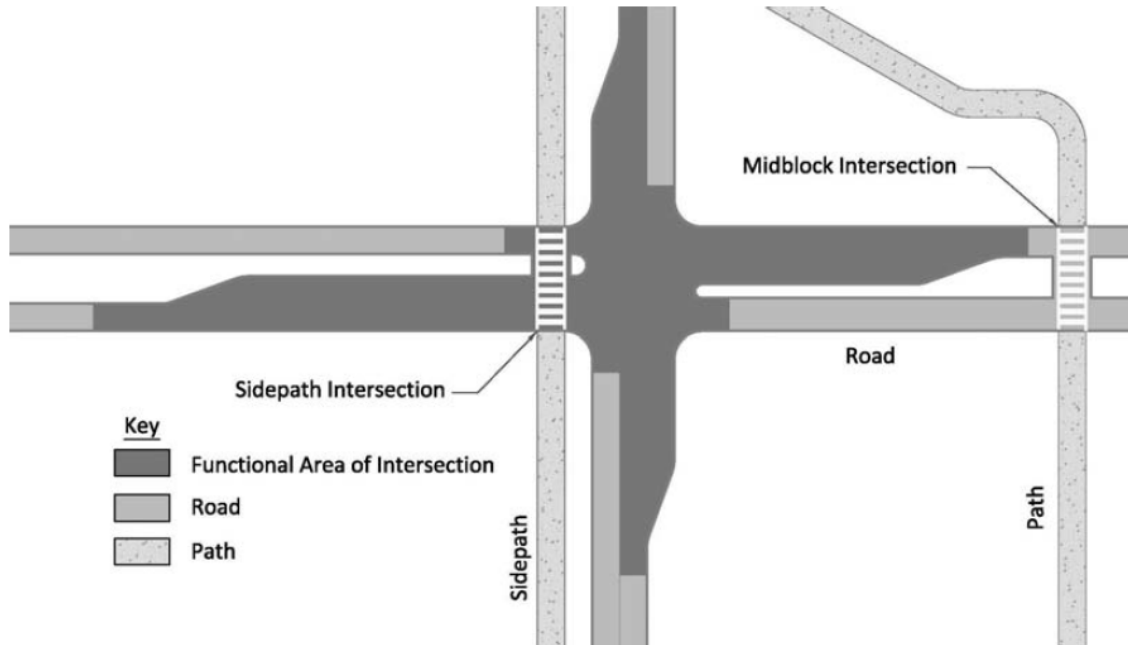
Roadway Intersections. The more complex design issue is how to address road crossings. As Figure 8 below shows, there are nine road crossings, two of which cross state highways (larger red circles below). All locations are at existing intersections and would be considered “side paths” similar to Figure 9 on the following page.³⁰ For these locations, a variety of design options are possible depending on site conditions, cost, community preference, and other criteria. Options the project team can consider include improved signage, pavement markings, crossing center islands, rapid flashing beacons, roundabouts, and other possible designs.

Figure 8. Proposed trail route locations where roadway crossings are expected.



³⁰ AASHTO. 2012. *Guide for the Development of Bicycle Facilities (4th Edition)*, Chapter 5.

Figure 9. Example of “Sidepath” and “Midblock” shared use path crossings. All proposed trail route roadway crossings are sidepaths.



Americans with Disabilities Act (ADA) Accessibility

The proposed trail is assumed to be designed to accommodate users with mobility limitations, per the Americans with Disabilities Act (ADA) and related USDOT regulations. For the purposes ADA Accessibility in design, the project follows Accessibility Requirements for Shared Use Paths as outlined in the *AASHTO Guide for the Development of Bicycle Facilities (4th Edition)* and *Public Rights-of-Way Accessibility Guidelines (PROWAG)*. These resources identify width, passing space, grade, cross slope, street crossings, surface materials and condition, and other necessary considerations for design.

Issues of grade, width, and passing space should not be an issue for much of the proposed route as it falls in flat, wide public rights of way. The areas of concern are roadway crossings, such as those circled in Figure 8 above. The Iris and Boundary Streets areas also correspond to crash clustering shown in the safety section. The project team should also ensure appropriate ADA Accessibility signage is located along the proposed route.

Right of way and easements

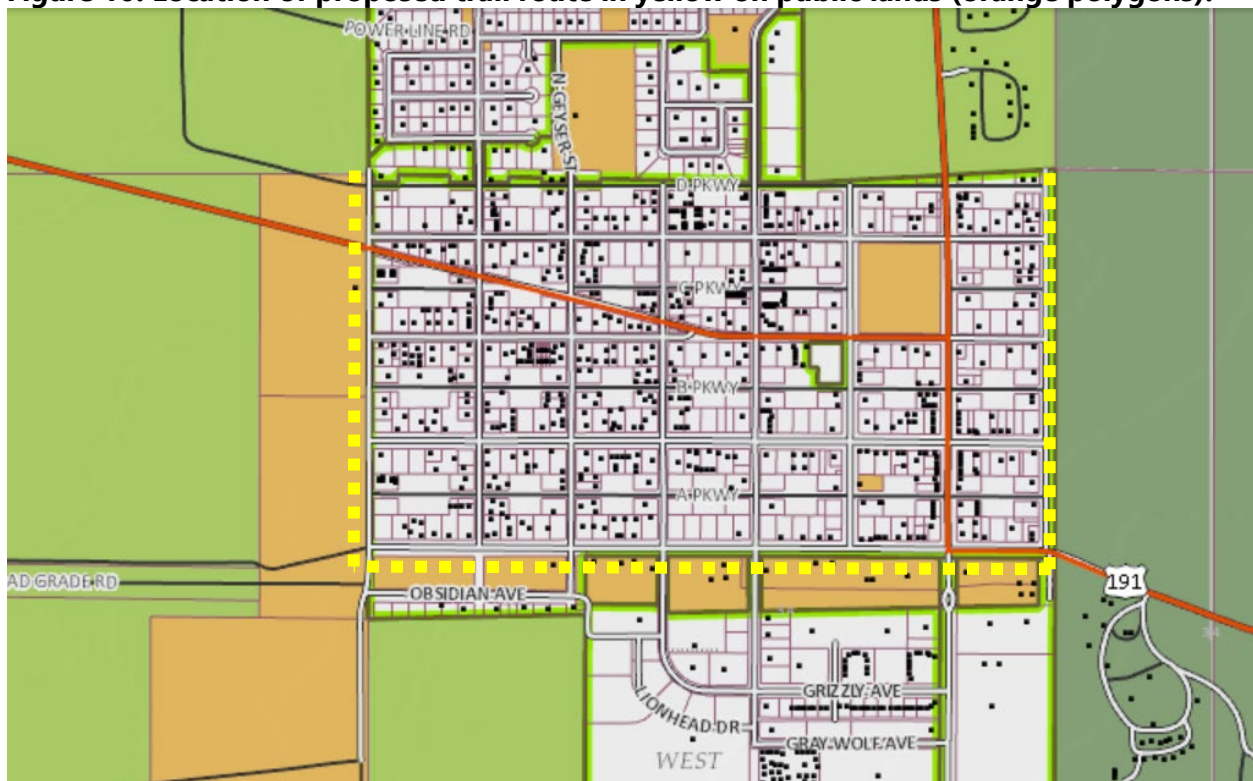
There are therefore no known right of way and easement conflicts to completing the proposed trail. The proposed trail is located entirely on Town-owned property and/or road right of way easements. Figure 10 below shows the proposed route in relation to property ownership.

The western route segment along Iris Street exists within the 80-acres of Town-owned land identified for future development. The Town should designate the trail easement within the 80-acre property prior to any development decisions are made.

The southern route segment follows the former Shortline Railbed through Town property and lots. Similar to the 80-acre property, the Town should designate the trail easement along the southern segment before any other development decisions are made.

The eastern route segment falls into the Boundary Street right of way between the paved roadway and the western boundary of Yellowstone National Park, as shown in Figure 11 below. The width of this area is approximately 30 feet.

Figure 10. Location of proposed trail route in yellow on public lands (orange polygons).³¹



³¹ Gallatin County. 2022. Gallatin County Interactive Maps. Retrieved December 2022 from: <http://webapps.gallatin.mt.gov/mappers/>.

Figure 11. Proposed trail route at Boundary Street connection to Boundary Trail³²



Drainage and Culverts

No known drainage issues exist and there are no culverts on the proposed route. The proposed trail will incorporate appropriate drainage features as applicable to the facility design, per *AASHTO Guide for the Development of Bicycle Facilities (4th Edition)*.³³

Utilities

Information provided by the Town's Public Service Superintendent and Energy West Montana confirms that a natural gas line runs along boundary street north-south along the border with Yellowstone National Park. The gas line roughly 4' east of the curb and gutter along Boundary Street at 36-40" in depth (see Figure 5.5 in Site Visit Report).

Further information from the Town states that water lines operate at a minimum depth of seven feet. For the proposed trail area, a water main runs along Iris Street north-south on the east side of the road. Also, the entire system is a giant looped system (lines do not terminate), which allows a constant flow to purge from the four ejection wells in each corner of the original townsite. The Town notes a water line approximately four feet north of Obsidian Avenue in former Shortline Rail bed.

³² Ibid.

³³ See Chapter 5.2.11 Drainage.

Conclusion

Following public and stakeholder engagement for the Existing Conditions milestone, the project team observed the following feedback themes for consideration in future project deliverables.³⁴

1. **Address trail options on Iris Street and through 80-acres parcel.** Comments received expressed interest in the trail route running through the 80-acres parcel rather than along Iris Street, as depicted in Figure 12 below.

Figure 12. Example alternate route through 80-acres parcel.



2. **Highway crossing designs.** Comments received expressed support for addressing highway crossing safety for the proposed trail, especially at US 20 and Iris Street. Many comments requested grade-separated designs, which may or may not be the appropriate option for the trail base on design, cost, and safety issues addressed.
3. **Connections to school and Madison Addition.** The proposed trail ends at Iris Street and Alley D/D Parkway, with users continuing on to USFS Trails around the northern boundary of the Town. Comments received suggested extending the trail route to connect with the West Yellowstone Elementary and Junior/Senior High schools as well as to the Madison Addition Walking Path.

³⁴ The themes shown in this section are summarized from the public and stakeholder comments addressed in the Engagement Strategy memorandum.

4. **Additional Park Features.** Comments received recommended additional design features to support bicycle and ski equipment storage along the route and improving the Shortline Railbed segment to become a linear park.

The summarized comments shown as well as those responded to in the Engagement Strategy will inform the conceptual design and cost estimate work that follows the Existing Conditions.