

Parkland Community Trail

Parkland, WA

Alternatives Evaluation & Conceptual Design

August 2020







Acknowledgements

The idea for a north-south trail in Parkland has been supported in the community for many years. The Parkland-Spanaway-Midland Communities Plan adopted the concept in 2002, later adopted by Pierce County Comprehensive Plan in 2015. It was from these plans and ongoing discussions with the community that this, Parkland Community Trail concept was born.

We want to thank the many Parkland residents who have a vision for a trail and continue to show up, engage, and advocate for the community. Your contributions to this project have been critical to shaping the concept in this document and where this project will go in the future.

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Overview

The Parkland Community Trail is a significant milestone in the Parkland neighborhood and represents a commitment from Pierce County leadership to improve safe mobility and enhance recreational options for Parkland residents.

Trails are important pieces of a community's fabric – they provide separated spaces for people to walk, run, bike, skate, and roll, among other activities. They create spaces for people to relax, contemplate, exercise, and socialize. In areas where sidewalks are lacking, trails are a vital way to help people move safely around the neighborhood, separated from areas with vehicular traffic. For those with mobility impairments, trails and sidewalks are critical for independence.

Studies have also shown the numerous physical and mental health benefits of trails, not only in providing places for people to stay active, but also by facilitating social interactions and connections which in turn create a sense of belonging. These types of interactions have shown to have a significant impact on reducing mental health associated with isolation and depression. These are just some of the benefits, in addition to simply enjoying time outside, that the Parkland Community Trail can bring to the community.

The Parkland Community Trail was first identified in the Parkland-Spanaway-Midland Communities Plan as a regional trail spine connecting all three communities. From this main trail, other connections to parks, public facilities, schools, and other trails could be made. This vision moved closer to reality when Pierce County Parks applied for and received grant funding for trail design in 2018.

Trail design is generally completed in three primary stages:

- Alternatives Evaluation & Conceptual Design: This is
 the process of evaluating the route that the trail should take
 by considering various routes and assessing each route
 for opportunities and constraints. A preferred alternative
 is identified, and a high-level design is prepared.
- Preliminary Design: After a concept design is prepared, the detailed engineering work begins. Preliminary engineering assesses the alignment and trail concept in much greater detail and identifies more opportunities and constraints. The public provides feedback on key decisions during this phase.
- Final Design: Based on further analysis of the trail alignment and public feedback, the final design is engineered and permits are started with key agencies.
 Trail construction is based on the final design.

This report outlines the process of how the conceptual design was created. It provides information on the various alternatives that were considered and how the community was engaged throughout the process The report concludes with the conceptual trail design and some of the envisioned design characteristics. The purpose of this report is to provide a foundation for the additional stages of trail design that will follow.



At a Glance

Engagement by the Numbers



Flyers

4,000+

Postcards



165

87

Webmap Interactions



50

Public Meeting Attendees



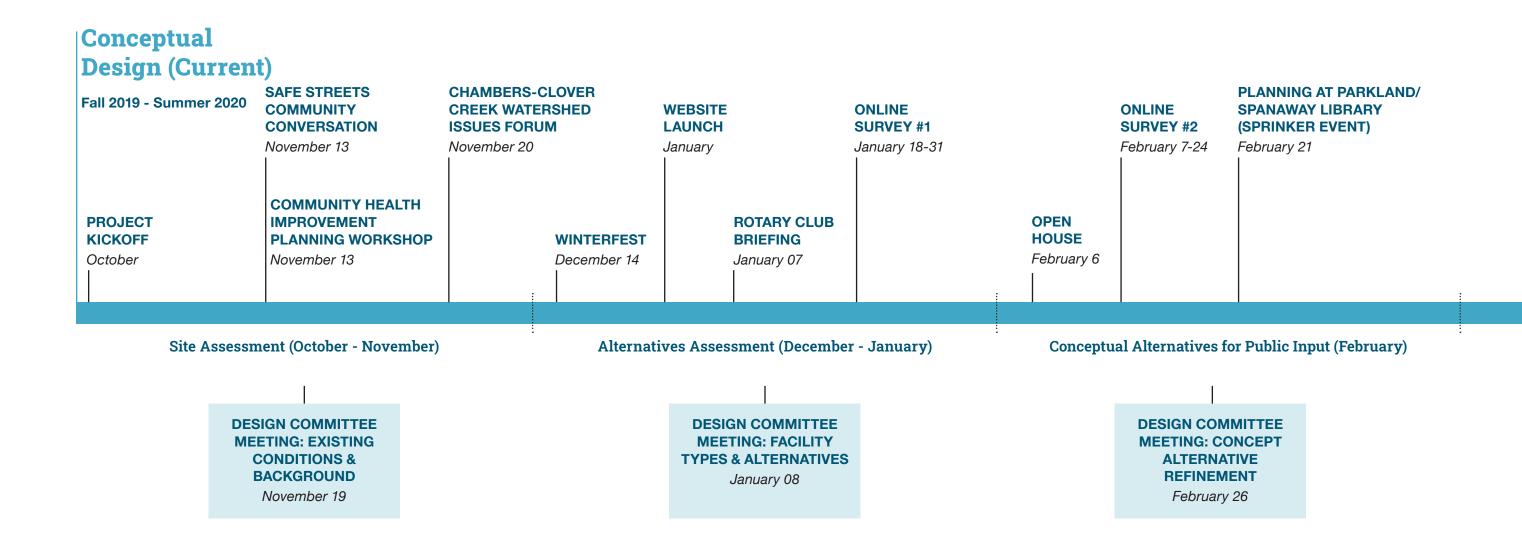


20+

Virtual Neighborhood Meeting Users

61%

of survey respondants said that safety, through better lighting and visibility, was their top priority for the **Parkland Community Trail**



Parkland Community Trail by the Numbers



Parkland Community Trail

The estimated cost of the proposed Parkland Community Trail



esign: \$800,000



Construction: \$2.5 million



Project Objectives



ACCESS

Give Parkland residents access to a safe and comfortable trail that connects them to the many schools, parks, Sprinker Recreation Center, and open spaces located in and around the neighborhood.



EQUITY

Improve active transportation options for all through increased capital investments in walking and biking infrastructure.



CONNECTIVITY

Provide safe street crossings, particularly at Tule Lake Road and 138th Street S., that allow people to easily and safely connect to transit and other destinations throughout the neighborhood.



QUALITY OF LIFE

Create a trail that reflects the Parkland community and provides attractive space for people to move around the neighborhood safely and reliably by foot, assistive device, and bicycle.



SAFETY

Provide opportunities for all people to safely travel to their destinations around the neighborhood by reducing the risk of collisions between people walking, biking, and rolling and motor vehicles.



ENVIRONMENT

Develop design solutions that minimize the impact of stormwater runoff, protect sensitive features, preserve trees and enhance Clover Creek. Connect people to open space and nature such as Clover Creek and Parkland Prairie.



HEALTH

Encourage physical activity by increasing access to safe and reliable active transportation options as well as providing safe access to Sprinker Recreation Center and other parks throughout the neighborhood.

Planning Context

GEOGRAPHIC LOCATION

The Parkland Community Trail is located in Parkland. Parkland is a census-designated place in unincorporated Pierce County. It is generally bordered by Joint Base Lewis-McChord on the west, Golden Given Road and Brookdale Road E. on the east, Highway 512 on the north, and Military Road S. / 152nd Street E on the south. Pacific Avenue S. (Highway 7) is the primary arterial roadway through the neighborhood and is the heart of the area's commercial activity.

The current phase of the Parkland Community Trail extends roughly from Keithley Middle School at 124th Street S. on the north to Sprinker Recreation Center on the south. As shown in the Planning Context Map, the Parkland Community Trail serves as a major connection between numerous schools, Pacific Lutheran University, several parks, open spaces, places of worship, public facilities, and Sprinker Recreation Center.

PLANNING GUIDANCE

The Pierce County Parks, Recreation, and Open Space Plan (PROS) guides the planning, design, and implementation of recreational facilities across Pierce County. A demand and need analysis identified trails as the number one amenity needed to improve recreational services for its communities. This need is supported by a statewide survey on outdoor recreational demand that indicated that the highest participation rate of all recreational categories was people walking and biking in a park or trail setting. The statewide survey found that trails were in high demand across all ages, genders, races, and incomes.



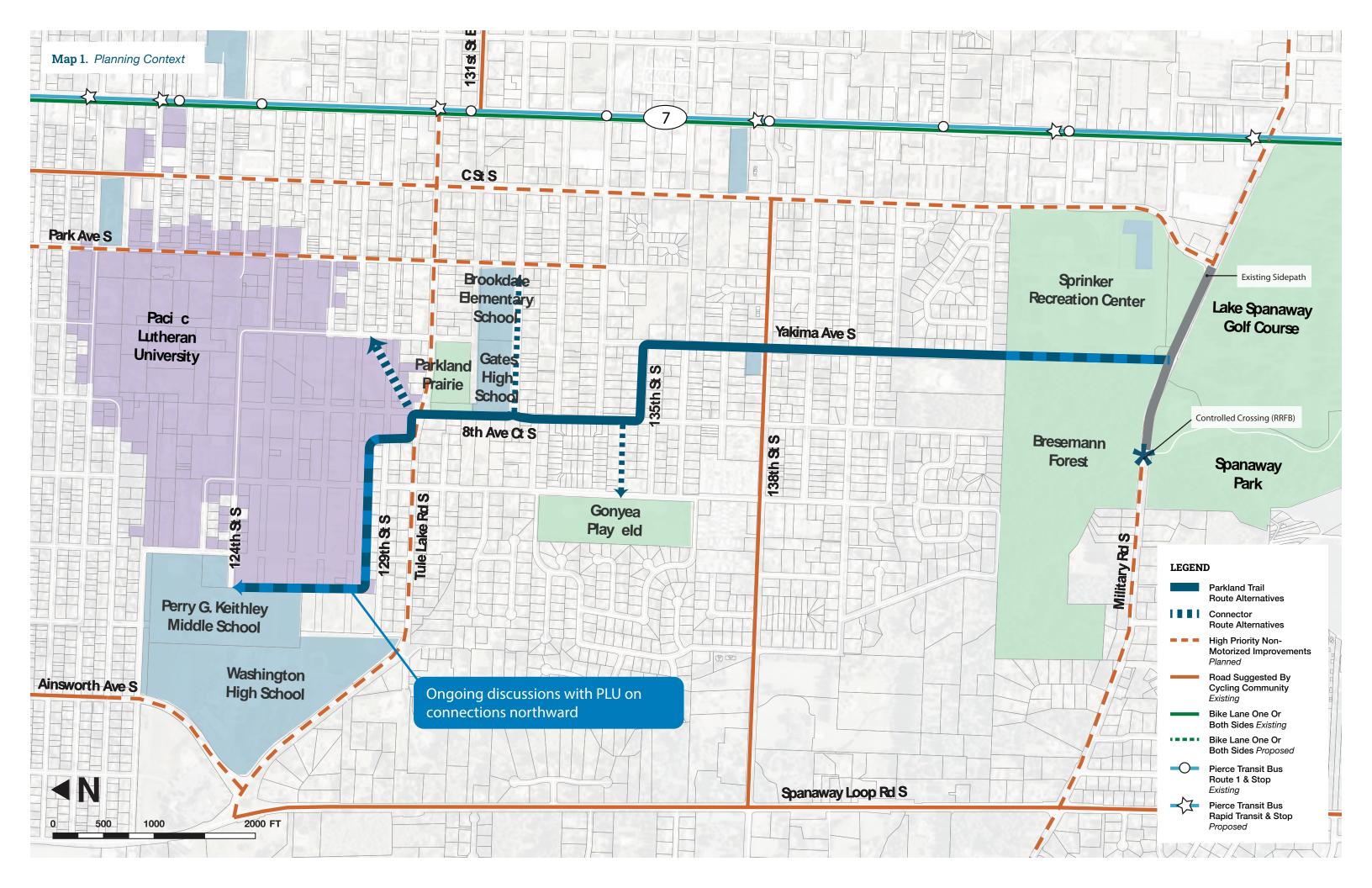
Keithley Middle School at the northern terminus of the current trail segment

Washington's Recreation and Conservation Office (RCO) develops statewide recreation policy including the Washington State Trails Plan which includes recommendations for:

- Improving Trail Equity: locate and build trails for underserved populations, connect more people to trails, provide trails where people like to use them, and address safety.
- Linking Trails with Transportation: Ensure recreational trails complement and link with multimodal transportation systems to provide a seamless experience.



Sprinker Recreation Center at the southern terminus of the current trail segment



Investment & Need

Trail miles in Parkland do not currently support the needs of this underserved population. Parkland lacks sidewalks and safe places for people to walk, bike or commute. Additionally, Parkland is not well served by public transportation, and activities such as traveling to the park, getting to school or work and seeking safe places for exercise all require a vehicle. Highway 7, which lacks pedestrian infrastructure, is the primary transit corridor through Parkland. Transit improvements, including additional bus rapid transit stops, are planned, but will not be built for many years.

The Parkland Community Trail will provide access to many of the neighborhood's parks, open spaces, and recreational facilities. Sidewalk improvements can help to link the trail to Gonyea Playfield, a popular park in Parkland. The trail also creates the opportunity for more direct access to Sprinker Recreation Center and Bresemann Forest where upgrades and improvements are ongoing. A multiuse trail along Military Road S. provides a linkage between the Parkland Community Trail's southern terminus at Sprinker Recreation Center and the many recreational trails and open spaces around Spanaway Lake Park.

Finally, the trail can help enhance regional connectivity. Pacific Lutheran University's south campus, situated at the northern extent of the trail, is currently being utilized by residents for outdoor recreation, despite being privately owned. Future extensions of the Parkland Community Trail northward will utilize either C Street S. or Ainsworth Avenue S. to cross Highway 512 and proceed northward to Tacoma. As part of this project, conversations were held with Pacific Lutheran University to assess how and where the Parkland Community Trail might travel through campus to both serve the PLU campus and facilitate these future connections northward.

The Parkland Community Trail is an intentional and equitable investment by the County into the neighborhood. The trail is an opportunity to provide safe routes for people of all ages to walk, bike, roll, skate, and play. The trail provides an

opportunity for safe physical activity within the neighborhood itself, allowing residents to rely a little less on cars for every trip. The trail can even enhance community, by providing places for neighbors to connect and interact. All of these benefits, among so many others, are known to improve both the physical and mental health of those that have access to trails.

HEALTH DISPARITIES

There are numerous health impacts experienced by those living in underserved neighborhoods, and these are disproportionally borne by people of color. Infrastructure investment has traditionally followed new development, placing central, established neighborhoods at a disadvantage for investment.

When compared to communities across Washington State by the Washington Department of Health, Parkland earns a score of 10 out of 10 populations disproportionately impacted by poverty and poor health outcomes. Drilling down into the data bit further, Parkland earns a score of 9 out of 10 for "populations near heavy traffic roadways." A 2017 report from the Center for Climate and Energy Solutions indicated that emissions-related health issues, including an increased risk of cancer, asthma, emphysema, heart disease, and developmental delays in children, impact lower-income communities at a higher rate. Parkland's ranking in the top 10 for populations near heavy traffic roadways highlights the potential health impacts and the additional need for non-motorized investments not just for safety, but health.

BENEFITS OF PHYSICAL ACTIVITY

According to data from the CDC, parks and trails promote physical activity, which has been shown to have many health benefits including:



Opportunities to connect with the outdoors



Improved air quality and reduced pedestrian and cyclist collisions with vehicles



Improve mental health and mood



Reduce the risk of diabetes, cardiovascular disease, and some cancers.

Demographics

The 2010 US Census counted a total of 35,803 residents in Parkland and recent US Census estimates increase the population to approximately 38,000.

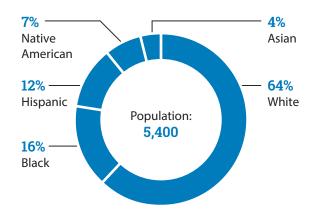
The Parkland community, as determined by the RCO, is considered an underserved population in that residents are below the state median household income and above the statewide percentage of persons of color, disabled population, body mass index for ages 16-19, and mortality rate.

Parkland is significantly more diverse than Washington State as a whole, with persons reporting as white accounting for only 51 percent of the total population. Hispanics or Latinos, Blacks, Asians, and Pacific Islanders account for 43 percent of the population and trends are showing that the neighborhood is continuing to diversify. This diversity is one of the unique strengths of Parkland and is celebrated through festivals, places of worship, community activities, and commercial establishments.

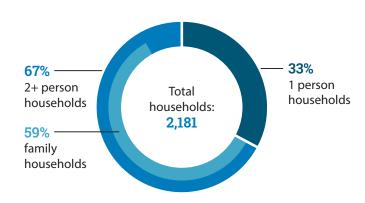
One unique demographic characteristic of Parkland is the age breakdown. Parkland has a higher population of residents over the age of 65 than the state average as well as a higher number of people living alone. At the same time, the neighborhood has larger family sizes than the state average and a large population of children. In short, this reflects that the neighborhood has a large number of younger families along with a larger number of seniors, both important groups to consider in trail planning.

CENTRAL PARKLAND

Population



Households



23%

of Parkland's population speaks a language other than English at home



Average household size:

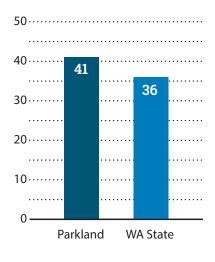
2.5



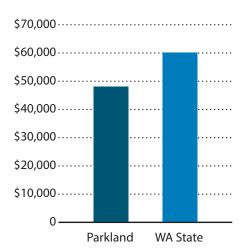
Average family size:

3.3

Median Age



Median Income



http://www.usa.com/WA053071503.html

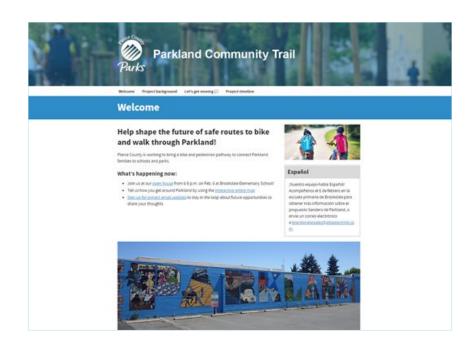
Process

Trails are a neighborhood and community asset. Since they are created directly for the neighborhood's enjoyment and use, they should also be designed by those who will benefit from them.

One of the primary objectives and genuinely desired outcomes of this phase of the Parkland Community Trail's development was a robust, diverse, and inclusive engagement process that provided multiple platforms and different opportunities for input. During late winter of 2020, the global COVID-19 health crisis changed the final outreach methods from in-person events and celebrations to virtual methods, discussed below.

WEBSITE & SOCIAL MEDIA

A dedicated project website was created for the Parkland Community Trail. The website provided project history, background, schedule, and materials, including materials from public meetings and the progression of the alignment evaluation and draft concept design. Additionally, the website hosted an interactive webtool that allowed participants to draw in their desired routes for the trail, highlight areas with safety concerns, and provide general comments on potential alternatives and alignments. Comments and routes were able to be seen by all, and could be "liked" to show support and agreement. Throughout the project, Pierce County also posted project information via their social media platforms, including posts in Spanish.



IN-PERSON OUTREACH

The Parkland project team hosted a booth at the PLU Center for Community Engagement & Service's Winterfest in Parkland providing an opportunity to talk with people about the Parkland Community Trail, the route alternatives, and how people might use the trail (bike, walk, run, skateboard, etc). The team was able to chat with over 300 people from the neighborhood at this event. Additionally, the project team attended various forums, workshops, and community organization meetings to provide information and updates on progress.

IN-PERSON OUTREACH EVENTS

- November 13: Community Health Improvement Planning Workshop
- · November 13: Safe Streets Community Conversation
- November 20: Chambers-Clover Creek Watershed Issues Forum
- December 14: Winterfest
- · January 7: Rotary Club Briefing
- · January 18 to January 31: Online Survey 1
- February 6: Open House
- February 7-24: Online Survey 2
- February 21: Tabling at Parkland/Spanaway Library
- March 6: Pacific Lutheran University Class
- · April 29: Neighborhood Webinar
- May 12: Rotary Club Update

POST CARDS

In order to provide an alternative to web-based input, over four thousand post cards were mailed to Parkland residents to advertise the open house. The post cards also directed neighbors to the project website for additional information. Post cards included Spanish outreach and directed Spanish speakers to the website where more multi-lingual information was provided.

OPEN HOUSE

On February 7, 2020, an open house was held from 6-8pm at Brookdale Elementary School in Parkland. The open house provided an overview of the preferred alignment and discussed what other alignments were considered and why they were removed. Over 50 residents of the neighborhood were in attendance, along with representatives from Pacific Lutheran University and the Tacoma-Pierce County Health Department. Feedback and input received at this meeting helped to validate and refine the preferred route, and directly influenced the decision to design a separated trail for the full extent of trail route.

VIRTUAL NEIGHBORHOOD MEETING

The COVID-19 health crisis required a change to the engagement approach. In lieu of in-person "targeted" meetings where the project team could meet with small groups and perform door-to-door outreach, a virtual neighborhood meeting was organized. The virtual neighborhood meeting was a live webinar hosted by Pierce County where participants could "chat" questions to the project team. The project team also provided an overview of some focused areas of the trail where questions had been received. All information, including a recording of the webinar, was posted to the project website.



NEIGHBORHOOD OUTREACH

- Why a Webinar?
- Why were you invited?
- What are we covering today?





Crossings





PROJECT FLYER

In preparation for the Virtual Neighborhood Meeting, a project flyer was sent out to all residents who lived directly adjacent to the planned trail, along with others who were perceived to be impacted the greatest by the trail. The flyers included an update on the project along with information on how to attend the upcoming meeting and other ways to provide input on the project.

CELEBRATION

The COVID-19 Pandemic impacted the ability for this phase of the project to conclude with the originally planned neighborhood bike rodeo celebration. In lieu of the in-person celebration, Parkland Community Trail engagement was combined with broader Pierce County Parks engagement efforts happening at the time. Coloring activities for children were posted on the Parkland Community Trail project website and completed artwork was encouraged to be sent back to the project team and shared on social media. The hashtag **#PierceCoCreates** encouraged people to post artwork from the Parkland Community Trail project website.

What We Heard

The engagement process directly reached hundreds of Parkland residents through a variety of outreach activites. There are numerous residents, community groups, houses of worship, schools, advocacy groups, and public agencies that can continue to be engaged as the Parkland Community Trail continues to be designed.

The majority of those engaged were supportive of the future trail, particularly due to concerns over the lack of sidewalks and safe crossings, particularly for children. There were feelings of excitement about using the trail to walk, bike, skate, and roll around the neighborhood and having a dedicated space to travel to parks and schools. Street crossings, in particular, were a major safety concern, particularly 138th Street S. and a future crossing at Tule Lake Road S.

Several trail options were provided for feedback, including a shared street concept where all users share an intentionally designed space. Feedback overwhelmingly indicated a preference for a separated trail from the roadway for safety and comfort.

Public concerns were primarily around vehicular speeds, particularly on 10th Avenue S. and 138th Avenue S, potential tree impacts, and relocating fencing in areas where fencing extends into the right-of-way. There were also some concerns over general safety, particularly near Bresseman Forest.

The diversity of Parkland is one of its greatest assets. It will be critical to continue community-based design that honors the unique communities and diversity of the neighborhood and for the trail to not only be an recreational opportunity, but a trail that reflects the neighborhood and is proudly owned by the community.

WHAT WE HEARD

- Preference for a separated facility over a shared street facility
- Ensure safety by providing lighting and visibility for users
- · Safe connections for children to walk and bike to schools
- Provide safe roadway crossings, especially at Tule Lake Road S and 138th Street S.
- Preference for 8th Avenue S. over 10th Avenue S.
- Need to improve walking and biking around the neighborhood in general
- · Concerns over speeding and higher traffic
- · Provide linkages to the parks
- · Desire to preserve trees and natural features
- · Need for bike safety education





Site Analysis

The technical evaluation of the trail began with a site analysis. The site analysis helps to better understand some of the opportunities and constraints that exist along the potential trail routes. The site analysis was completed across several visits beginning with a windshield survey, where first thoughts and potential obstructions were identified, and followed by additional visits where measurements, encroachments, right-of-way verification, and other "on ground" issues were assessed.

It's important to remember that the site analysis during a conceptual design is a reconnaissance—it focuses on questions like:

- What are the current characteristics of the right-ofway, the area owned by the County? Are there sidewalks, pathways, unofficial pathways people are using? What are the parking patterns within the right-of-way? Are there existing areas within the right-of-way that provide space for a trail?
- Where are residents wanting to go? Assessing the destinations in the neighborhood and understanding which roadways and pathways people take to get there.
- Are there safety issues? Observing traffic patterns in-person and understanding vehicular travel behaviors such as speeding, and whether a trail in those corridors might be unsafe.
- Is visibility clear, particularly at major crossings? Visiting
 potential roadway sites and assessing whether there is good
 visibility for trail users, meaning that trail users are able to see
 oncoming traffic, and that traffic is able to better see trail users.
- Are there major obstructions within the right-of-way? Are there major utilities, significant trees, or property encroachments, such as fences, within the public right-of-way?

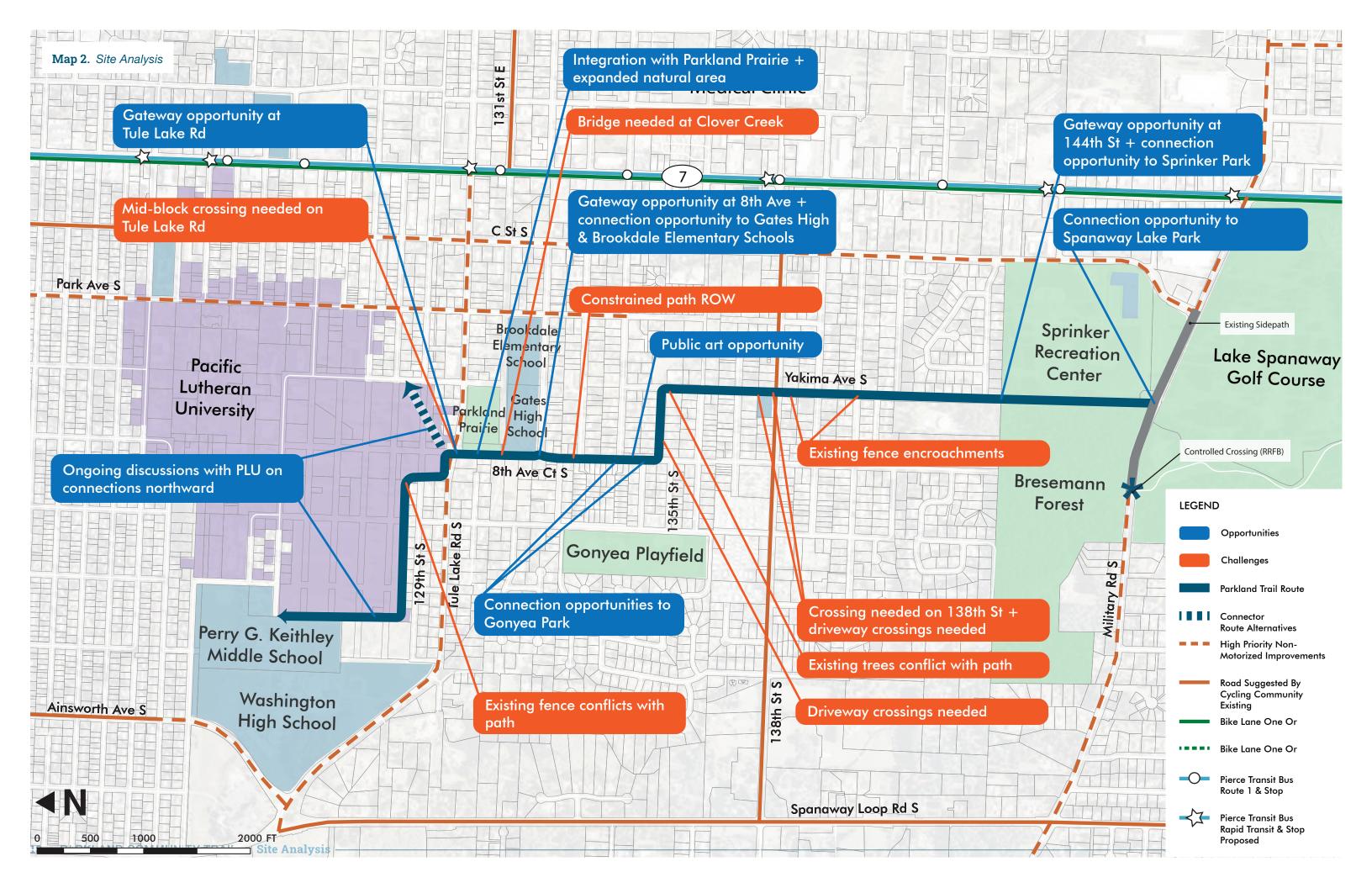
The following chapter provides an overview of this reconnaissance which helps to inform the alternatives assessment. It's also important to note that no surveying was conducted as part of the conceptual design; Pierce County GIS data was used and further surveying in critical areas will be required in future phases of work.







Current site conditions across Parkland do not provide a separated area for pedestrians and are generally characterized by a 55-foot right-of-way with 20-foot pavement widths.



Existing Characteristics

The first task of the site analysis is examining the existing characteristics of the areas where the trail could potentially go. Looking at the existing characteristics is important because it helps designers find the path of least resistence which can help to minimize impacts to adjacent residents and lower overall construction costs. Assessing existing site characteristics involves looking at how areas where the trail could go are currently being used and determining if there are any major barriers that would cause major impacts. Looking at existing characteristics also involves looking for opportunities, such as open areas that could more easily accommodate a potential trail. The following section provides more detail on some of these types of observations.

INFRASTRUCTURE & UTILITIES

Parkland is generally void of sidewalks. Some sidewalks and a Rapid Flashing Rectangular Beacon (RRFB) for controlled pedestrian crossings are located at 10th Avenue S. and 134th Street Ct. S. near Gonyea Playfield. The area is also generally void of curb and gutter street infrastructure, although some underground stormwater conveyance is present, such as along 138th Avenue S. Generally speaking, Parkland's soils have high concentrations of sand which allow for rapid absorption of stormwater runoff, even during larger storm events. These beneficial soils, and their rapid absorption, have minimized the need for formalized storm conveyance.

Utilities, such as water and sewer, are present within the public right-of-way. These utilities are governed by franchise agreements between the utility purveyors and the County, when the utilities are operated by other agencies. Infrastructure such as fire hydrants will be relocated as part of trail construction.

Most power service lines within Parkland are above ground and generally located on one side of the right-of-way. While these types of facilities located within the public right-of-way require relocation as part of public projects, the trail design considered significant relocations of power transmission lines as a barrier for trail implementation. There are some utility poles that will require relocation, however the total number is minimal.

STREET USAGE PATTERNS

Overall, the average width of street pavement within the right-of-way for most areas assessed was roughly between 20 and 25 feet. This equates to two, 10-12' vehicular lanes without any formal shoulder space—a narrow roadway. Pedestrians were observed walking within the roadway pavement since no dedicated pedestrian spaces are present. Numerous kids were observed walking on the roadway pavement as they walked home from school.

In most places, the right-of-way is roughly 55 feet, although it varies in some locations. The 20-foot roadway pavement leaves roughly 30 to 35 feet of space within the right-of-way that is not used for direct vehicular travel. In areas where residential homes front the streets, this space is used for vehicular parking on both sides of the roadway. Generally, north to south avenues, such as 10th Avenue S. and 8th Avenue Ct. S., have less shoulder parking, while east to west streets have a far greater amount of on-street parking since homes take direct access off these streets in much higher proportions.

TRAFFIC & VISIBILITY

Observations were made around rush hour periods at several locations across Parkland, including 10th Avenue S., 8th Avenue Ct. S., Tule Lake Road S at Parkland Prairie, 138th Street S. at Yakima Avenue S, and Yakima Avenue S at 144th Street S. These observations were qualitative, not quantitative. Observations indicated that 10th Avenue S. had significantly higher traffic volumes than 8th Avenue Ct. S. Additionally, traffic speeds were substantially higher along 10th Avenue S. This is most likely due to 10th Avenue S. providing a cut-through connection between Tule Lake Road S and 138th Street S. 8th Avenue Ct. S. did have higher traffic volumes near 132nd Street S. during times of student releases at Brookdale Elementary and Gates High School, also accompanied by a large number of students walking in the street or on the immediate street shoulder.

Both Tule Lake Road S and 138th St S are wider arterial roadways with paved shoulders. These two roadways had the fastest traffic speeds and the highest traffic volumes. The Parkland Community Trail will need to cross both roadways. Due to higher traffic volumes and speeds, crossings at these two roadways will need to be highly visible with controlled trail crossings. Additionally, traffic calming measures can be incorporated to help slow traffic naturally as it approaches trail crossings. Sight line distances were assessed at potential crossing sites and met site line requirements at the proposed Tule Lake Road crossing and also at two proposed crossings at 138th Street S. (Yakima Avenue S. and 8th Avenue Ct. S.).

EXISTING PAVEMENT PATTERNS

Roadway pavement within the County right-of-way varies considerably and meanders within the right-of-way lines. In some areas, the pavement is nearly centered within the right-of-way while in others, the pavement is oriented more towards the edge of the right-of-way. The assessment of roadway pavement within the right-of-way is important because it could significantly reduce the cost of trail implementation by avoiding major roadway reconstruction. For example, roadway pavement located in the center of the right-of-way does not provide sufficient space on either side to incorporate a trail and associated buffers. Conversely, roadway pavement located on one particular side of the right-of-way provides more space on the opposite to incorporate a trail and buffer areas.

On north/south avenues, the pavement was generally centered along 10th Avenue S. but was oriented more towards the eastern sides of the right-of-way along 8th Avenue Ct. S. and Yakima Avenue S. making the latter roadways more opportunistic for a trail on the western sides. Roadway pavement on Yakima Avenue S was more consistently on the eastern side of the right-of-way while some shifts take place on 8th Avenue Ct. S., particularly as the roadway approaches the intersection of 138th Street S. The east/west cross-streets are highly variable. Generally, 134th Street S., 136th Street S., and 141st Street S. had pavement oriented towards the south, leaving room on the north for a trail. Conversely, 135th Street S., 137th Street S. and 140th Street S. had pavement on the northern side of the right-of-way, leaving space on the southern right-of-way area for a potential trail. 141st Street Ct. S. had pavement roughly in the middle of the right-of-way, not conducive for a separated trail facility but other facility options could be considered.

NORTH END

North of Tule Lake Road S, there is some variability in how and where the trail can go to provide a connection north of Pacific Lutheran University. 129th Street S. provides County right-ofway to make a westward trail connection towards 14th Avenue S. from a potential trail crossing near Parkland Prairie. In order for a trail connection to move northward, however, an easement would need to be acquired from either Franklin Pierce School District or Pacific Lutheran University. Without easement acquisition, the trail would likely need to use the shoulder of Tule Lake Road S to Ainsworth Avenue S to proceed northward on the western side of the schools and Pacific Lutheran University. The south campus area of Pacific Lutheran University is a former golf course now used for disc golf and open space by the neighborhood. There are visible pathways and trails that have been organically created in the open space area. This open space area presents an opportunity for an off-street trail, but would require participation by Pacific Lutheran University.

A north-eastward connection to the east of Pacific Lutheran University would also require coordination with Pacific Lutheran University should the trail move outside of the County right-of-way. While not ideal, a trail connection on the north side of Tule Lake Road S could connect to Yakima Avenue S. and proceed northward along Yakima Avenue S. This particular area, however, is the location of Pacific Lutheran University's student housing bringing higher activity and more vehicles. Additionally, the Yakima Avenue S. right-of-way is heavily used for student parking. Any trail facility through this location would need to include design enhancements to ensure the safety of trail users due to the higher activity levels.

SOUTH END

8th Avenue Ct. S. provides a direct connection into Bresemann Forest where currently only soft-surface trails and walking are permitted. Bresemann Forest is also a conservation area and is heavily forested. A trail through the forest would require a larger disturbance area and the removal of a significant number of trees. Yakima Avenue S. provides a second southward connection with a more direct link to Sprinker Recreation Center using County rightof-way. The Yakima Avenue S. route could provide a direct trail connection southward to the Sprinker Recreation Center parking lot which could leverage existing parking capacity for a trailhead, along with providing a direct connection for Parkland residents to Sprinker Recreation Center. This route also provides a connection to an existing sidepath along Military Road where a controlled crossing provides access to Spanaway Lake Park. An ongoing redesign process for the Sprinker Recreation Center is examining the possibility of incorporating the trail along the boundary between Sprinker Recreation Center and Bresemann Forest.



Sidepath along Military Road connecting to Spanaway Lake Park.

Opportunities

As part of the existing conditions evaluation, opportunities are developed. Opportunities can be existing physical observations that can be leveraged to minimize construction impacts and lower costs, such as the availability of space within the existing right-of-way to incorporate a trail. Opportunities can also be the identification of routes that would provide better connections to schools, parks, and public facilities around Parkland. Finally, opportunities can be natural features that, if enhanced or preserved, can create a sense of place and connect residents to nature, such as Clover Creek. The following section provides greater detail on the primary opportunities identified during the site evaluation.

8TH AVENUE CT. S.

8th Avenue Ct. S. provides a calmer roadway that is more conducive for trail user safety. The roadway does not see major cut-through traffic advantages, and is typically used more by residents who live in the neighborhood, with the exception of school drop-off and pick-up periods at Brookdale Elementary and Gates High School. North of 137th Street South, roadway pavement is generally oriented on the eastern side of the right-of-way, providing a varied 15-20 feet of space on the western side of the right-of-way for a potential trail. Additionally, Pierce County Parks owns the vacant land to the north and west of the 8th Avenue Ct. S. and 132nd Street S. intersection that surrounds Clover Creek. This area would provide an off-street trail connection from Parkland Prairie to 8th Avenue Ct. S.

YAKIMA AVENUE S.

Similar to 8th Avenue Ct. S., Yakima Avenue S. is also a relatively quiet local street. To the south of 138th Street S., Yakima Avenue S. does have cut-through traffic via 144th Street S.

Existing roadway pavement along Yakima is generally oriented on the eastern side of the public right-of-way providing between 15 to 20 feet of space on the western side of the right-of-way for a potential trail. At the intersection of 138th Street S., the existing pavement on Yakima Avenue S. continues to be oriented on the eastern side of the right-of-way through the intersection, providing space and a great opportunity for a trail crossing. 8th Avenue Ct. S., on the other hand, does have a significant pavement shift through the 138th Street S. intersection which would require roadway reconstruction to provide a trail crossing. Additionally, Yakima Avenue S. provides a direct connection to Sprinker Recreation within existing right-of-way.



Yakima Avenue S. near 144th Street S.



8th Avenue provides an opportunity for a trail along the western side of the right-of-way



Yakima Avenue provides an opportunity for the trail on the western side

PARKLAND PRAIRIE / CLOVER CREEK

Pierce County owns the property along Clover Creek to the north and west of Gates High School. This area provides an opportunity for an off-street trail which would be a characteristic change since trail design south of this location is generally adjacent to an existing roadway. Currently, the 10th Avenue S. crossing of Clover Creek is the only immediate crossing to be leveraged. The existing bridge, however, is narrow and does not have the space to accommodate a trail crossing without major reconstruction. In lieu of 10th Avenue S., a low-profile trail crossing could be built over Clover Creek, near Parkland Prairie, and could connect to 8th Avenue Ct. S. at 132nd Street. This would provide a more natural trail experience and could be enhanced by future park work or Clover Creek restoration efforts.



The south campus area of Pacific Lutheran University is utilized by students and by the neighborhood for open space, although the area is private land owned by Pacific Lutheran University. Trails have been organically carved into the south campus area through extensive use. There is an opportunity for a trail connection from Tule Lake northward through Pacific Lutheran University that would avoid a facility along 129th Street S. and instead traverse north of the 129th Street neighborhood. This trail connection facilitates a northward extension of the trail, providing better access for adjacent schools and neighborhoods. Pierce County Planning & Public Works has a planned sewer extension project that would also run in the same general area as a potential trail alignment. Discussions are ongoing with Pacific Lutheran University and the Franklin Pierce School District on this sewer main alignment. The alignment could be utilized for both the sewer main extension and the trail project by creating a dual easement.



Clover Creek near proposed trail crossing

GATEWAYS AND BRANDING

Trail crossings provide a great opportunity for trail visibility and are excellent areas for branding. A potential trail crossing of Tule Lake Road on the western side of Parkland Prairie would be a major gateway location. Design space could include a rest area, Parkland Community Trail gateway signage, public art, landscaping, and wayfinding signage. In addition to trail branding, these types of activities would also naturally slow down traffic as it approaches the trail crossing by giving visual cues, along with signage and controlled crossing features.

A second highly visible area is at the intersection of 8th Avenue Ct. S. and 132nd Street S. This area where a future trail could connect from the open space area near Clover Creek to 8th Avenue S. would be a great candidate for a passive area with benches, art, and gateway signage. Currently a number of fir trees at this site would provide natural shade, particularly in the afternoon.

Due to most of the trail being confined to existing County right-ofway, there are not a lot of opportunities for large design spaces. In these constrained areas, branding will be accomplished through visibility, wayfinding signage, and smaller artistic details.



Clover Creek restoration within Parkland Prairie



Potential alignment along the PLU / Keithley Middle School boundary

Challenges

The final piece of site evaluation is the identification of challenges along potential routes where the trail may be located. Challenges for trail design and construction can include:

- Steep elevations or hills
- Natural features including streams, creeks, wetlands, and large trees
- Utilities like storm, power, water, and sewer that can lead to expensive relocations
- Property encroachments, such as property fencing and landscaping that extends into the public right-of-way
- Alignments through privately owned areas that require negotiations and agreements
- Existing roadway patterns within the right-ofway that can limit the ability to construct the trail without significant roadway reconstruction

These challenges, among others, help to assess the pros and cons of various alignment options, described in Appendix A. The following section provides more detail on some of the primary challenges identified through the site analysis.

CLOVER CREEK CROSSING

As the water table rises in the winter months, Clover Creek comes to life with running water. Currently, 10th Avenue S. is the primary crossing of Clover Creek in the vicinity of the Parkland Community Trail. As mentioned previously, the 10th Avenue S. crossing of Clover Creek does not have sufficient width to accommodate a trail crossing without major reconstruction. An alternative is a crossing of Clover Creek that is designed exclusively for trail users. Clover Creek is a designated salmonid stream, so the addition of a crossing would require permitting and construction would need to occur during the fish window to minimize disturbances. While a new crossing can be expensive, the low-profile nature of trail bridges would create cost savings for a new crossing. Regardless of where, a new crossing of Clover Creek will need to be created for trail users.

MINIMIZING ROADWAY RECONSTRUCTION

A main goal of the trail alignment was to select a route that would avoid reconstruction of existing roadway pavement which would trigger more costly improvements to meet current design standards. In many areas, there is sufficient width to accommodate a trail with some buffers, but minimizing impact to existing roadway pavement does pose some challenges. In some areas, the required four-foot buffer between the trail and the roadway are not achievable without shifting roadway pavement. In these areas, deviations from the four-foot separation requirement, and/or trail width reductions, will need to occur. Additionally, there are a few areas where trees exist within the County right-of-way. Without roadway pavement shifts, the trail width will likely need reduction in these tight spots, or tree removal will need to occur.



Clover Creek Crossing at 10th Avenue. S.



Yakima Avenue configured to the eastern side of rightof-way, leaving space in western ROW for trail

FENCING & ENCROACHMENTS

Without formalized curbs, gutters, and sidewalks throughout Parkland, there are some ambiguities on where personal property lines exist. In many cases, there appear to be small encroachments by residents into the County right-of-way, as evidenced by fencing, plants, and shrubs beyond the property line. In a few locations, these encroachments are significant, with fencing and some landscaping extending 10 to 15 feet into the County right-of-way. One of the largest encroachments occurs along 8th Avenue Ct. S. just to the south of 138th Street S, where rock walls and evergreens are planted well into the right-of-way. Along Yakima Avenue S., a few fence encroachments are present. In most cases, the encroachments do not present major obstructions, but fencing will need to be replaced and relocated to maximize space for the trail and buffers.

There are a couple areas where large trees also exist in the right-of-way, particularly along Yakima Avenue at 135th Street S. While these large trees are within the County right-of-way, the County is exploring options to protect the trees as part of trail design, as possible.

NORTHERN EXTENSION

The trail alignment north of Tule Lake Road S is contingent on participation by Pacific Lutheran University and the Franklin Pierce School District due to private land ownership north of Tule Lake Road S. Without participation, the trail route will need to be confined to public right-of-way westward to Ainsworth Avenue S or eastward to Yakima Avenue S. in order to progress northward. This is a critical segment with some current ambiguity on where the segment can be located. As mentioned previously, a planned sewer main project through both Pacific Lutheran University and Franklin Pierce School District property roughly in the same location of the trail presents a major opportunity to consolidate infrastructure projects into the same easement, with some minor deviations between the two. Ongoing discussions with all parties have been positive and the final alignment of the trail north of Tule Lake Road S will be contingent on the outcome of these conversations.



PLU South Campus Open Space near 129th Ave S.



Major encroachments into right-of-way (left side of photo)



Periodic utilities in right-of-way

CONNECTION THROUGH SPRINKER

Sprinker Recreation Center is a regional parks and recreation venue for Parkland and the broader community. At the time of this project, Sprinker Recreation Center is also completing a redesign process for outdoor improvements. Sprinker is currently locked and gated during non-operational hours, which would limit accessibility by trail users. A major goal for the Parkland Community Trail would be accessibility by trail uses and not making trail use contingent on the center's hours of operation. A Yakima Avenue S. alignment would place the trail at the boundary between Sprinker Recreation Center and Bresemann Forest. As part of the redesign process, the alignment of the trail through Sprinker Recreation Center grounds, and a discussion of trail operation through the grounds, is taking place. The outcomes of this conversation will be reflected in future design of the Parkland Community Trail.

PARKING

In Parkland, roadways are surrounded by shoulders - areas of gravel or grass directly adjacent to the roadway pavement. These shoulders are often used by residents for parking. Site reconnaissance found that the avenues (north to south roadways) typically have less shoulder parking since fewer homes have driveways directly on these roadways. On the other hand, east to west roadways have a much higher concentrations of shoulder parking. One consideration for where the trail should be routed is minimizing the disruption and impact of removing on-street shoulder parking by residents as much as possible.

The north to south orientation of the Parkland Community
Trail can leverage roadways where minimal shoulder parking
exists, minimizing shoulder parking disturbances. The trail
will, however, need to shift from 8th Ave Ct S to Yakima
Ave S. which will require using one of the residential streets
for the transition. This will likely impact shoulder parking
on the side of the street where the trail is located.



Sprinker Recreation Center boundary



Shoulder Parking on 135th Street S.

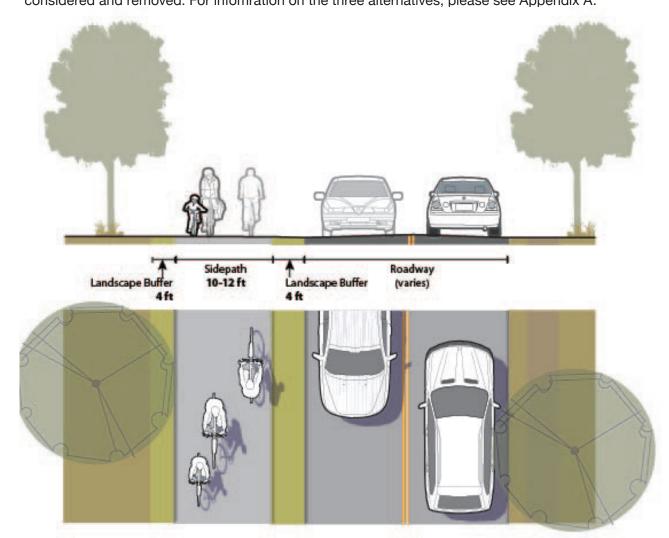


Preferred Alternative

Creating the preferred alternative is a complex process that involves assessing a number of different options. This process of assessment and removal, supported by public feedback, utlimately led to the creation of the preferred alternative route for the Parkland Community Trail that begins near Pacific Lutheran University and Keithley Middle School, parallells 129th Street S to the north of existing homes, crosses Tule Lake Road S near Parkland Prairie, crosses Clover Creek with a new low-profile trail bridge, extends southward along 8th Avenue Ct. S., uses 135th Street S. to move east to Yakima Avenue S., and from there continues southward for a direct connection to Sprinker Recreation Center.

This preferred alignment for the Parkland Community Trail was identified to have the least significant impacts, although some impacts and constraints still exist. These constraints will continue to be evaluated during future design and engineering stages. This preferred alternative is shown in detail in Chapter 04.

The following pages provide greater detail into the decision-making process and highlight the alternatives that were considered and removed. For information on the three alternatives, please see Appendix A.











Inspiration for the Parkland Community Trail



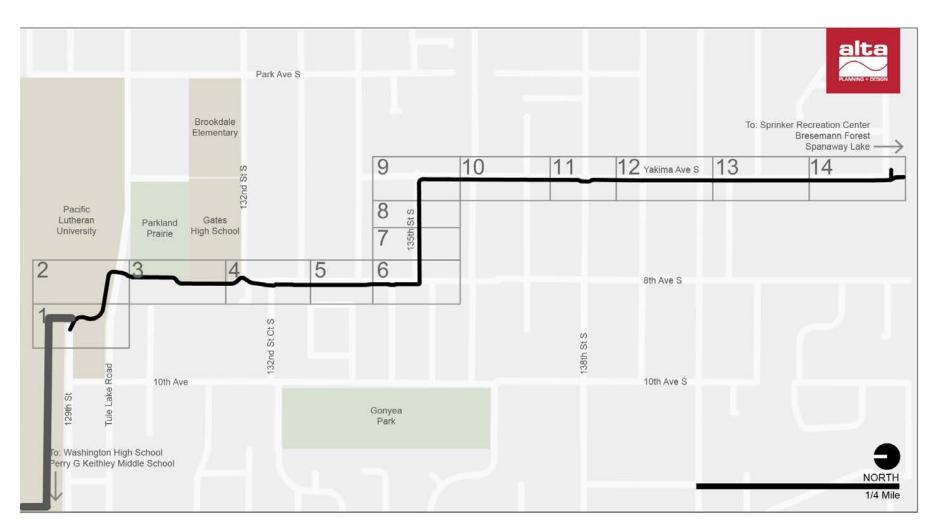
Trail Concept

The Parkland Community Trail concept is a "first look" visual that helps to show where the trail will go and how it might look.

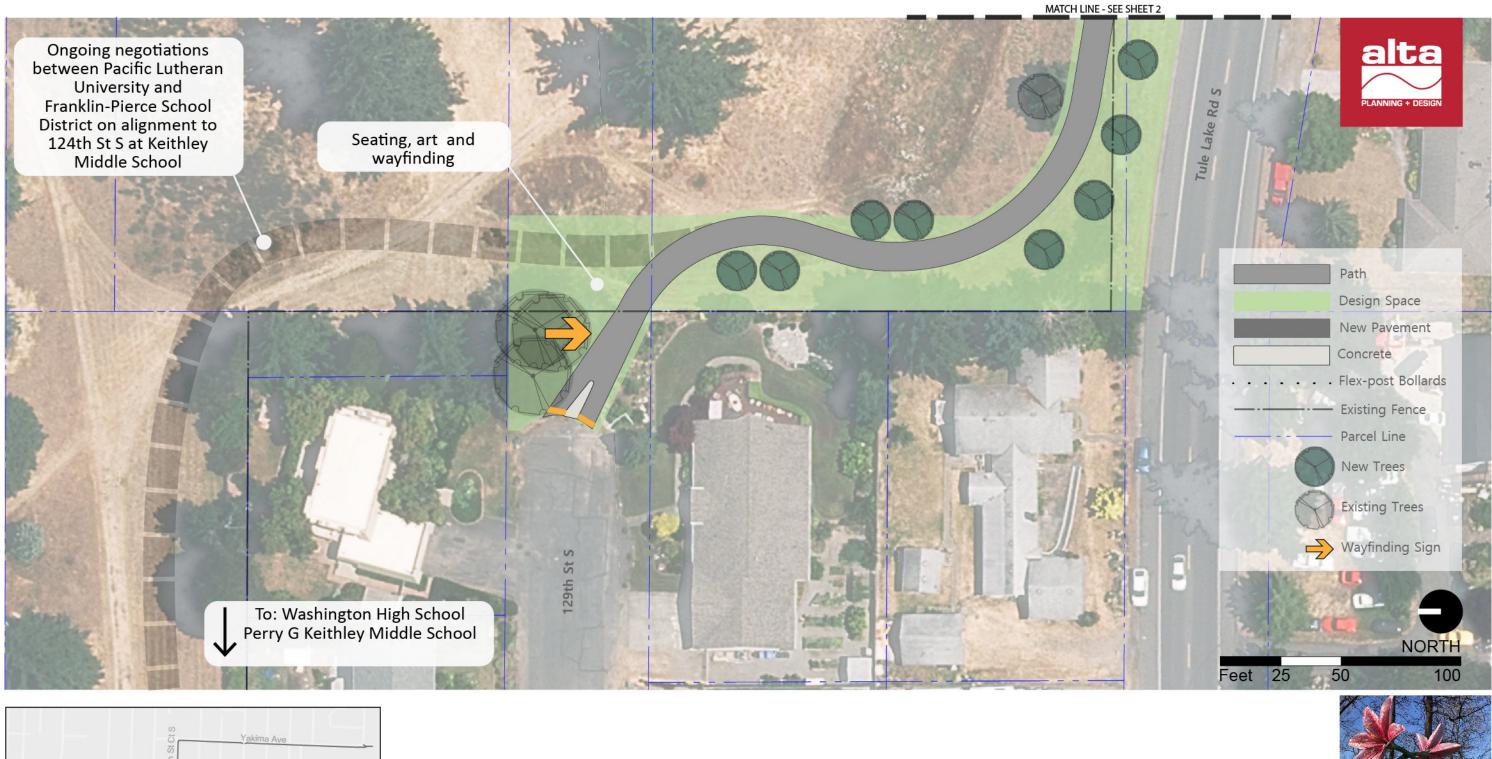
The concept is a result of the reconnaissance, site assessments, alternatives evaluation, and public input. The Parkland Community Trail concept is based directly on the preferred alternative described in the previous chapter.

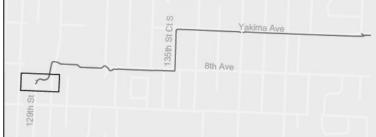
The concept design on the following pages creates a guide for future trail design by pulling information into a tangible and visual view. The Parkland Community Trail concept is a reflection of how the trail can be built within the existing context and constraints. The concept is not, however, an engineering document and is only the first of several steps towards building the trail.

The following trail concept design only includes the sections between 129th Street S. and Sprinker Recreation Center since the final north and south legs of the trail are currently being discussed and negotiated.



Key map for concept sheets



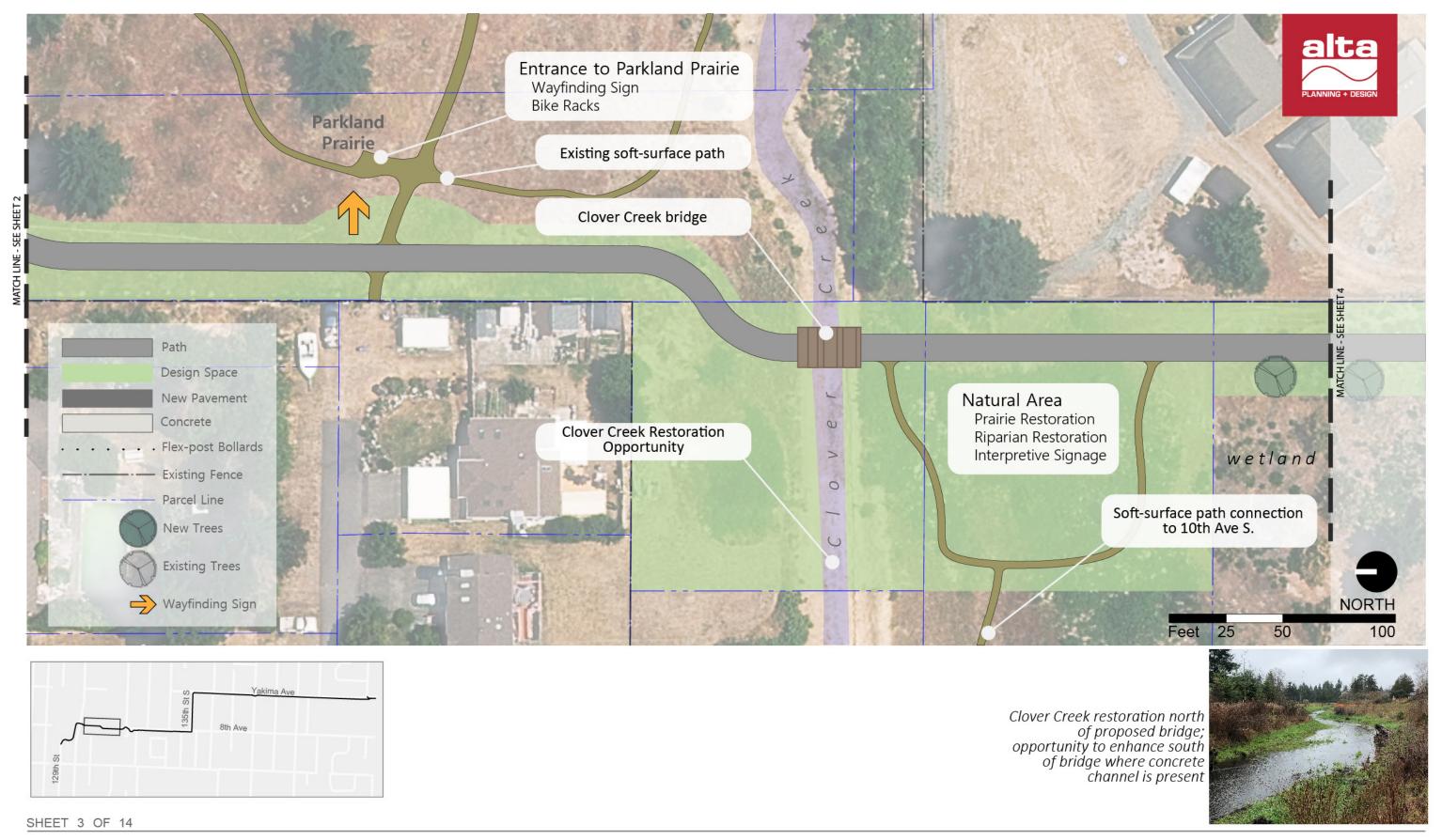


Seating, art, and wayfinding

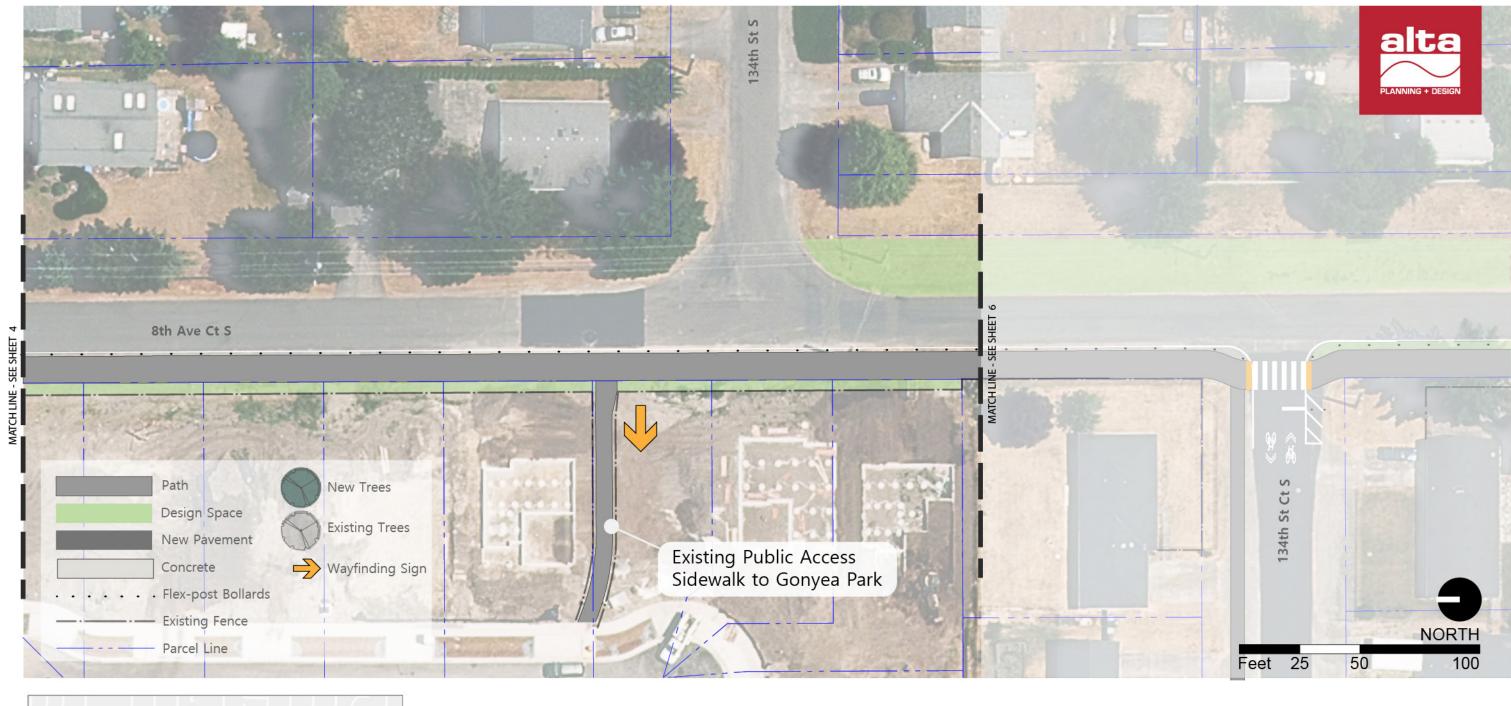
PARKLAND NEIGHBORHOOD TRAIL | PIERCE COUNTY, WA

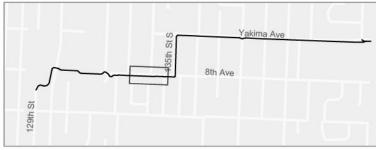
SHEET 1 OF 14



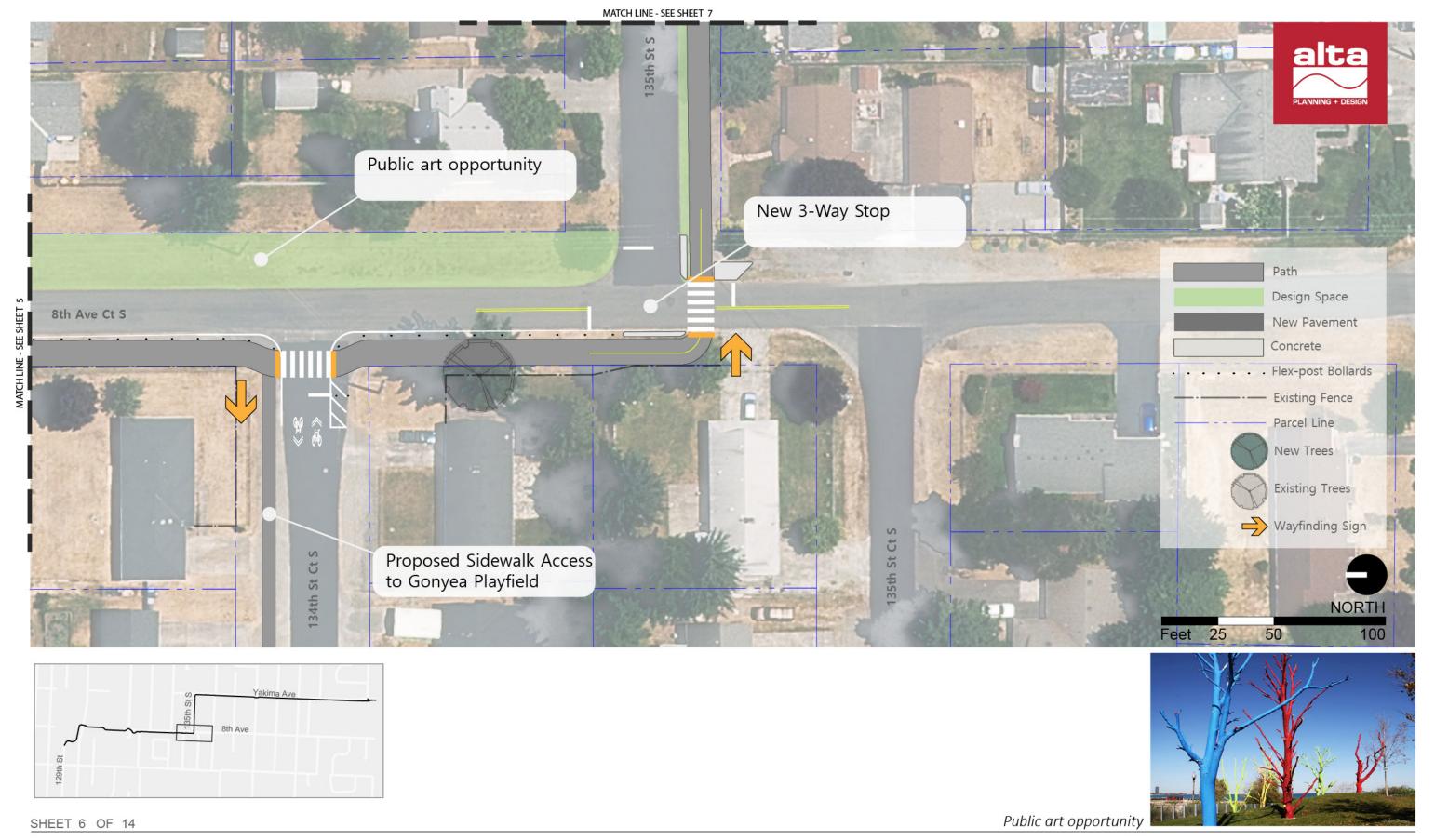




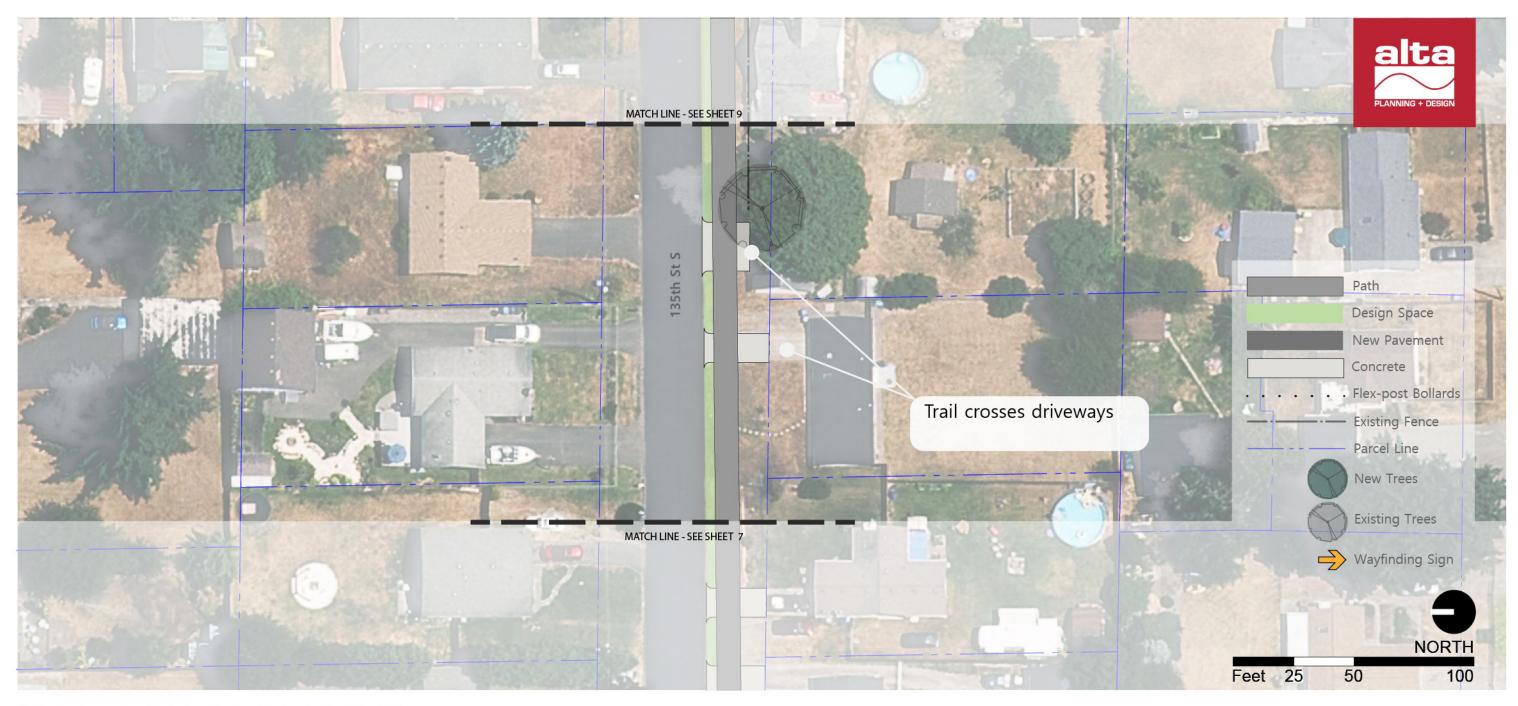




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SHEET 8 OF 14



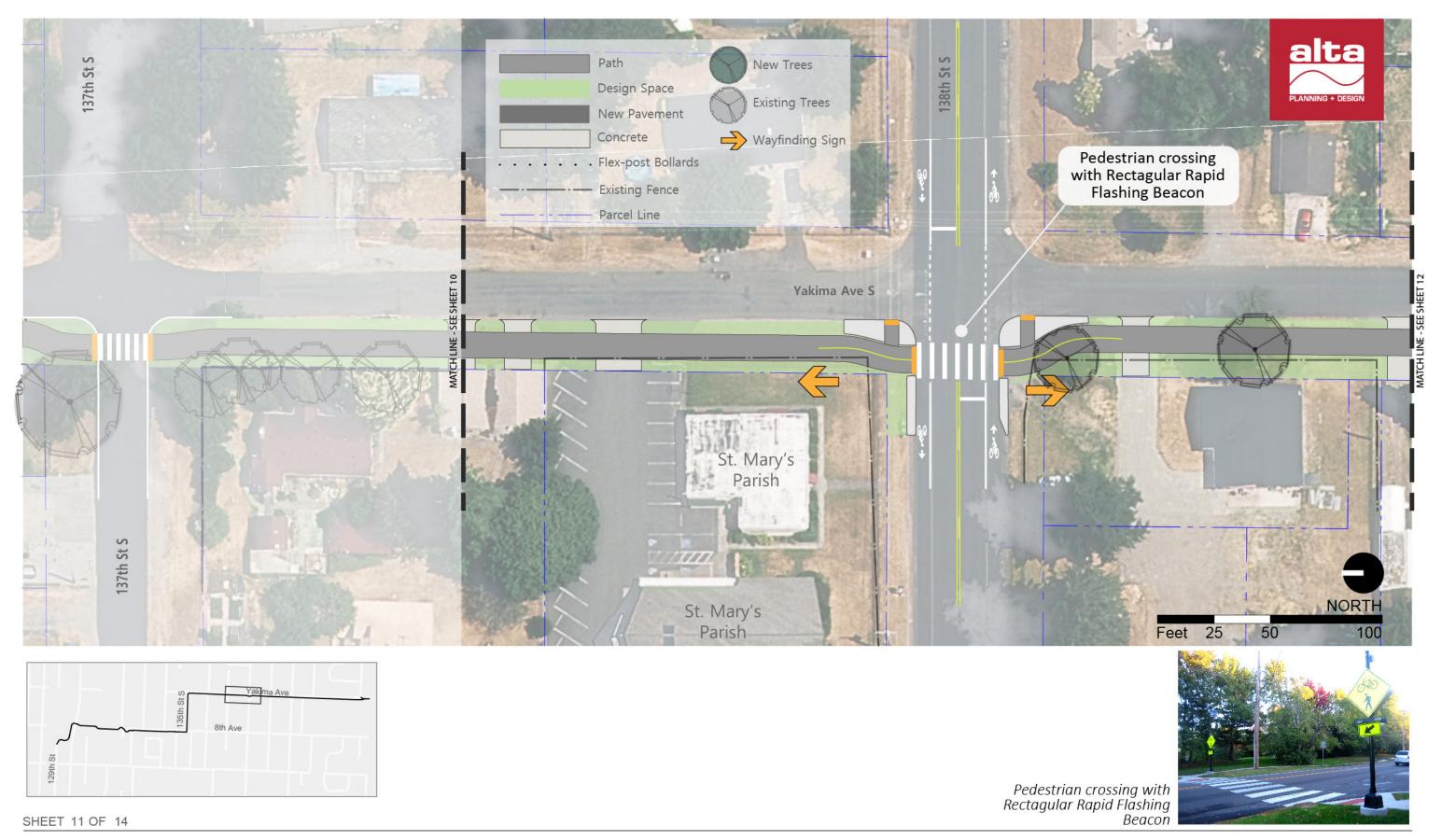


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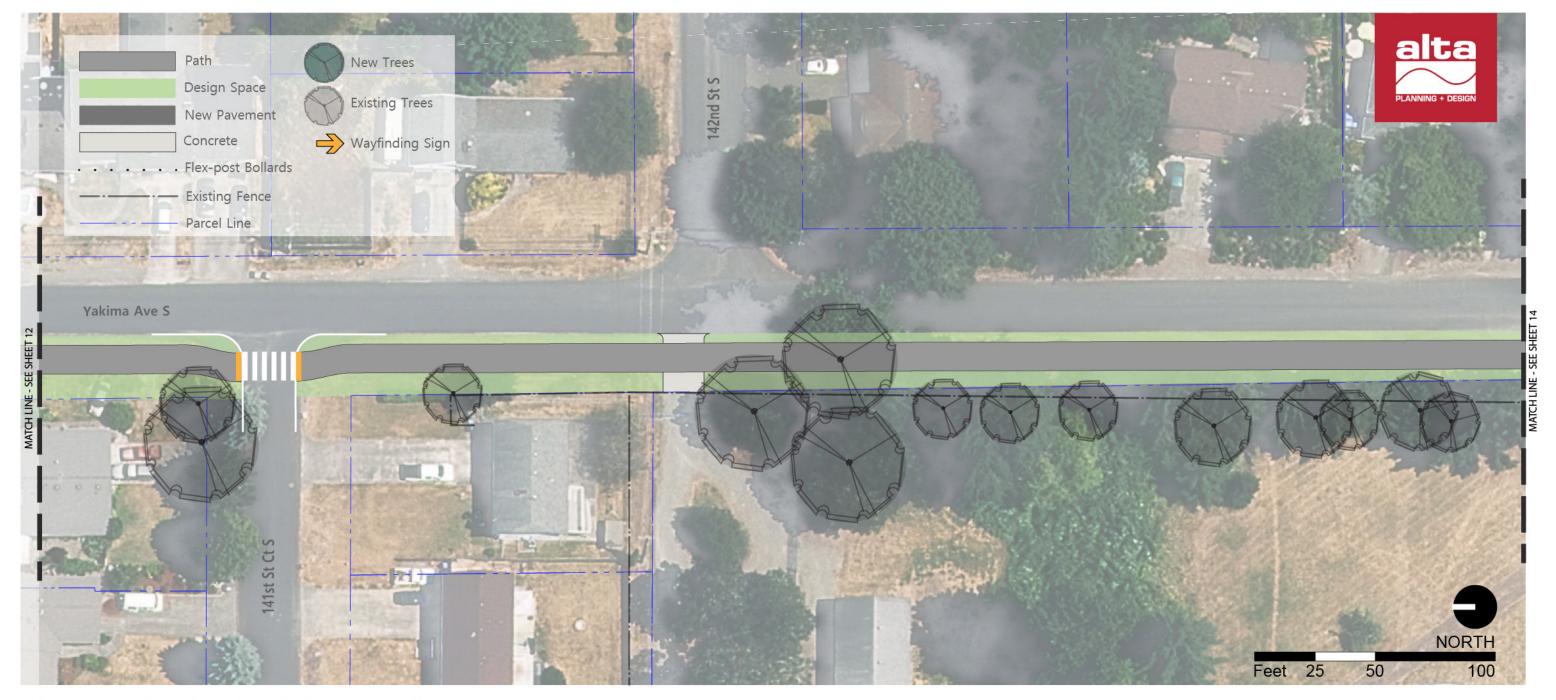
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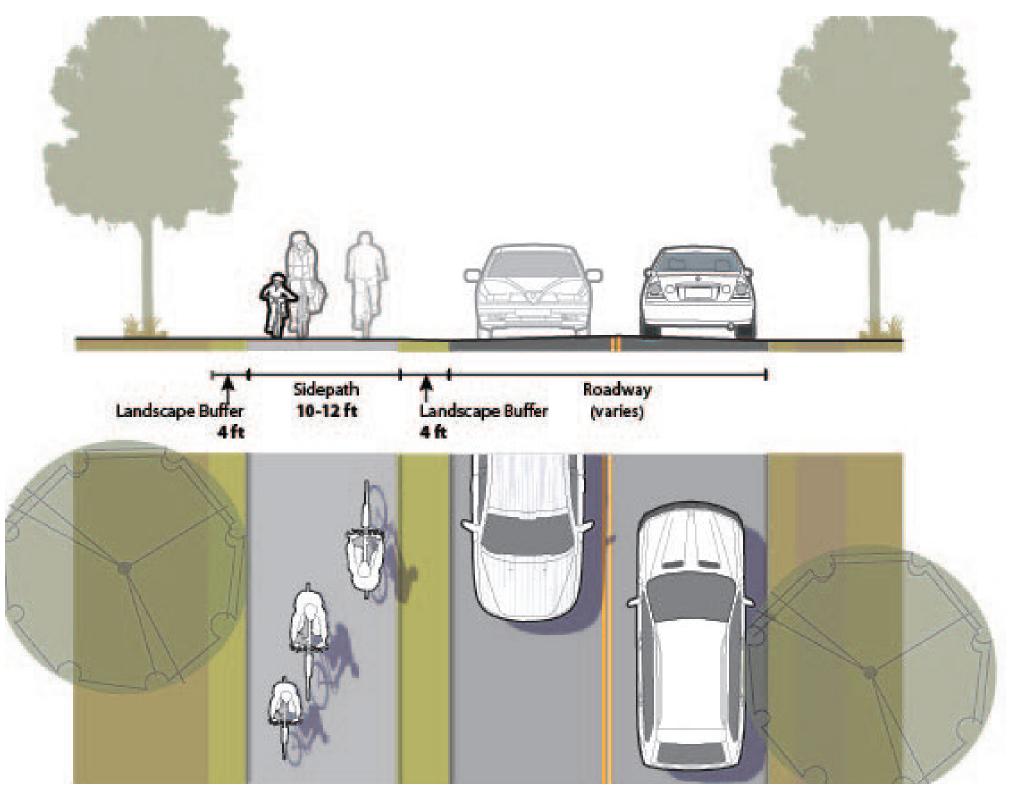
SHEET 12 OF 14





SHEET 13 OF 14





CROSS-SECTION

This cross-section is an illustration of how the Parkland Community Trail can be built within the county right-of-way. The wider the trail, the more comfortable the experience for users, especially when the trail is designed to serve a lot of different users, such as cyclists, runners, walkers, rollers, and skaters. The majority of the Parkland Community Trail is designed to be 12-feet wide. There are a few locations where the trail will be more narrow than 12-feet due to constraints.

For safety of trail users, there is physical separation between the roadway and the trail - this was a high priority during public input. The space between the roadway and the trail itself can sometimes be used for landscaping which can not only enhance the beauty of the trail but can also help to give trail users an added feeling of safety and separation from roadway traffic.

The area north of 132nd Street S. will be different from this illustration since it will be an off-street trail, or a trail that does not run parallel or adjacent to an existing roadway.

Crossings





This segment of the Parkland Community Trail will have two arterial crossings - one at Tule Lake Road S and another at 138th Street S. These crossings are critically important to protect the safety of trail users and create a trail that can be comfortably used by all ages and abilities.

These crossings depict a number of different elements that will help to enhance visibility and increase safety. First, Rapid Flashing Rectangular Beacons (RRFB) are proposed at both locations. RRFBs create a managed crossing experience where a trail user arrives at the street, activates the signal, waits for traffic to yield, and then crosses. Flashing yellow lights are activated when the user requests crossing and vehicular traffic is required to yield to the user. Additionally, curbs and other vertical elements that narrow the roadway at the approaches to the crossing help to naturally slow traffic down.

Other design enhancements, such as trail signage, a rest area, and public art, also help to provide visual cues to the crossing. There is space around the Tule Lake Crossing, in particular, to accommodate enhanced design features.



LOCAL STREET CROSSINGS

The Parkland Community Trail crosses numerous local streets, primarily at street intersections where a programmed stop already exists. It is important to keep sight lines clear at these local crossings so that a vehicle can stop before the trail and see whether trail users are present and also be able to view cross traffic from the stop location to avoid creeping into and blocking the trail area. The use of different materials for the trail crossing, and other visual cues, are also important to clearly delineate the crossing. Pylons and other vertical features can also help to raise the visibility of the trail while also tightening the intersection to prohibit wide turns across the trail. Signage should also clearly identify the presence of the trail at these crossings. Trail users will exercise caution and yield but should maintain the right-of-way at local street crossings.



DRIVEWAY CROSSINGS

The Parkland Community Trail will cross numerous private driveways, particularly along 135th Street S. where many homes take direct access. Driveways are more sporadic along 8th Avenue Ct. S. and Yakima Avenue S. Trail crossings at driveways are treated the same as a sidewalk where the resident yields to trail users as they enter or leave their driveway. The trail typically uses a different material type than the driveway in order to clearly define the trail from the driveway but also to create visual cues for trail users that a driveway is present.



Signalization and striping to raise trail crossing visibility



Multiuse trail crossing numerous driveways



Prominent RRFB with added curbs for traffic calming and user visibility



Trail crossing local roadway with RRFB



Trail with a local street crossing

Future Alternatives

The Parkland Community Trail concept on the previous pages provides an overview of the trail design between 129th Street S. and Sprinker Recreation Center. As part of the assessment and concept creation, several alternatives were evaluated. The following section highlights areas where ongoing conversations will impact final trail routing or where constraints have been identified and will require further assessment during design.

NORTH OF TULE LAKE ROAD S

The Parkland Community Trail concept currently ends design at 129th Street S. The trail, however, is planned to extend northward from the current terminus at 129th Street S. and connect to 124th Street S. near the Keithley Middle School entrance, but was not included due to ongoing discussions about the routing of the trail northward. Discussed previously, the area between 129th Street S. and 124th Street S. is owned by Pacific Lutheran University (PLU) and Franklin Pierce School District. Any trail alignment through this area requires a partnership between Pierce County, PLU, and the School District.

As part of assessing alternatives for the Parkland Community Trail, discussions were held with PLU to discuss the potential to make a trail connection northward to serve regional mobility. PLU's South Campus area is largely reserved for future expansion, athletics, and student recreation. Discussions with PLU indicated a willingness to discuss options for a future trail in a manner that does not significantly impede the ability for the campus to expand in the future. PLU also expressed a desire to keep the trail on the periphery of campus in order to avoid the heart of campus.

Pierce County Planning & Public Works is planning a sewer main project that is also planned to traverse the South Campus area of PLU, or 129th Street S. Discussions have also been ongoing between PLU, the School District, Pierce County Planning & Public Works, and Pierce County Parks to consolidate both projects as much as possible. This would allow for the creation of an easement that is able to accommodate both the sewer main and the Parkland Community Trail. The easement would place responsibility for safety, operation, and maintenance on Pierce County.

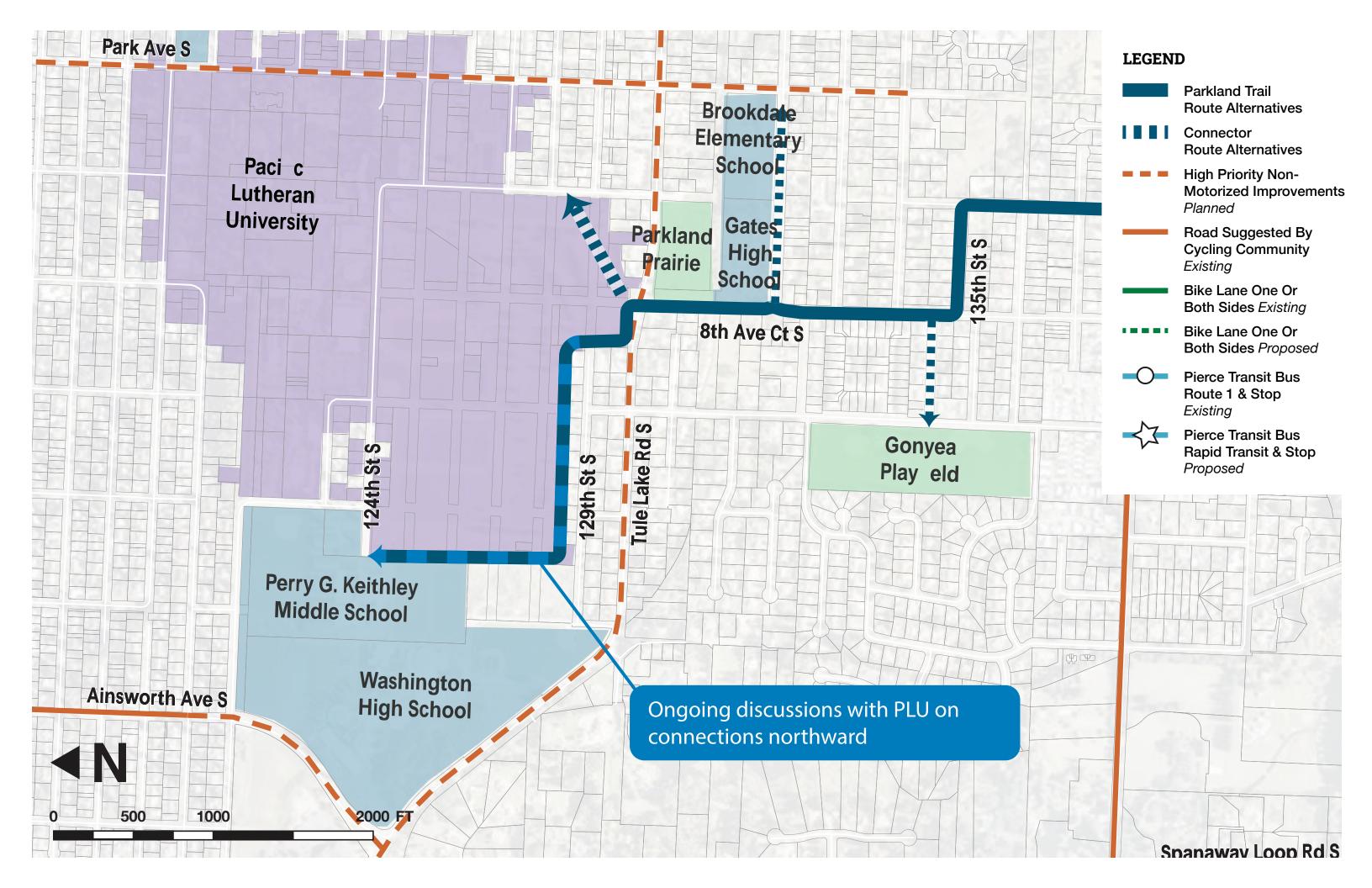
The trail connection at the eastern terminus of 129th Street S. would be removed as part of the trail's northward continuation to 124th Street S. However, a neighborhood connection to the trail at this location could replace the current trailhead design providing sidewalk access to the trail.



PLU South Campus Open Space



Proposed trail area to the north of 129th Street S.



8TH AVENUE CT. S. AT 132ND STREET S.

There is an area of constraint on 8th Avenue Ct. S. between 132nd Street S. and 133rd Street S. primarily due to the location of existing roadway pavement within the right-of-way. The existing configuration places the existing roadway pavement towards the middle and western side of the right-of-way, limiting the availability of land within the right-of-way for the trail.

One option would involve roadway reconstruction that would shift roadway pavement to the east providing additional room for the trail and its buffers. This type of activity would trigger roadway reconstruction to meet existing design standards. The additional required width to meet the roadway design standards would reduce the space available for the trail and its buffers, offsetting any major benefit.

A second option could include property acquisition of the currently vacant parcel on the northwest corner of 132nd Street Ct. S. and 8th Avenue Ct. S. Acquisition would provide additional design space north of 132nd Street Ct. S., but would not solve the constraint directly to the south.

The current design depicts a narrowed trail from a 12-foot width to a 10-foot width. Due to constraints, a deviation from standards will also be required to reduce the separation from less than the minimum 4-foot requirement. A vertical barrier and/or pylons are suggested for an additional visual barrier between trail users and vehicular traffic in this area.



8th Avenue Ct. S. at 132nd Street S. looking south, with visible constraints on the right

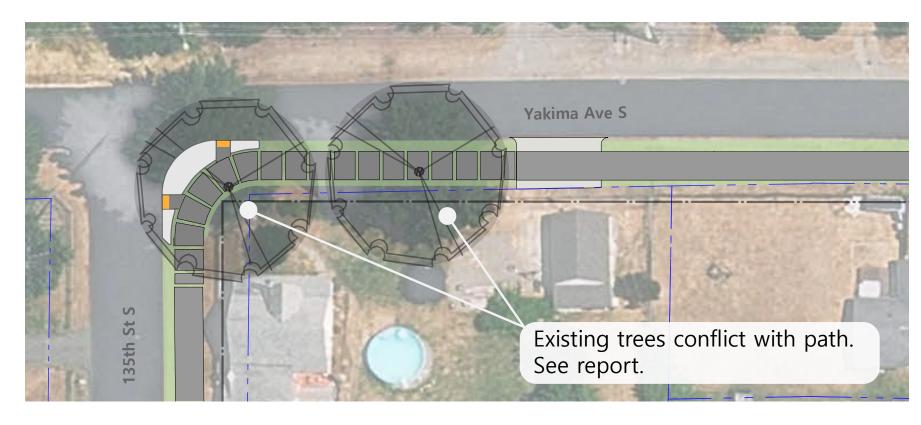


Alternative configuration should a vacant parcel be acquired by the County.

YAKIMA AVENUE S. AT 135TH STREET S.

There is a large fir tree at the southwest corner of 135th Street S. and Yakima Avenue S. that hovers along the property line. It is currently unknown the exact implications of the trail through this location. Data seem to show the possibility of constructing the trail around the large tree, however it will be nearly impossible to avoid all impacts to the tree's extensive dripline.

Due to challenges with roadway reconstruction, a full roadway reconstruction and shift to create space to preserve the existing tree seems improbable, but can be assessed during future design. There are low impact options that can be reviewed during design that can minimize impact to the tree's dripline. Other options also include reducing the width of the trail through this corner and considering lower impact materials or construction practices, such as the use of porus pavement within the tree's dripline area.





135th Street S. looking west from Yakima Avenue S.



Yakima Avenue S. at 135th Street S. looking south



Use of porus pavement around a tree dripline

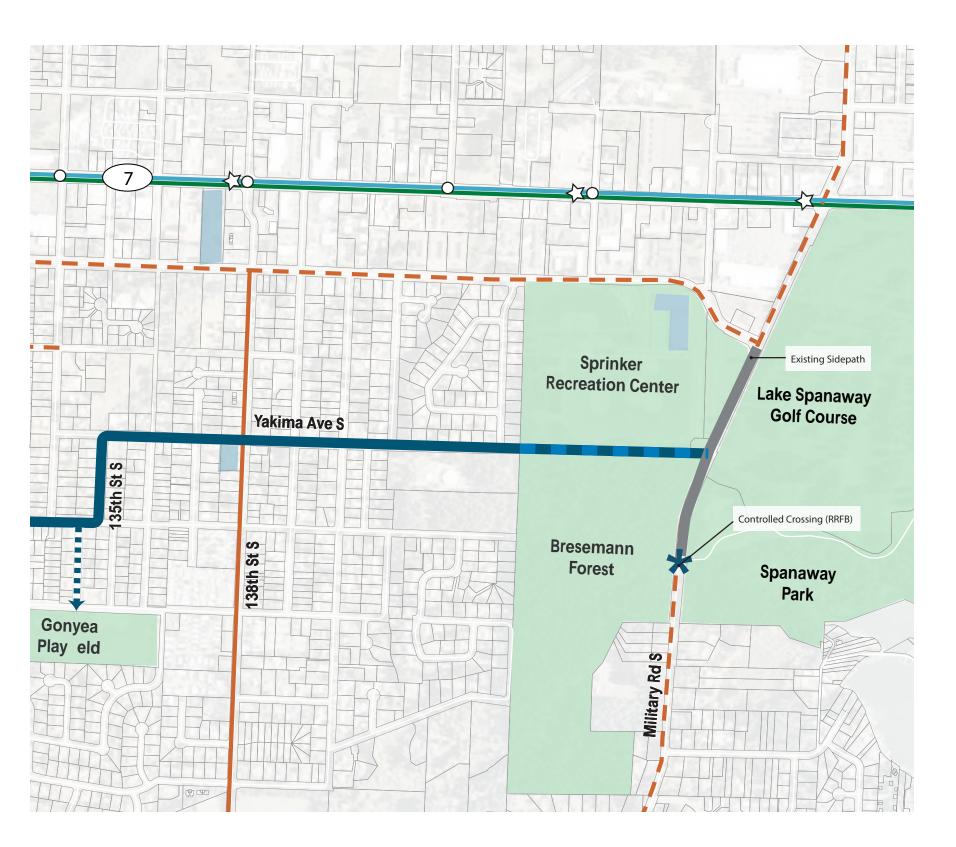
SPRINKER RECREATION CENTER

The Parkland Community Trail design currently ends at Yakima Avenue S. and 144th Street S. at the boundary of Sprinker Recreation Center. Mentioned previously, there are ongoing conversations around the trail's extension into Sprinker Recreation Center as part of the ongoing Sprinker redesign process. The trail will likely extend southward from the shown terminus into Sprinker Recreation Center and will likely follow the boundary between Sprinker and Bresemann Forest.

One of the main ongoing discussion points is the ability for the trail through Sprinker Recreation Center to remain accessible to the public after other Sprinker facilities have closed. If the Parkland Community Trail closes through Sprinker during off-hour periods, trail users would need to utilize 144th Street S. as a connection to C Street S. in order to continue southward. If this alternative were to happen, traffic calming would likely be needed along 144th Street S. to lower traffic speeds due to the potential increase of bicycle and pedestrian traffic.



Proposed trail entrance into Sprinker Recreation Center from Yakima Avenue S.



APPENDIX A

Alternatives Assessment

Alternatives Assessment

Appendix A provides an overview of the alternatives that were assessed as part of creating the preferred alternative outlined in Chapter 03. The alternatives assessment is a technical process that builds upon the existing conditions analysis and the opportunities and constraints described in Chapter 02.

There were three primary routes assessed::

- Alternative 01: This removed Tule Lake Road and 10th Ave S. from consideration due to higher traffic volumes and speeds. These concerns were also reiterated by the public in the project webmap and during discussions.
- Alternative 02: 8th Ave. Ct. S. to the south of 137th Street S. was removed from consideration due to a variety of challenges including an offset intersection at 138th Street S., large encroachments into the right-of-way south of 138th Street S., and extensive shoulder parking, among others.
- Alternative 03: This alternative focused primarily on the connection between 8th Ave Ct S. and Yakima Ave S. All east-to-west streets between 133rd Street S. and 137th Street S were assessed to determine which route would have the least major impacts while also providing the most benefit.

The map on the following page provides an overrview of the three alternatives along with information on constraints and characteristics that helps to explain why the potential route was removed from consideration. The map is followed by detailed descriptions on each alternative.



Proposed trail crossing location on Tule Lake Road



8th Avenue Ct. S. near 134th Street S.



10th Avenue S. looking south



8th Avenue Ct. S. bend at 132nd Street S.

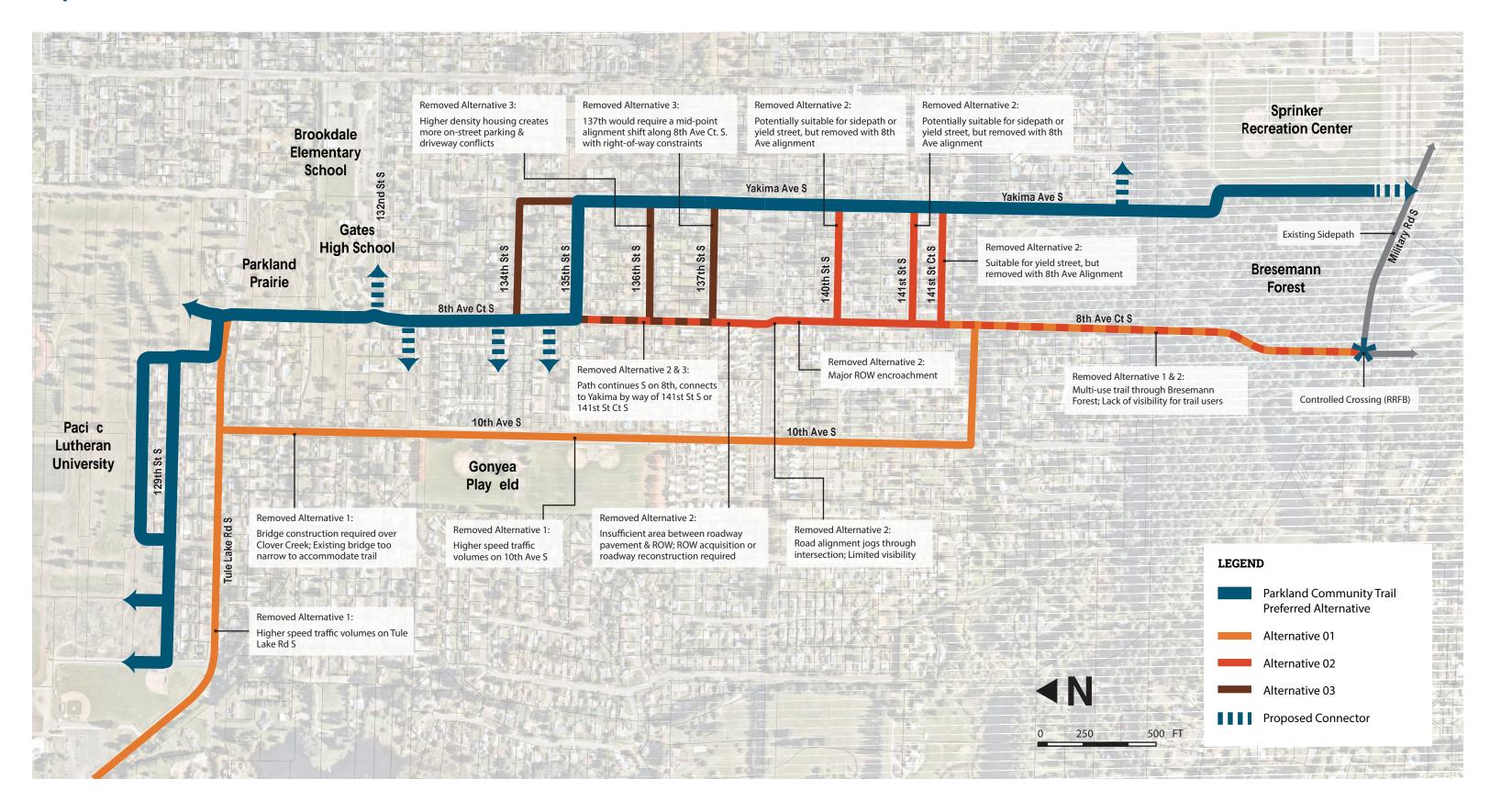


Entrance to Clover Creek open space and



Parkland Prairie on Tule Lake Road

Map 3. Alternatives Assessment



Alternative 01

10th Avenue S. vs. 8th Avenue CT. S.

As part of the grant application process, Pierce County assessed a variety of conceptual routes for the Parkland Community Trail. As part of this initial assessment, 8th Avenue Ct. S. and 10th Avenue S. were both seen as the most opportunistic north/south routes for the trail north of 138th Street S. – both streets have the ability to connect between Bresemann Forest and 129th Street S in different capacities. The only other north/south spine is C Street S. which has significantly higher traffic volumes due to its close proximity to Pacific Avenue S. (Highway 7). Ultimately, 10th Avenue S. was removed from consideration based on the descriptions below, in addition to public feedback on the project website that 10th Avenue S. was a high-speed traffic corridor.

10TH AVENUE S.

The main advantage of 10th Avenue S. is that it has an existing crossing over Clover Creek and runs directly adjacent to Gonyea Playfield. These perceived advantages, however, have significant complications. First, the 10th Avenue S. bridge over Clover Creek is not sufficiently wide to accommodate pedestrian and bicycle improvements needed to facilitate trail users across the bridge. The existing bridge would need to be expanded, or a new trail bridge constructed adjacent to the existing bridge, in order to facilitate a safe trail crossing over Clover Creek. Expanding the existing bridge would be extremely costly and would be a full replacement of the existing bridge. Space around the existing bridge is also constrained making the addition of a lower profile trail bridge adjacent to the existing vehicular bridge unlikely.

10th Avenue S along the frontage of Gonyea Playfield is also constrained with much of the existing right-of-way adjacent to the park utilized for parking. The parking is important for park users and accommodates many events throughout the year. Providing a trail along 10th Avenue S. would require a total reconfiguration and expansion of parking areas elsewhere or would require removal of most of the existing parking. Additionally, 10th Avenue S. has higher traffic volumes with some using it as a cut-through between Tule Lake Road S and 138th Street S.

8TH AVENUE CT. S.

8th Avenue Ct. S. is considerably different in characteristics and vehicular patterns than 10th Avenue S. 8th Avenue Ct. S. does not have any cut-through traffic advantages, since it does not extend northward to Tule Lake Road. As described previously, it is predominantly a local access roadway used by neighborhood residents. It also provides an important connection to Gates High School and Brookdale Elementary School on 132nd Street S. The primary constraint of 8th Avenue Ct. S. is the ability to connect northward to Tule Lake Road S where the trail can continue to extend northward. County ownership of the open space area surrounding Gates High School, as well as Parkland Prairie, provide an opportunity to extend an off-street trail through the open space and along the western boundary of Parkland Prairie. The trail through this open area can be an impetus for additional soft surface walking trails and a continuation of the restoration of Clover Creek to 10th Avenue S.



10th Avenue S near Gonyea Playfield



10th Avenue S. bridge crossing Clover Creek

Alternative 02

Removal of 8th Avenue Ct. S. south of 138th Street S.

Alternative 01 removed 10th Avenue S. as an alternative for the Parkland Community Trail leaving 8th Avenue Ct. S. as the primary trail spine. 8th Avenue Ct. S. ends near 144th Street Ct. S. with an entrance into Bresemann Forest. While this terminus provides a direct connection into Bresemann Forest, the forest area is not designed for formalized and more intensive recreation – it is a conservation area defined by small, softsurface walking trails and natural elements. Yakima Avenue S, on the other hand, provides some immediate benefits with a direct right-of-way connection to the northwest corner of Sprinker Recreation Center. Contrary to Bresemann Forest, Sprinker Recreation Center has a variety of active recreation facilities and is more formally developed. The trail along the western side of Sprinker Recreation Center provides logistical and environmental benefits by leveraging existing facilities and parking while also minimizing disturbances to natural areas that would be required with trail construction through Bresemann Forest.

Given the advantages of a Yakima Avenue S. connection into Sprinker Recreation Center, that connection became the preferred alternative. With that connection set, the next phase of assessment focused on the best location to move the trail from 8th Avenue Ct. S. to Yakima Avenue S. There are a number of streets that would provide the connection between the two roadways, including 140th Street S., 142st Street S., and 141st Street Ct. S. These streets were initially evaluated for their ability to support a trail within the right-of-way, or, as in the case of 141st Street Ct. S., support a different type of facility intentionally designed to be open to all types of transportation modes.

As part of the overall site analysis, 8th Avenue Ct. S. just south of 138th Street S. had a number of significant encroachments. Additionally, the street configuration of 8th Avenue Ct. S. in this area was not optimal for providing a trail within the existing right-of-way without having impacts to the existing roadway pavement which, described under challenges in Chapter 2, was a primary consideration for evaluating alternatives. 8th Avenue Ct. S. shifted within the right-of-way for a more diagonal approach to 138th Street S., rather than a perpendicular approach, which would make roadway reconstruction unavoidable. The Yakima Avenue intersection as it approach that is much more opportunistic for a trail crossing.

Due to the constraints of the 8th Avenue Ct. S. crossing at 138th Street S, and the clear advantage of the crossing at Yakima Avenue S. instead, 8th Avenue Ct. S. was removed as an alternative south of 138th Street S, along with the other east/west street connection alternatives south of 138th Street S.



Yakima Avenue S. at 138th Street S. crossing



8th Avenue S. at 138th Street S. crossing



Encroachments on 8th Avenue S. and roadway pavement shift

Alternative 03

Trail Shift from 8th Avenue Ct. S. to Yakima Avenue S.

As described in Alternative 02, the Yakima Avenue S. connection to Sprinker Recreation Center was a more opportunistic connection. This alignment requires trail shift from 8th Avenue Ct. S. to Yakima Avenue S where it can continue southward to Sprinker Recreation Center. Also described in Alternative 02, some significant site conditions resulted in the removal of 8th Avenue Ct. S. as an alternative for consideration south of 138th Street S. These realities required a shift from 8th Avenue Ct. S. to Yakima Avenue S. north of 138th Street S. and all street connections were assessed for opportunities and constraints.

137TH STREET S.

137th Street S. had available right-of-way to the south of the exiting roadway pavement for a potential trail. The primary constraint with 137th Street S. was a shift in the right of way on 8th Avenue Ct. S. just south of 136th Street S. This right-of-way shift would require a mid-block trail crossing from the west side of 8th Avenue Ct. S. to the eastern side of the street, where overhead utilities are present. This area of 8th Avenue Ct. S. became a significant obstruction and would require major reconstruction to accommodate the Parkland Community Trail. Due to these complications, 137th Street S. was removed from consideration.

136TH STREET S.

136th Street S. has a much higher density of homes than other streets evaluated for the connection. The right-of-way is heavily utilized for shoulder parking, and also has a high concentration of overhead utilities that would require burying or relocation. The roadway also provides a connection between 10th Avenue S. and Yakima Avenue S. which could lead to a higher amount of cut-through traffic.

135TH STREET S.

135th Street S. has the ability to build a trail along the southern side of the existing roadway pavement, While shoulder parking is present along 135th Street S, it was observed to be significantly less than 136th Street S. Another advantage to the street is that it the street segment does not extend beyond 8th Avenue Ct. S. on the west and Yakima Avenue S. on the east which provides no cut-through traffic advantages.

134TH STREET S.

Finally, 134th Street S. was evaluated for the connection. Overall, the existing roadway pavement is located roughly in the center of the County right-of-way, but does provide space for a trail on the southern side of the roadway, although the trail would likely need to be reduced from its targeted width of 12 feet. The street also provides a direct connection eastward to Pacific Avenue which also raises the profile of the roadway as a route for vehicular use beyond local access to homes. 134th Street Ct. S. (different segment from 134th Street S.) provides a direct connection between the Parkland Community Trail and Gonyea Playfield and utilizing 134th Street S. would not bring the trail connection southward to this important connection point.

The analysis of each of the streets above, along with feedback at the Open House, led to the selection of 135th Street S. as the connection point between 8th Avenue Ct. S. and Yakima Avenue S. The street provided space to accommodate the trail, had less shoulder parking than others compared, allowed for an important connection along 134th Street Ct. S. to Gonyea Playfield, and was a low traffic roadway due to no cut-through traffic advantages.



135th Street S. provides right-of-way on south for trail



Extensive shoulder parking along 133rd Street S.

APPENDIX B

Design Elements

Furnishings & Amenities

In addition to the trail itself, there are some opportunities to provide amenities that can be used as people experience the trail. The location of the trail within the existing right-of-way limits space for larger-scale amenities, but there are opportunity areas where some of the following types of amenities can be situated. In particular, amenities for Parkland should focus on accommodating users of all ages and abilities by providing periodic resting spaces and creative lighting for safety.









Gateway Plaza



Outdoor fitness equipment



Bike repair station



Bicycle parking Informal rest stop



Lighting

Branding & Trail Art

Trail branding and the inclusion of public art are important ways of not only enhancing the user experience, but also tying the trail to the community itself. Branding and art also helps to raise the profile of the trail and increase awareness for users. The Parkland Community Trail schematic provides several locations where public art and branding can be incorporated.

The best neighborhood art is community-based and should reflect the values and history of Parkland. Spaces for art should continue to be identified as part of future design and artwork should be commissioned through collaborative partnerships with local cultural and arts organizations.

Trail branding should be reflected in the many types of trail and wayfinding signage that will be installed. A special Parkland Community Trail theme can be incorporated into the Pierce County design standards to reflect the neighborhood itself.



Cultural



Family-oriented



Historical / informative



TRAIL ENTRY -LARGE



TRAIL ENTRY -SMALL



TRAIL DIRECTIONAL



Interactive



Surface

Trees, Shrubs & Ground Covers

Landscaping is an important way to raise the visual interest and reinforce separation between the trail and adjacent streets. Most of the current segment of the Parkland Community Trail is located within the right-of-way which constrains the space available for larger landscaping efforts. There are opportunities, however, in the trail buffer and also between the trail and any adjacent fencing.

Design criteria for selection of ornamental planting include:

- Low maintenance
- · Hardy and able to withstand occasional foot traffic
- Bright color, preferably in all seasons
- · Seasonal color

It is also important to ensure that plantings do not obscure site line visibility, particularly at major crossings.

Shrubs and ground covers will be the most advantageous landscaping features given the nature of the Parkland Community Trail. There may be some opportunities to incorporate trees where space permits. The selection of trees should be native species with vertical root systems.

Shrubs



Lavandula angustifolia source: Flickr.com, Dana (danakosko)



Cornus sericea source: Flickr.com, Andrey Zharkikh



Polystichum munitum source: Flickr.com, Forest Service -Pacific Northwest

Grasses



Calamagrostis × acutiflora source: Flickr.com, Sue Loring



Helictotrichon sempervirens source: Flickr.com, Drew Avery



Pennisetum alopecuroides 'Hameln' source: Flickr.com. John Tann

Ground Covers



Fragaria chiloensis source: Flickr.com, Brian Gratwicke



Ajuga reptens source: Flickr.com, Cristina (nociveglia)



Geranium macrorrhizum source: commons.wikipedia.org A. Barra

Bulbs



Narcissus source: Flickr.com, Laura Bittner



Allium globemaster source: Kim Carpenter



Tulipia source: Flickr.com, Sergey Rodovnichenko

Stormwater Management

With the exception of Tule Lake Road and 138th Street S., the neighborhood area around the Parkland Community Trail generally lacks any formal stormwater conveyance facilities, Due to a lack of curb and gutter infrastructure, open drainage channels are prevalent and have been successful at accommodating runoff from storm events. Additionally, topography is relatively flat across the area and the soils are sandy in nature which make them highly conducive for water absorption in even the heaviest rainfall events.

These features and characteristics allow for the use of natural stormwater quantity measures, such as rain gardens. Generally, the trail is envisioned to have a four-foot buffer of separation from any adjacent roadways which will continue to be used for stormwater absorption. These buffers can utilize plantings for both aesthetic and stormwater purposes. Additionally, as part of additional design analyses, larger areas can be identified for formal rain gardens that also provide an opportunity to educate the public on stormwater treatment.

Due to a combination of existing characteristics, sandy soils, and the potential use of porous pavement, no major stormwater quantity impacts are anticipated. Additionally, due to the separation from motorized uses, stormwater quality treatment is not anticipated to be a major design factor.









Green street

Trail using porus pavement

Plantings

Rain garden signage







Stormwater treatment on a trail



Native plantings for stormwater runoff areas

Clover Creek Crossing

While much of the trail is planned to run adjacent to an existing roadway, the area between 132nd Street S. and Tule Lake Road S provides a great opportunity for an off-street and more natural experience for the Parkland Community Trail.

Currently, Pierce County owns the vacant land north and west of Gates High School along Clover Creek. In the immediate area, Parkland Prairie has been a community-based restoration effort that provides an opportunity for residents to experience a prairie habitat and the Clover Creek riparian system. A continuation of restoration efforts and educational signage can be extended southward along the trail, providing a natural and quiet experience for trail users.

The crossing of Clover Creek is an excellent opportunity for an amenity that attracts users while also providing information on the riparian system and Clover Creek watershed. Within the vicinity of the bridge, other soft-surface trails may also be included to highlight some of the native species and seasonal wetlands. Additionally, a soft-surface trail connection to 10th Avenue S. provides a continuation of east/west connectivity from 132nd Street S. westward through the open space area.

The trail is anticipated to run along the far western boundary of Parkland Prairie to minimize impacts to the park's recent restoration efforts. A second entrance to Parkland Prairie is envisioned from the trail, with landscaping and natural features providing a boundary between the trail and the Prairie. This entrance is a prime location for bike racks and benches.









Example trail bridge crossing

APPENDIX C **Opinion of Cost**

Opinion of Cost

Item Description	Unit Cost	Unit	Quantity	Cost
DEMOLITION				
Fence Demo	\$10	SF	692	\$6,920
Roadway Demo	\$3	SF	1,700	\$5,100
Large Tree Removal	\$2,000	EA	9	\$18,000
ROADWAY MATERIALS				
Roadway Widening - Asphalt	\$250	TON	41	\$10,250
Roadway Widening - Aggregate Base	\$40	TON	80	\$3,200
Concrete Sidewalk	\$5	SF	3,000	\$15,000
ROAD / TRAIL CROSSINGS				
RRFB Crossing	\$50,000	EA	2	\$100,000
High Visibility Crosswalk	\$20,000	EA	9	\$180,000
ADA Curb Ramps	\$5,000	EA	5	\$25,000
TRAIL MATERIALS				
Paved Path	\$10	SF	68,625	\$686,250
Soft Surface	\$4	SF	4,000	\$16,000
Protected Bike Lane	\$25	LF	515	\$12,875
Driveway Reconstruction	\$160	SY	475	\$76,000
Ped/Bike Bridge	\$150	SF	630	\$94,500
Chain Link Fence (6')	\$40	LF	692	\$27,680
Signs	\$300	EA	27	\$8,100
TRAIL AMENITIES				
Lights (150' o.c.)	\$3,000	EA	41	\$123,000
Electrical Supply	\$15,000	EA	4	\$60,000

Item Description	Unit Cost	Unit	Quantity	Cost
Drinking Fountain	\$3,500	EA	4	\$14,000
Map Kiosk	\$5,000	EA	1	\$5,000
Waste Receptacles	\$1,000	EA	4	\$4,000
Picnic Tables	\$1,500	EA	6	\$9,000
Benches	\$1,000	EA	3	\$3,000
Bike Racks	\$250	EA	4	\$1,000
Item Description	Unit Cost	Unit	Quantity	Cost
LANDSCAPING				
Tree	\$500	EA	20	\$10,000
Planting Strip	\$4	SF	83,765	\$335,060
UTILITIES				
Major Utilities Relocation	\$2,500	EA	6	\$15,000
			Subtotal	\$1,863,935
PERMITTING & PUBLIC ENGAGEMENT			Subtotal	\$1,863,935
	\$100,000	LS	Subtotal 1	\$1,863,935 \$100,000
ENGAGEMENT	\$100,000 \$50,000	LS LS		
ENGAGEMENT Additional Studies			1	\$100,000
ENGAGEMENT Additional Studies Permitting	\$50,000	LS	1	\$100,000 \$50,000
ENGAGEMENT Additional Studies Permitting Riparian Corridors	\$50,000 4%	LS LS	1 1 1	\$100,000 \$50,000 \$74,557
ENGAGEMENT Additional Studies Permitting Riparian Corridors	\$50,000 4%	LS LS	1 1 1 1	\$100,000 \$50,000 \$74,557 \$37,279
ENGAGEMENT Additional Studies Permitting Riparian Corridors Public Involvement	\$50,000 4%	LS LS	1 1 1 1	\$100,000 \$50,000 \$74,557 \$37,279
ENGAGEMENT Additional Studies Permitting Riparian Corridors Public Involvement DESIGN & CONTINGENCY	\$50,000 4% 2%	LS LS LS	1 1 1 1 Subtotal	\$100,000 \$50,000 \$74,557 \$37,279 \$261,836
ENGAGEMENT Additional Studies Permitting Riparian Corridors Public Involvement DESIGN & CONTINGENCY Soft Costs (design, CA, etc.)	\$50,000 4% 2%	LS LS LS	1 1 1 1 Subtotal	\$100,000 \$50,000 \$74,557 \$37,279 \$261,836 \$559,181
ENGAGEMENT Additional Studies Permitting Riparian Corridors Public Involvement DESIGN & CONTINGENCY Soft Costs (design, CA, etc.)	\$50,000 4% 2% 30% 30%	LS LS LS	1 1 Subtotal 1 Subtotal	\$100,000 \$50,000 \$74,557 \$37,279 \$261,836 \$559,181 \$559,181

Special Thanks to...

The Parkland Community Trail evaluation outlined in this document was a collaborative effort between a variety of Pierce County Departments. We want to thank our design committee for dedicating their time and for contributing to robust discussions on the future of the Parkland Community Trail.

Pierce County Parks

Roxanne Miles, Director

Kimberly Freeman, Resource Stewardship Superintendent

Brianne Blackburn, Trails Coordinator

Cindy Haverkamp, Planner

Design Committee

Andrea Clay, Parks and Recreation Manager

Becky Little, Parks Specialist, Pierce County

Diane Evans, Tacoma-Pierce County Health Department

Gregory Hess, P.E., Design Supervisor, Pierce County

Sangkros Lok, Recreation Coordinator, Plerce County

Shawn Phelps, Senior Transportation Planner, Pierce County

Tiffany O'Dell, Senior Planner, Pierce County

Benjamin Barrett, Capital Projects Manager, Pierce County

Alta Planning + Design

Steve Durrant, FASLA, Principal-in-Charge

Brandon Gonzalez, AICP, Project Manager

Hannah Hefner, Designer

Kirk Paulsen, P.E., Engineer

Enviroissues

Alayna Linde, Engagement Lead

Harrison Price, Engagement Support



