



# CITY OF RIDGEFIELD MULTIMODAL TRANSPORTATION PLAN

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Ridgefield, Washington

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**DRAFT**



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# 1

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## EXECUTIVE SUMMARY

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Ridgefield is a place where walking and cycling can be part of everyday life. Opportunities exist for residents and visitors to safely and efficiently walk, bicycle, or use a golf cart for both transportation and recreation. Improvements to city streets, sidewalks and trails will encourage trips by foot, bicycle, golf cart, transit, reduce traffic congestion and parking demand, and normalize less frequent travel modes as viable, safe, convenient, enjoyable and healthy.

The Ridgefield Multimodal plan is intended to guide the development of local transportation projects as a part of a larger multimodal transportation system, ensure that residents and visitors of all ages and abilities are able to travel around the city with a variety of transportation options in a safe and convenient manner, and sufficiently accommodate anticipated long-term growth.

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## Key Themes to Emerge from Community Engagement Events

- » Improve pedestrian and bicycle conditions along Pioneer Street
- » Improve pedestrian and bicycle conditions along Hillhurst Road
- » Need for congestion mitigation and improved downtown circulation
- » Improve access to schools
- » Preserve neighborhood character
- » Improve transit service

## Key Opportunities

- » Significant number of existing trails, including segments of the Gee Creek Trail, Heron Ridge and Pioneer Canyon
- » 36 miles of existing sidewalk constructed
- » Possible to expand golf cart zone if speed limits are lowered on Pioneer Street and Hillhurst Road
- » City of Ridgefield has adopted a Complete Streets Resolution to accommodate all road users regardless of age or ability
- » Many new areas under development including the 45th Avenue Subarea and Ridgefield Junction Subarea
- » Engaged and enthusiastic community support for improved walking, bicycling and golf cart facilities

## Key Challenges

- » Significant number of network “gaps” or constrained areas that do not allow connections between key destinations
- » Improvements in constrained areas may require extensive and costly improvements, and/or ROW acquisition, utility relocation, etc.
- » Some existing trails will be difficult to retrofit to accommodate multiple modes
- » Limited transit service and transit ridership

## Multimodal Connectivity Standard

Provide a safe and convenient multimodal connection between key local destinations by establishing the network on existing and proposed streets, sidewalks and trails. Connecting walkways and bikeways should be available without having to travel more than a  $\frac{1}{4}$  mile out of the way from the nearest on-street route for pedestrians, and  $\frac{1}{2}$  mile out of the way from the nearest on-street route for bicyclists.

Utilize existing facilities by connecting existing trails, sidewalks, bike facilities, and low-volume, low-speed local roads where possible. All sidewalk gaps along identified bike/ped routes should be filled. Fixed-route transit stops will be critical along Pioneer Rd, Hillhurst Rd, and 45th St, as these areas are developed.

## TOP 6 PROJECTS

### 1. Hillhurst Road - Ridgefield High School

**Frontage** Construct buffered bike lanes and sidewalks to connect facilities in front of RHS.

### 2. Smythe Trail

Construct new shared-use path between Pioneer Canyon and Reiman Road via Smythe Road

### 3. Hillhurst Road - 6th Way and Pioneer Street

Add enhanced crossing treatment at intersection, reduce posted speed limit and widen road to add bike lane

### 4. Pioneer Street - Roundabouts

Construct bike lanes and sidewalks and continue to build buffered bike lanes between roundabouts

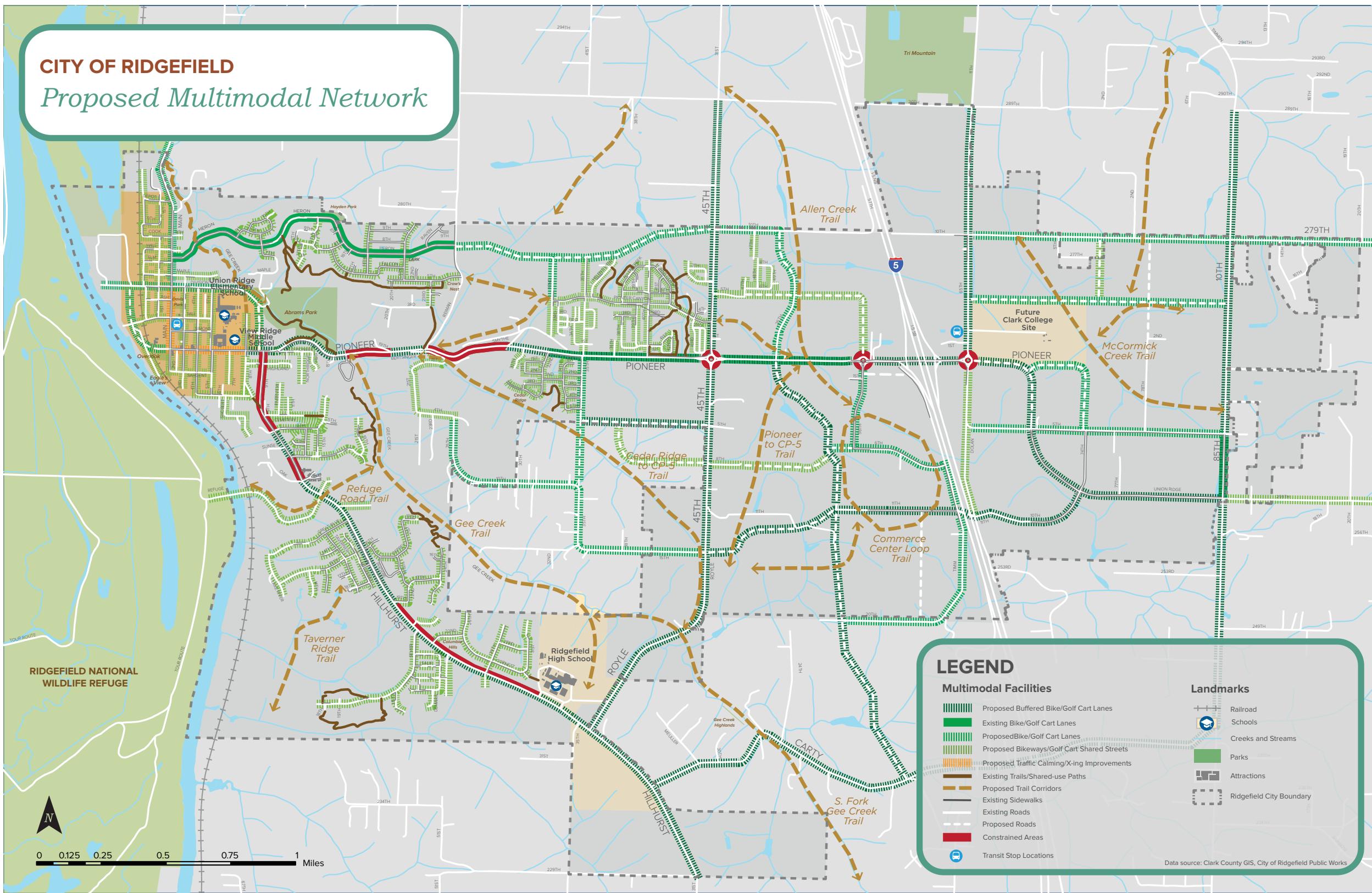
### 5. Hillhurst Road - Oak Road and 8th Way

Reduce posted speed limit and widen road to add bike lane

### 6. Pioneer Street - Gee Creek Loop and 19th Court

Reduce posted speed limit, widen road and bridge, add bike lanes and sidewalks or build separate bike/ped bridge

Figure 1: Proposed Multimodal Network Map



# 2

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## INTRODUCTION

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- » Value of a Multimodal Transportation Network
- » Plan Intent
- » Vision, Goals, & Objectives
- » Connectivity Standard
- » Community Profile & Growth
- » Plan Overview & Planning Process

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# Introduction

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## VALUE OF A MULTIMODAL TRANSPORTATION NETWORK

Ridgefield is a place where walking and cycling can be part of everyday life. Opportunities exist for residents and visitors to safely and efficiently walk, bicycle, or use a golf cart for both transportation and recreation. Improvements to city streets, sidewalks and trails will encourage trips by foot, bicycle, golf cart, transit, reduce traffic congestion and parking demand, and normalize less frequent travel modes as viable, safe, convenient, enjoyable and healthy.

## PLAN INTENT

The Ridgefield Multimodal plan is intended to guide the development of local transportation projects as a part of a larger multimodal transportation system, ensure that residents and visitors of all ages and abilities are able to travel around the city with a variety of transportation options in a safe and convenient manner, and sufficiently accommodate anticipated near-term growth.

While much of the city is currently undeveloped, exceptional growth in the 45th Avenue and Ridgefield Junction Subareas, Downtown and waterfront areas will require a comprehensive plan in place to provide multimodal travel options giving residents and visitors more choice about how they get around the city. This plan serves as the blueprint for the City to develop this multimodal system in a coordinated, systematic way over time.



# Vision, Goals, & Objectives

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## VISION

A comprehensive and interconnected transportation system that allows safe, convenient, and accessible travel by all roadway users, regardless of age, physical ability, or travel mode, and that strengthens Ridgefield's role as a regional economic center, reinforces the quality and character of Ridgefield's neighborhoods and the downtown area, protects its critical environmental resources, and that is aligned with the growth management efforts of the City and region.

## GOALS + OBJECTIVES

### GOAL. Safety

- » Improve the comfort and safety of the multi-modal transportation system.
- » Reduce the rate of injuries and fatalities of all roadway users, including those in motor vehicles, golf carts, bicyclists and pedestrians.
- » Improve comfort while using facilities.

### GOAL. Connectivity

- » Provide transportation infrastructure and services that create safe and convenient connections between everyday destinations, to ensure the reliable movement of people and goods throughout the city.
- » Create desirable pedestrian environments in residential neighborhoods, with connections from neighborhoods to schools and parks.
- » Create a transportation system that fosters an interconnected community, with access to trails and greenway systems.

### GOAL. Equity

- » Provide multi-modal transportation for all residents and visitors.
- » Prioritize transportation investments in high need areas, such as the Downtown, school areas, and other areas with particularly unsafe roadways throughout the community.
- » Ensure project selection accommodates equity

populations, including low income households, children, older adults, people with disabilities, communities of color and, other disadvantaged populations.

- » Ensure that the public outreach process encourages involvement from all community members.

### GOAL. Economic Prosperity

- » Provide an efficient and interconnected multi-modal transportation system that supports mobility and competitiveness as a regional economic center.
- » Partner with state, county and adjacent communities to coordinate planning efforts that support Ridgefield's economic competitiveness.
- » Protect existing capital investments.
- » Provide urban services that support economic development and long term stability, while preparing for significant growth in residential and commercial development.
- » Enhance multimodal access in the downtown area to attract future residents and visitors, and encourage commercial activity, tourism, real estate development, as a vibrant center of the community.
- » Maintain freight access, parking and loading areas in the downtown area.

### GOAL. Multimodal Transportation Options

- » Increase multimodal transportation options through the planning, design and construction of quality bike, pedestrian, golf cart and transit facilities for improved access and connectivity throughout the City of Ridgefield.
- » Increase pedestrian, bike, golf cart and transit mode shares for all trips throughout the City of Ridgefield.

## Community Profile & Growth

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The City of Ridgefield is located in Clark County, 10 miles north of Vancouver, Washington and 20 miles north of Portland, Oregon. Ridgefield's origins can be traced back more than 1,000 years to early Native American settlements. After the Civil War, the area became known as Union Ridge and saw rapid growth through the second half of the nineteenth century. Ridgefield was incorporated in 1909.

Early settlers built a vibrant agricultural and forestry-based economy, followed by growth in the industrial and shipping sectors with the creation of the Interstate 5 junction and the expansion of the Port of Ridgefield. The adjacent Ridgefield National Wildlife Refuge and direct connection to Interstate 5 provide the city the opportunity to grow but remain a distinctive community. Ridgefield has also been discovered as a desirable residential community for families who participate in the broader regional economy.

The current population of Ridgefield is estimated to be 6,400 and it is expected to grow to over 25,000 residents by 2035. As Ridgefield transforms from a small city to a mid-sized city, a complete community will begin to take shape that affords a diversity of residential and non-residential options strategically located throughout the city. Ridgefield will increase school and park options, and pursue development of a mix of housing products to accommodate the growth.

Ridgefield's population is younger than the surrounding area, with a median age of 32 compared to 37 in Clark County and Washington State. Additionally, over one-third of the population is under the age of 20. Ridgefield also has a higher share of people with disabilities (23%) than in Clark County as a whole (17%). Other notable differences between Ridgefield and Clark County include higher rates of home ownership, larger households (by number of people), and a higher median household income.



# Plan Overview & Planning Process

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## PLAN OVERVIEW

The planning process began with the development of the vision, goals, and objectives for the project. These drew heavily on the City of Ridgefield's Complete Streets Resolution, which was adopted by the City Council in September 2015. The Resolution calls for a safe and convenient transportation network for all types of users and modes.

The first phase of the plan included an evaluation of existing plans and policies and a review of current conditions. The current conditions analysis looked at the existing multimodal network and focused on the following aspects:

- ▶ Safety
- ▶ Connectivity to destinations
- ▶ Gap analysis
- ▶ Ability to serve the needs of different users

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The next phase of the plan was the development of a proposed multimodal network based on the findings from the current conditions. This phase produced the multimodal network map as well as recommendations for support facilities, golf cart zone enhancements, and strategies to encourage increased levels of walking and biking.

Community engagement was an essential part of the planning process. The proposed multimodal network was presented at two events in Ridgefield. The first event was an open house in September 2015, with participation from families, employees, property owners, council members, and representatives of the Port of Ridgefield. The second presentation was organized for the Downtown Main Street Program and allowed business owners in Ridgefield to offer feedback. Subsequent public open houses were held in December 2015, and January 2016.

In addition, community feedback was incorporated from other recent or concurrent planning efforts. These included the Downtown Circulation Plan, updates to the Transportation System Plan and Comprehensive Plan, updates to the city development code and engineering standards, and city subarea planning efforts. The final recommended multimodal network relied heavily on the input of the community.

The last phase of the project was the evaluation of projects that were identified during the network development. Projects were scored on a number of evaluation criteria including:

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- ▶ Providing a direct route
- ▶ Community support
- ▶ Safety improvements
- ▶ Addressing multiple modes

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After the evaluation, projects were ranked and the top three scoring projects received planning level cost estimates.

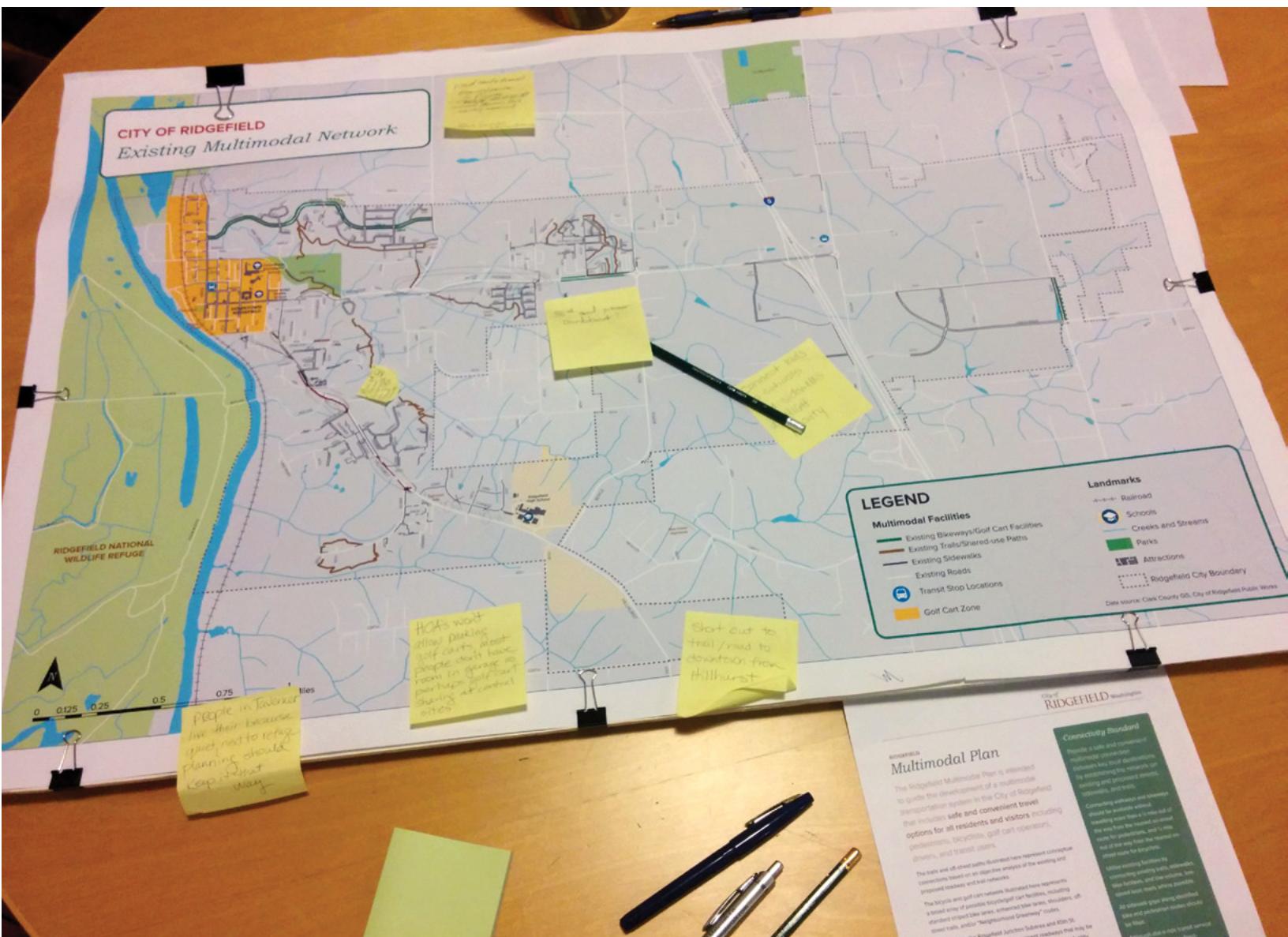
During this planning process, a separate but closely related planning effort, The Downtown Circulation Plan, was also undertaken by the City. This plan focuses specifically on access, circulation and safety improvements in the Downtown area. The top projects selected in the Multimodal Plan were intended to complement the downtown-specific improvements identified by the Downtown Circulation Plan. The Multimodal Transportation Plan and the Downtown Circulation Plan will both guide the development of the City's Capital Facilities Plan for future citywide transportation improvements.

# Connectivity Standard

## CONNECTIVITY STANDARD

Provide a safe and convenient multimodal connection between key local destinations by establishing the network on existing and proposed streets, sidewalks and trails. Connecting walkways and bikeways should be available without having to travel more than a  $\frac{1}{4}$  mile out of the way from the nearest on-street route for pedestrians, and  $\frac{1}{2}$  mile out of the way from the nearest on-street route for bicyclists. Utilize existing

facilities by connecting existing trails, sidewalks, bike facilities, and low-volume, low-speed local roads where possible. All sidewalk gaps along identified bike/ped routes should be filled. Although dial-a-ride transit service is available city-wide, fixed-route transit stops in addition to the central downtown stop and Ridgefield Junction Park and Ride will be critical along Pioneer Rd, Hillhurst Rd, and 45th St, as these areas are developed.



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## EXISTING CONDITIONS

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- » Overview
- » Opportunities & Constraints
- » Existing Conditions Map
- » Plan & Policy Review

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## Overview

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The quality of the multimodal transportation network is reflected in the current provision of pedestrian, bicycle, golf cart, and transit facilities, and their degree of connectivity, current and projected levels of pedestrian, bicycle, golf cart and transit activity and ridership. It is influenced by the physical geography of the area, particularly topography, water bodies, and distances between destinations. It is also shaped by many other factors such as the composition and relative organization of land uses, and plans and policies for the future development of the network, especially around the Downtown and Subareas.

This chapter looks specifically at the conditions of the multimodal network as they exist today, and serves as the foundation for Ridgefield's multimodal network of tomorrow. A survey of existing sidewalks, along with a series of basemaps were created to evaluate the quantity and quality of existing facilities. This is followed by a review of current plans and policies related to the multimodal network.



# Opportunities & Constraints

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## Pedestrians

The city currently has over 36 miles of paved sidewalks. In many of the residential areas, and the downtown, sidewalks are often provided on both sides of the streets. Along the busier arterials such as Pioneer Street, and Hillhurst Road, continuous sidewalks are not always provided. As the primary cross-town connections, filling in these sidewalk gaps is perhaps the top priority for the multimodal network. All new roads should have sidewalks on both sides and should consider bike facilities based on roadway classification, projected volumes and posted speed limit.

Many sections of roadway have narrow shoulders and/or constrained widths for sidewalks, and will require creative solutions including improvements to the roadway itself, or providing facilities on alternative routes. These areas include stretches of Pioneer Street, Hillhurst Road, and in the yet to be developed Subareas. Enhanced pedestrian crossings, traffic calming and streetscapes improvements are other necessary improvements to the pedestrian environment.

Innovative transitional facilities including bike and pedestrian accommodations at roundabouts, shared use facilities such as trails and interstate overpass connections, and enhanced on-street-off-street interfaces will greatly enhance the pedestrian, bicycle and golf-cart network, and allow residents and visitors to access the downtown, parks, schools and other local destinations.

Trails and off-street paths provide people on foot, on bikes or using mobility devices with access to these destinations and are a critical element of the transportation system. Many pedestrian trails have already been developed throughout the city, however, many of these trail segments are isolated and do not necessarily connect local destinations without having to worry about conflicts with automobiles. The Ridgefield Parks and Recreation Comprehensive Plan identifies several short-term and long-term opportunities and constraints for a citywide trail system.

As an example, the proposed Smythe Trail is a pedestrian/bike trail facility that will provide enhanced connectivity for east and west parts of town along Pioneer Street, provide direct access to and from the Pioneer Canyon neighborhood, and open up the intersection of Reiman Road and Pioneer to needed pedestrian and bike crossing improvements. Many more trail connections would connect otherwise isolated parts of the city, including Gee Creek trail connections.

## Bicycles

The City currently provides standard five foot striped bike lanes on several streets including Heron Drive, on Pioneer Street from 36th Avenue to 45th Avenue, and on 85th Avenue from Union Ridge Parkway to 5th Street. Five foot striped bike lanes are the standard on city collector streets, and the City plans to include bike lanes as a part of future improvements on collector and arterial roadways throughout the city, as well as on new roads constructed in the 45th Avenue Subarea and Ridgefield Junction Subarea.

On arterials such as Pioneer Street and Hillhurst Avenue the automobile traffic volumes and speeds are higher. Buffered bike lanes or protected bike lanes are recommended as the minimum facility type on these streets since bicyclists require more space to safely and comfortably travel in the same space. Similar to pedestrian improvements on these roadways, some segments with constrained roadway widths will require creative improvements, such as reallocating roadway space, narrowing lanes, or constructing parallel alternate facilities.

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Conversely, narrower local/residential streets with posted speed limits of 25 mph or less are ideal for bicycles as “Shared Streets” or designated “Neighborhood Greenways.” Also known as bicycle boulevards, these low speed, low stress bike routes are ideal for providing local connections to neighborhoods and the downtown. Much of the Downtown and nearby neighborhoods are appropriate as Shared Streets.

Off-street trails and paths also offer excellent opportunities to provide bicyclist with low-stress connections throughout town. The city already has a solid foundation of trails and paths, but many of them may need to be widened or graded to allow for comfortable use by everyday bicyclists.

### **Golf Carts**

By definition, golf carts are vehicles originally designed for operation on golf courses and capable of travelling up to 15 mph. In Washington, golf carts may only be driven within a designated by city or county ordinance golf cart zone. In June, 2015, the City of Ridgefield created the first golf cart zone in the region, establishing the golf cart network as a viable transportation option with the intention of providing enhanced mobility options for its developing residential neighborhoods. (See appendix C for more information on golf cart/NEV definitions and facility improvements)

Because golf carts are not permitted on roadways with posted speed limits in excess of 25 mph, they cannot travel on many of the major collectors and arterials in the city. These major roadways include Pioneer St, Hillhurst Rd, 45th Avenue, Carty Rd and NE 10th Ave. Instead, golf cart operators must rely on low-speed residential roadways and off-street paths to make longer trips. Cross-town connections and intersection crossing improvements will be necessary to create a complete golf cart/NEV network. Wayfinding signage and regulatory signage prohibiting entry to major roadways will be critical to prevent golf cart operators from using the street network as they would while operating a motor vehicle.

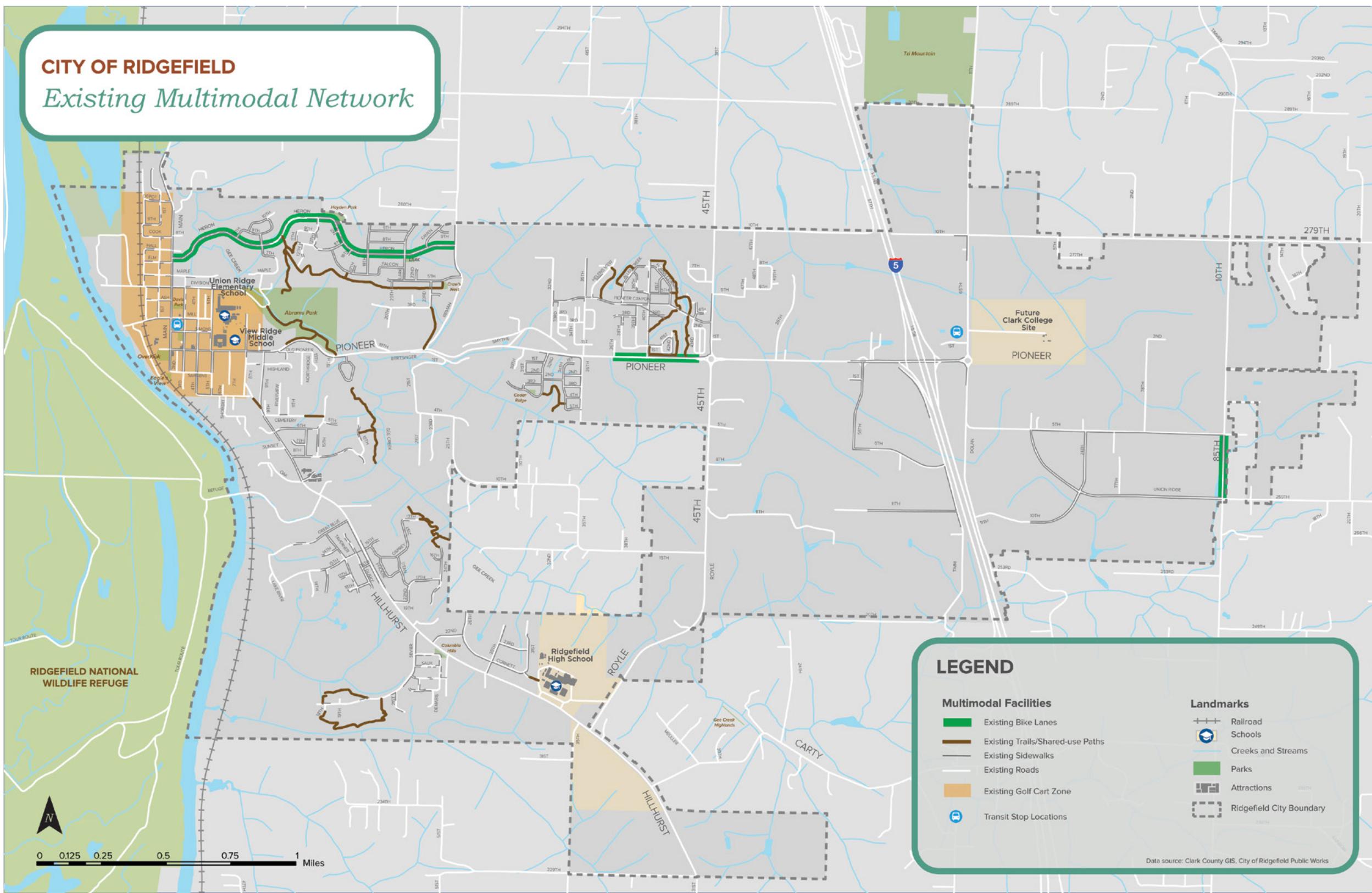
The City’s goal is to connect the downtown area with nearby neighborhoods, including Taverner Ridge, Columbia Hills, Pioneer Canyon, Heron Ridge, and Cedar Ridge. In order to do this, the current downtown golf cart zone must be expanded to permit golf cart use in other residential areas. In particular, posted speed limits on Pioneer St. and Hillhurst Rd. need to be reduced to 25 mph, and/or alternate off-street paths must be constructed to provide golf carts and NEVs a way to travel between these areas.

NEV’s access to roadways with posted speed limits of 35 mph or less affords NEV operators access to a few more collector roadways. However, this provides only marginally improved network connections around the 45th Avenue Subarea and Ridgefield Junction Subarea. Like golf carts, NEVs will rely primarily on low speed residential streets. If off-street paths are retrofitted/constructed to accommodate NEVs, this may present significantly improved connections for NEV users.

### **Transit**

Fixed route transit service is currently limited to the C-TRAN Connector shuttle that picks up at two stops, the Park and Ride near the Ridgefield Junction and downtown on Simons Street between Main and 3rd Aves. The Connector also provides Dial-a-Ride service anywhere within Ridgefield City Limits. This service connects Ridgefield to La Place, Camas and the larger C-TRAN regional transit network. As the Ridgefield Junction and 45th Subareas develop, expanded fixed route transit service will be an essential element of the multimodal network, helping to reduce congestion and parking demand in the central city.

Figure 2: Existing Network Map



# Plan & Policy Review

The City of Ridgefield's population is expected to quadruple by 2035. The following considers significant plans and policies that will shape this growth and impact the forthcoming Ridgefield Multimodal plan.

## EXISTING PLANS + POLICIES

### City of Ridgefield Comprehensive Plan

Ridgefield's Comprehensive Plan sets the City's vision for accommodating growth through 2035. It was first adopted in 2004 and subsequently updated in 2010, 2013, and 2016. The guiding principles of the Plan are for Ridgefield to:

- ▶ Become a regional employment center
- ▶ Maintain and create new quality neighborhoods
- ▶ Protect critical environmental area
- ▶ Manage growth

To implement this vision, the Plan provides a direction for the future and policies for each of the following: land use, historic preservation, economic development, the environment, public facilities, transportation, parks and recreation, and annexation.

The 2016 update to the Plan will include provisions to make Complete Streets a significant part of the vision for Ridgefield's future. The transportation chapter features a policy dedicated to Complete Streets. The policy prescribes that streets, both new and existing, should be designed in accordance with Complete Street principles. Subsequent policies in the chapter call for the provision of bicycle and pedestrian facilities throughout the city. Additionally, the provision of Complete Street facilities are included in a land use policy on new development.

### City of Ridgefield Parks and Recreation Comprehensive Plan

The Parks and Recreation Comprehensive Plan is a strategic plan for the City's parks that inventories and evaluates existing park areas and makes policy, site development and other recommendations. Developed with Ridgefield residents, the Plan's vision is to create "an interconnected community with a park, trail, and

greenway system that contributes to the City's small town character, provides a variety of recreation opportunities, and is an integral part of the community."

The Plan acknowledges that demand for trail corridors will increase with the projected population growth and recommends additional trail mileage to serve future needs. The Plan recommends 0.75 miles of trail per 1,000 people. The goal of the trails network is to create a connected community, with connections from neighborhoods to downtown, the river, and other key destinations.

The Plan identifies the following challenges to the

**Community engagement and feedback were an important aspect of the creating the framework for the Plan. The following is a brief summary of key findings:**

- » **69%** of Ridgefield residents surveyed considered maintaining parks and trails a "high priority" when compared to other parks and recreation services.
- » **37%** responded that building new parks and trails were a "high priority."

trail network:

- ▶ Physical barriers, such as Interstate 5 and waterways
- ▶ Existing trails are limited in length
- ▶ Existing trails offer few connections to each other or to parks, downtown or other key destinations
- ▶ A lack of wayfinding and signage
- ▶ Accessibility and ADA compliance issues

The Plan states that “the on-street bike route and sidewalk system meet transportation needs, but also supplements the off-street system by providing linkages and offering connections where off-street connections are presently unfeasible.” The trail system should connect to all parts of the city, with connections to downtown, educational institutions, residential neighborhoods, natural spaces, and other key destinations.



### **City of Ridgefield Complete Streets Resolution**

The City of Ridgefield adopted a Complete Streets Resolution in September 2015. The resolution strengthens the City's commitment to creating an integrated, multi-modal transportation network. It states that both the infrastructure and the design of the transportation network must “allow safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, motorists, golf cart operators, transporters of commercial goods, users and operators of public transportation, seniors, children, youth, and families.” The goal of the resolution is to create “a balanced transportation system” that accommodates all network users, including pedestrians, cyclists and users of public transportation. There is also an emphasis placed on creating a safe environment for children to walk and bicycle to and from school and on providing equitable transportation infrastructure in low- and moderate-income areas.

Like the Parks and Recreation Comprehensive Plan, the resolution identifies the anticipated growth in population throughout the city as an important reason to consider multimodal transportation, particularly when reconfiguring an existing road or constructing new roads. The Complete Streets Resolution also places emphasis on creating a more connected city, with linkages between where people live and key destinations, such as schools, retail, parks, employment, and transit. Finally, the resolution conforms to the requirements of the Washington State Complete Streets Act, and makes Ridgefield eligible to receive funding from grant program established by the Act.

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## NETWORK DEVELOPMENT

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- » Needs Assessment
- » Gap Analysis
- » Facility Types
- » Programs & On-going Operations

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# Needs Assessment

A needs assessment was performed to identify constraints in the existing transportation network and to determine where pedestrian, bike and golf cart transportation improvements are most needed. This section provides recommendations on improving the multimodal network based on the network gap analysis and input received through public engagement events.

The network gap analysis identifies where critical gaps exist in the bicycle, pedestrian, and golf cart network and evaluates locations where facilities need to connect in order to allow users to access key destinations throughout Ridgefield. The multimodal network was analyzed in conjunction with the key points of connection to identify gaps in the existing and proposed pedestrian, bicycle, and golf cart networks.

## Key Locations

- » Schools
- » Parks
- » Downtown
- » Neighborhoods
- » Subareas



# Facility Types

## Sidewalks

Provide an area for pedestrian travel that is typically constructed out of concrete and separated from vehicle traffic by a curb or gutter and sometimes a landscaped planting strip area. The width and design of sidewalks will vary depending on street context, functional classification, and pedestrian demand. Sidewalks should be at minimum 5 feet wide, with wider dimensions in commercial areas that experience higher pedestrian activity.



## Curb extension

Minimizes pedestrian exposure during crossing by shortening crossing distance and increasing visibility to motorists. They can be installed either at intersections or at midblock crossings and are most appropriate when there is a parking lane adjacent to the curb.



## ADA-compliant curb ramp

Design elements placed at crossings that allow all users to make the transition from the street to the sidewalk. To be ADA-compliant, the ramp must meet federal standards for maximum slope and landing dimensions, and should be marked with contrasting tactile warning devices (truncated domes) to alert people with visual impairments to changes in the pedestrian environment.



## Median refuge island

Located at the mid-point of a marked crossing and helps improve pedestrian safety by allowing pedestrians to cross one direction of traffic at a time. Refuge islands minimize pedestrian exposure by shortening crossing distance and increasing the number of available gaps for crossing.



## Marked crossing

Consists of high-visibility Continental crosswalk, signage and other markings to slow or stop traffic and encourages pedestrians to cross at designated locations. At mid-block locations, crosswalks can be marked where there is a demand for crossing and there are no nearby marked crosswalks.



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### Bicycle lane

Exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and is used in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge or parking lane. In some applications, bicycle lanes can be designed to accommodate golf cart travel as well.



### Buffered bicycle lane

Bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes are designed to increase the space between the bike lane and the travel lane and/or parked cars. This treatment is appropriate for bike lanes on roadways with high motor vehicle traffic volumes and speed, adjacent to parking lanes, or a high volume of truck or oversized vehicle traffic.



### Shared street

Low-volume, low-speed facilities with shared operating conditions comfortable for use by bicyclists and golf cart operators. Treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications are utilized to achieve specific speed or volume targets.



### Shared use path

Off-street facilities separated from motor vehicle traffic for the use of bicycles, pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Shared use paths can be built to accommodate bikes and golf carts provided that modes are adequately separated. Key features include frequent access points from the local road network, directional signs, a limited number of at-grade crossings with streets or driveways, and separate treads for pedestrians and bicyclists when heavy use is expected. Path facilities can also include amenities such as lighting, signage, and fencing (where appropriate).



Protected bicycle lanes are exclusive facilities that combine the user experience of a separated path with the on-street infrastructure of a conventional bike lane.

# Gap Analysis

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## NETWORK GAPS

As a part of the Current Conditions Analysis, base maps establishing the locations of existing walking, biking, and golf cart facilities were created. This allowed for a preliminary assessment of major travel corridors and low-service areas in relation to local destinations and available multimodal facilities.

This high level assessment then assigned general facility types to the roadways for each mode of transportation. For example, bike facilities were assigned to road segments based on roadway functional classifications and posted speed limits (See Figures 3-5). A more refined, street-level network gap assessment was then performed to identify the “gaps” or barriers along paths of travel connecting local destinations for pedestrians, bicyclists, and golf cart operators (See Figure 6).

Constrained areas were identified according to the following conditions:

- » Locations with poor access or otherwise discontinuous paths of travel
- » Locations that present challenges for pedestrians crossing the street or walking along a roadway
- » Locations without bike lanes or sufficient space in the roadway for a designated bike or golf cart facility
- » Roadways with speed limits greater than 25 mph for golf carts
- » Roundabouts without separated bike facilities
- » Locations that do not meet the connectivity standard
- » Locations of concern identified at community engagement events by the public were also classified as network gaps.
- » Locations that are unlikely to develop or redevelop within the 20-year planning horizon.

This gap assessment was limited to the roadway network. Although discontinuous trail segments along established trail corridors could be considered network gaps, the multimodal plan prioritizes on-street network connections as the most direct connections between local destinations in accordance with the connectivity standard. The overall plan does however address the need for off-street connections as alternatives to on-street improvements in some cases, such as the proposed Smythe Trail. In the project evaluation phase of the plan, trail development was also factored as one of the project prioritization criteria.

Many of the existing trails in Ridgefield are not currently suitable for multiple modes and feature physical constraints that may not easily allow retrofits to accommodate more than one mode in the near future. The Gee Creek Corridor is one example of this. On the other hand, many of the more conceptual proposed trail alignments, such as the trails around the Ridgefield Junction area may be good candidates for future multimodal facilities.

The plan also recognizes that traditional transportation funding sources are generally exclusive of trail development or facilities otherwise considered “recreational” and that trail gaps will be filled as appropriate funds are available. The City should still pursue creative funding strategies involving collaboration between engineering, planning, and parks and recreation departments on projects aligned with shared goals.

The facility recommendations provided here should be considered conceptual in nature and are subject to change based on changing conditions. Local improvements may result in new localized improvement priorities. Future development plans and proposed roadways in the 45th Ave Subarea and Ridgefield Junction Subarea may be subject to change. This may affect the type of facilities required in the area and the connections provided to the rest of the network.

After network gaps were identified, pedestrian/

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bicycle/golf cart facility types recommendations were refined, and specific improvements were identified. Identification of these specific locations and facility types led to the project evaluation phase of the plan. These gaps or constrained areas are listed in Table 1, and illustrated in Figure 6.

**Table 1: Network Constraint Locations**

Location	Extents	Description
Pioneer St roundabouts	N 45th Ave and Pioneer St, N 65th Ave and Pioneer St, N 56th Ave and Pioneer St	Roundabouts do not currently provide safe, separated crossings for bikes and pedestrians. Multi-lane roundabouts facilitate higher speeds, more complex movements and less deflection.
Hillhurst Rd	S Oak Rd to S 8th Wy	Roadway is currently too narrow to accommodate bike lanes in each direction. Posted speed limit is too high for golf cart use.
Hillhurst Rd	S 6th Way to Pioneer St	Roadway is currently too narrow to accommodate sidewalks or bike lanes in each direction. Posted speed limit is too high for golf cart use. Bike/ped crossing needed to connect east (NB) side of street to path leading 8th Ave.
Pioneer St	S Gee Creek Loop to N 19th Ct	Roadway and Gee Creek crossing is too narrow to accommodate sidewalks or bike lanes. Posted Speed limit is too high for golf cart use.
Smythe Trail	N Pioneer Canyon Dr to N Reiman Rd	Roadway is too narrow to accommodate pedestrians/bikes/golf carts. Need an alternative to Pioneer St and a connection from Pioneer Canyon neighborhood to downtown.
Hillhurst Rd	Ridgefield High School frontage	Currently no sidewalks or bike lanes.

Figure 3: Proposed Pedestrian Network Map

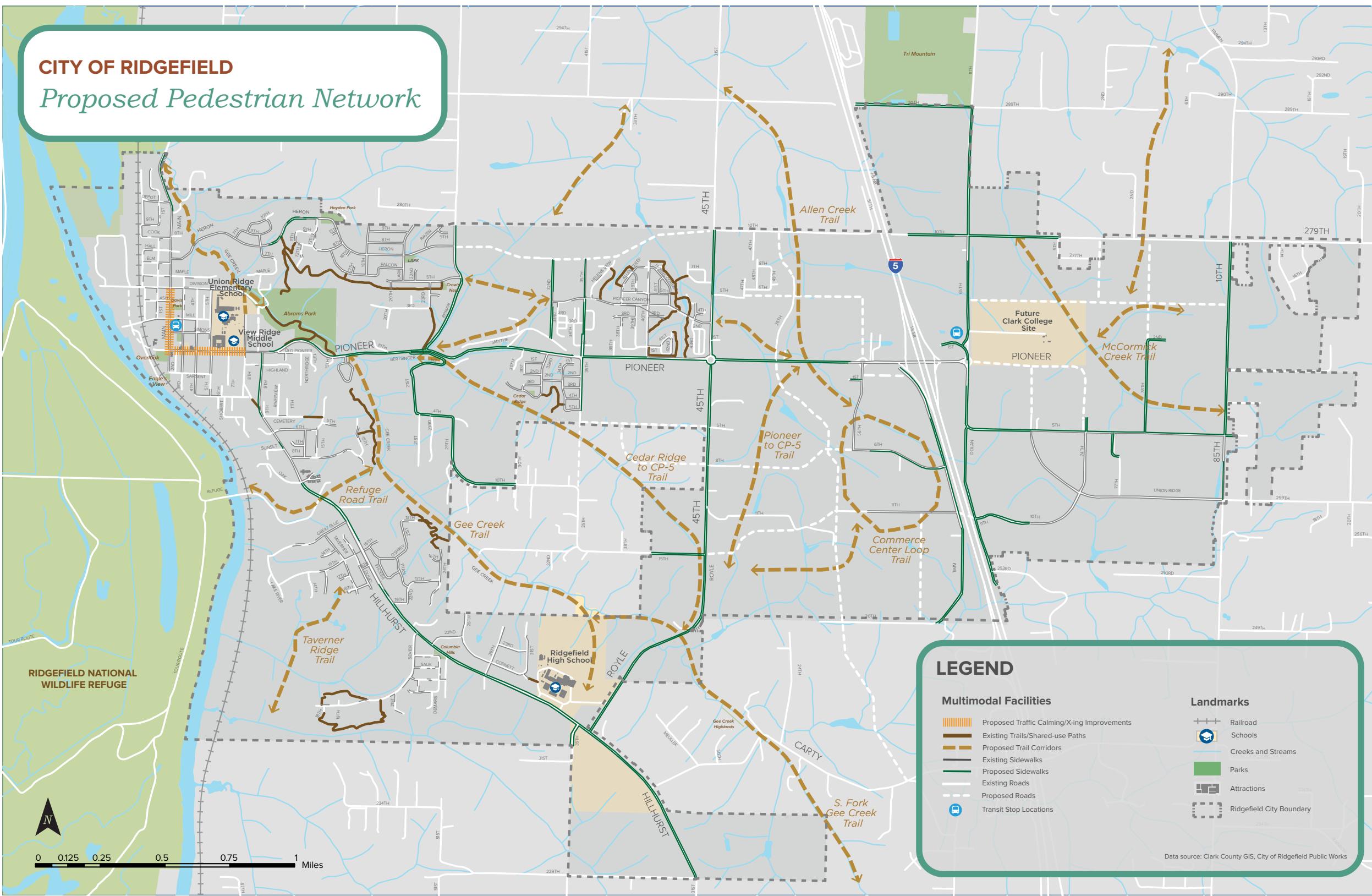
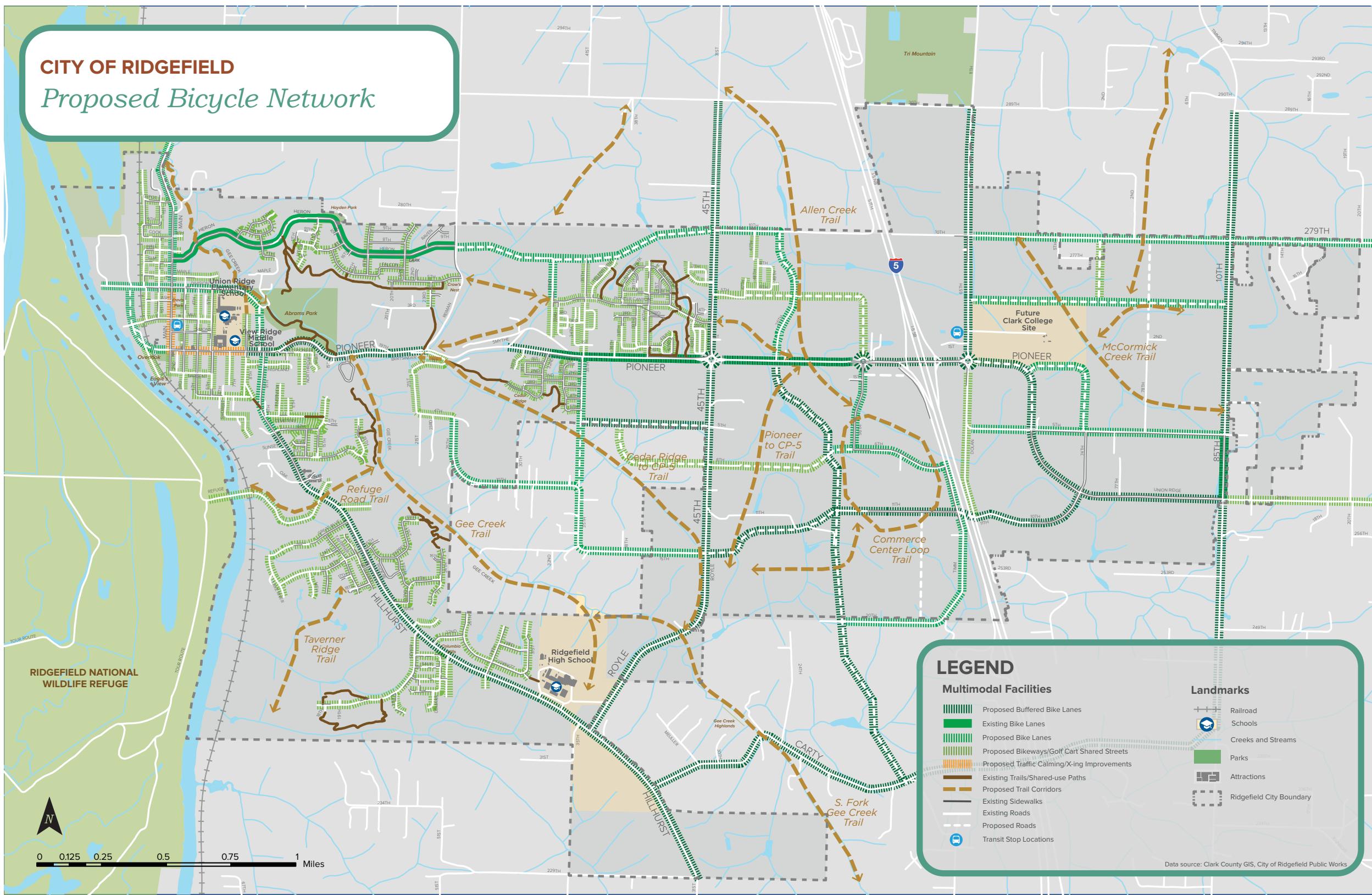


Figure 4: Proposed Bicycle Network Map



**Figure 5: Proposed Golf Cart/NEV Network Map**

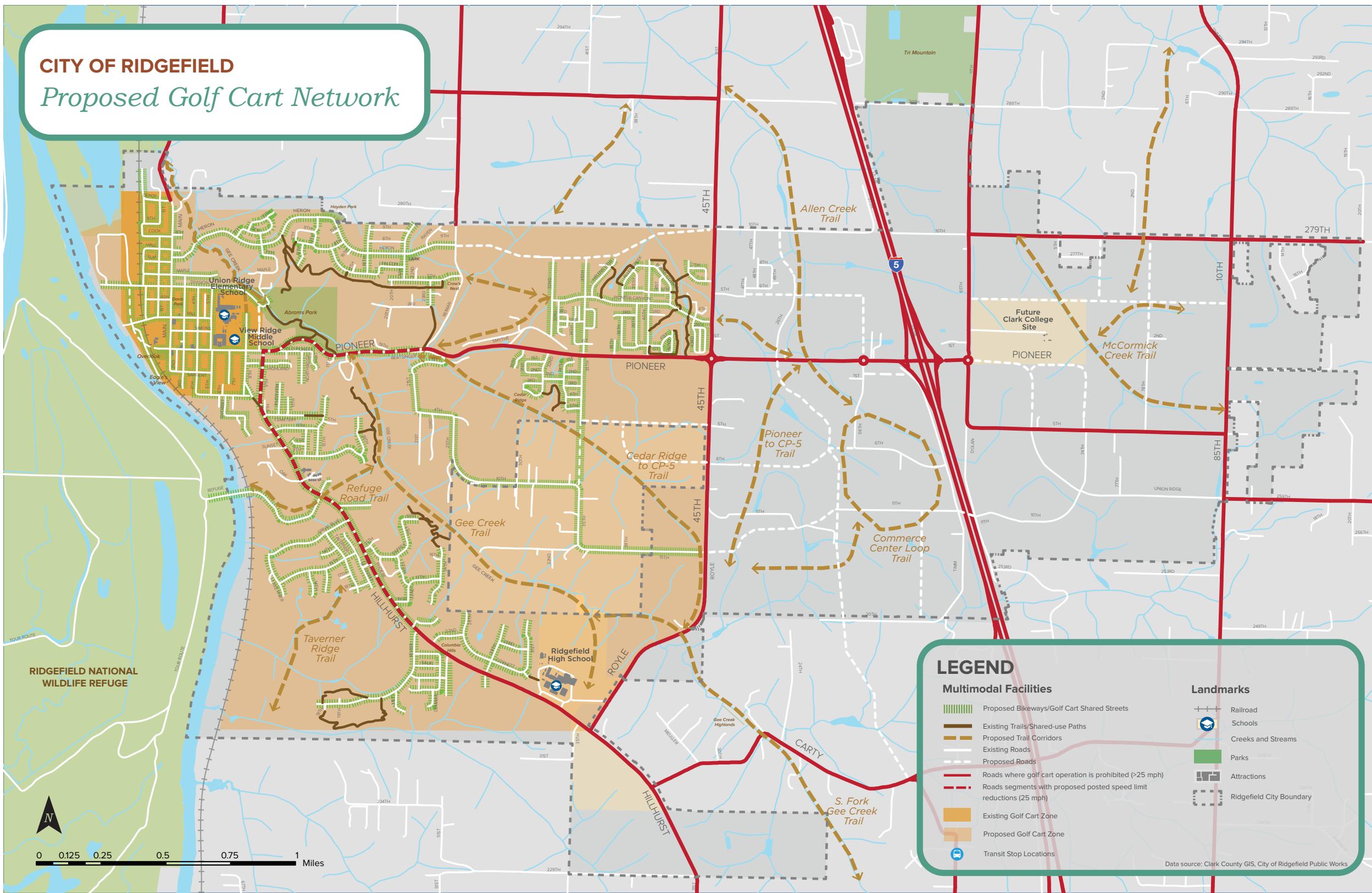
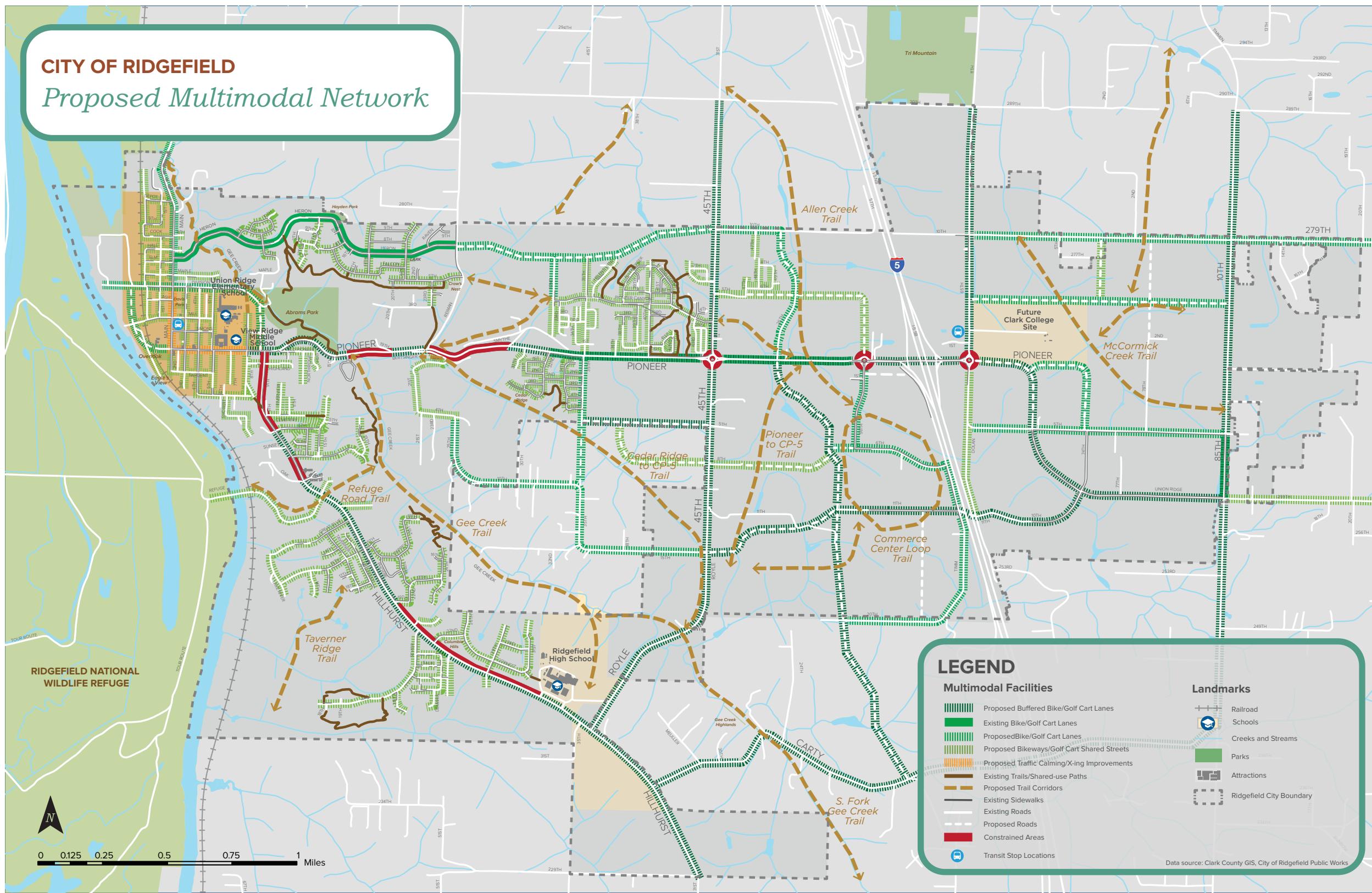


Figure 6: Proposed Network Map



# Programs & On-going Operations

The infrastructure recommendations in this Plan will provide safer, more comfortable ways for residents and visitors to travel throughout the city. However, while improving infrastructure is critical to increasing rates of walking, bicycling, golf cart and transit use, the importance of multimodal transportation education, encouragement, enforcement, and evaluation efforts should not be underestimated.

Programs can ensure that more residents will know about new and improved facilities, learn about the benefits of a multimodal transportation system, and receive positive reinforcement about why and how to integrate new transportation options into their everyday lives. In essence, these efforts market transportation options to the general public and provide the maximum “return on investment” in the form of more people walking, bicycling, using golf carts, transit, and a combination of these travel modes. This further contributes to a higher degree of awareness and transportation safety in Ridgefield.

This section contains an overview of best practices for education, encouragement, enforcement, and evaluation programs that should be pursued as infrastructure investments are made.

## EDUCATION & ENCOURAGEMENT

Education and encouragement programs are designed to:

- ▶ Raise awareness of walking, bicycling, golf cart use, and transit use
- ▶ Connect users to existing and future resources
- ▶ Educate them about their rights and responsibilities
- ▶ Encourage residents to walk and bike, and consider other travel modes more often

These programs give communities the tools they need address travel behaviors and choices, health equity, and community-wide physical activity. Education and encouragement programs can be tailored to a community's needs with a focus on a

specific outcome or to a specific demographic.

### Safe Routes to School

Safe Routes to School (SRTS) programs use a “6 Es” approach (Engineering, Education, Enforcement, Encouragement, Evaluation, and Equity strategies) to improve safety and encourage children walking and biking to school. SRTS works to provide youth with the opportunity to ride or walk to school, the sports field, a friend’s house, or to the library. Programs educate youth and parents about safe bicycling skills, encourage schools and communities to support bicycling and walking, and help communities make the streets, trails, and sidewalks safe for bike riders of all ages. The programs are usually run by a coalition of city government, school and school district officials and teachers, parents and students, and neighbors.



Safe Routes to School - Santa Monica

### Open Streets Events

Open Streets events are periodic street closures that create a temporary park that is open to the public for walking, bicycling, roller skating, dance and exercise activities, etc. The purpose of the event is to encourage walking and biking for the general public by providing a car-free street event.

### Kidical Mass

This family bike ride aims to be a legal, safe, and a fun community activity. The goal is to gain confidence and learn how to ride safely. The first Kidical Mass ride took place in Eugene, Oregon, in 2008 and now takes place in many communities throughout

North America and beyond. Rides vary in location, route, and theme, but are always planned to be family friendly and welcoming for all abilities.

### **Bike Friendly Businesses**

Local business reward and discount programs encourage people to commute or run errands by biking. People who bike are eligible for rewards or discounts at participating local businesses. In some cases a membership or a helmet sticker is needed by consumers to receive the discount. These programs reinforce bicycling as a positive behavior; business see increased customer loyalty, it encourages bike-friendly establishments, and it provides the opportunity to build partnerships with local businesses.

### **Media Campaigns**

Media campaigns target unsafe and illegal behaviors and attitudes of all road users including motorists, bicyclists, and pedestrians with the goals of encouraging mutual respect among all road users. Campaigns can be customized with a variety of messaging, target audience, and outreach methods.



## **ENFORCEMENT**

An enforcement strategy aims to deter unsafe behaviors of drivers, pedestrians, and bicyclists, and encourages all road users to obey traffic laws and share the road safely. Enforcement complements many transportation programs. Options include community enforcement (pedestrian/bike safety training) and/or law enforcement (promoting good road user behaviors).

### **Back-to-School Crosswalk Policing**

One way of institutionalizing crosswalk enforcement is to pair it with the Back-to-School season. The

safety of children walking is of great concern to many community members. The beginning of the school year is also a time when many people – children and their families, college students, those who work in education – are beginning new habits and may be more likely to change their behavior.

### **Law Enforcement Collaboration – Tucson, Arizona**

Tucson's enforcement comes from a strong, communicative relationship between transportation staff and local law enforcement. A representative of the Police Department attends monthly Bicycle Advisory Committee meetings for a few minutes to communicate with transportation professionals and advocates, and the Police Department seeks their own funding to do targeted enforcement of illegal, unsafe behavior of motorists, bicyclists, and pedestrians. Law enforcement officers focus on behaviors known to be the most dangerous, such as motorist right hook turns and bicyclists not using lights at night. Even when conducting bike light enforcement, the police officers prefer to start with education, warnings, and free lights, followed by citations if the issue persists.

### **Speed Limit Enforcement**

Speeding vehicles endanger pedestrians and bicyclists and discourage travel by these modes in general. Targeted speed enforcement activities can address both of these issues. Law enforcement agencies can enforce speed limits on designated bikeways, near schools, and in response to complaints. These campaigns are ideal for a Safe Routes to School Program. A speed reader board request program will deploy speed reader boards at the request of neighborhood associations and schools. The boards should be mounted temporarily (e.g. for two weeks) and then be moved to another location to keep motorists from becoming inured to the speed reader board effect.

### **Driver Education**

Improving driver awareness of bicyclists helps to make a safer and more comfortable road environment

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for bicycling. Outreach through drivers' education classes is a good way to reach beginning drivers, while a diversion class can be offered to first-time offender violations that endanger bicyclists.

## EVALUATION

Evaluation is a key component of any program or campaign. Walking and bicycling evaluation considers increases in desired behaviors, mode shifts, psychological changes, the exchange of information, and social interaction throughout the campaign or program. Evaluation of education, encouragement, and enforcement programs will vary depending on the goals, budget, and longevity of the program. Monitoring and setting performance measures will insure that the program goals are being met and provide data and program feedback that will allow the program to adjust or evolve as necessary to fit the community's needs.

In addition to the evaluation process associated with an implemented program, the City of Ridgefield should consider other forms of evaluation that provide baseline data or determinants of changes in behaviors, such as golf cart ridership and transit use, bike, golf cart, and automobile parking inventories and utilization studies, pedestrian travel paths and short cuts, school routes and drop-off zones, etc.

## Periodic Bicycle/Pedestrian Policy Review & Planning

The City of Ridgefield should set internal deadlines for benchmarking bicycle and pedestrian policy through periodic reviews and planning sessions. Regular policy review and planning would allow City staff to understand the program's strengths and weaknesses, as well as next steps. These meetings can also discuss the need for additional long-range strategic plans.

These review sessions and deadlines can ensure that the plan remains a "living document" and is continuously updated according to design guideline, policy, legislation, and other document updates. Updating the plan according to the state's needs would help ensure its relevancy for bicyclists across Washington.

## Bicycle and Pedestrian Counts Program

In order to determine a plan or program's success at meeting bicycle ridership and walking goals, it is necessary to establish an annual data collection program. At a minimum, this program should tally the number of bicyclists and pedestrians at key locations around the city, such as trails, schools, parks or in the Downtown area. The same locations should be counted in the same manner annually. This will provide the City with information about the growth of bicycle ridership and pedestrians. In addition to a simple tally, it is common to collect additional information at the same time (such as cyclist gender, helmet use, number of children, etc). It is recommended that the data collection program use the methods developed by the National Bicycle and Pedestrian Documentation Project (NBPD). If desired, surveys can also be included in the data collection effort to learn more about bicyclist and pedestrian demographics, trip origin/destination, and attitudes towards bicycle/pedestrian facilities. Count and survey instructions and materials can be found at the Bike Ped Documentation Project website.

# Community Engagement

The long-term success of Ridgefield's developing multimodal transportation system depends heavily on the community's input, support, and compliance with new and existing transportation policies and regulations. Residents, community leaders, and business owners who are all users of the multimodal transportation system, also have a vital role in shaping the system. Their ideas, concerns and insight at the local level are essential in the successful development of this city-wide network.

## COMMUNITY ENGAGEMENT

The overarching framework for the multimodal plan coincides with the City of Ridgefield's Complete Streets Resolution. The primary aim of this policy is to provide a "comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, and persons with disabilities, motorists, and golf cart operators, transporters of commercial goods, users of public transportation, seniors, children, youth and families." The multimodal, multi-user, multi-purpose principles of this policy serve as the central tenets of the Multimodal Plan. Testimony for the Complete Streets Resolution was presented at a City Council hearing, including a presentation of Complete Streets concepts, and opportunity for the public to ask questions and provide support or opposition to the policy. The City of Ridgefield City Council unanimously adopted this resolution in September 2015.

The adoption of this comprehensive policy set the stage for the development of the multimodal plan, as well as several other concurrent planning processes in the city, including the Downtown Circulation Plan, updates to the Transportation System Plan and Comprehensive Plan, updates to the city development code and engineering standards, and city subarea planning efforts. Each of these planning efforts included opportunities for community input through open houses, presentations, walking tours and other public engagement opportunities at local events.

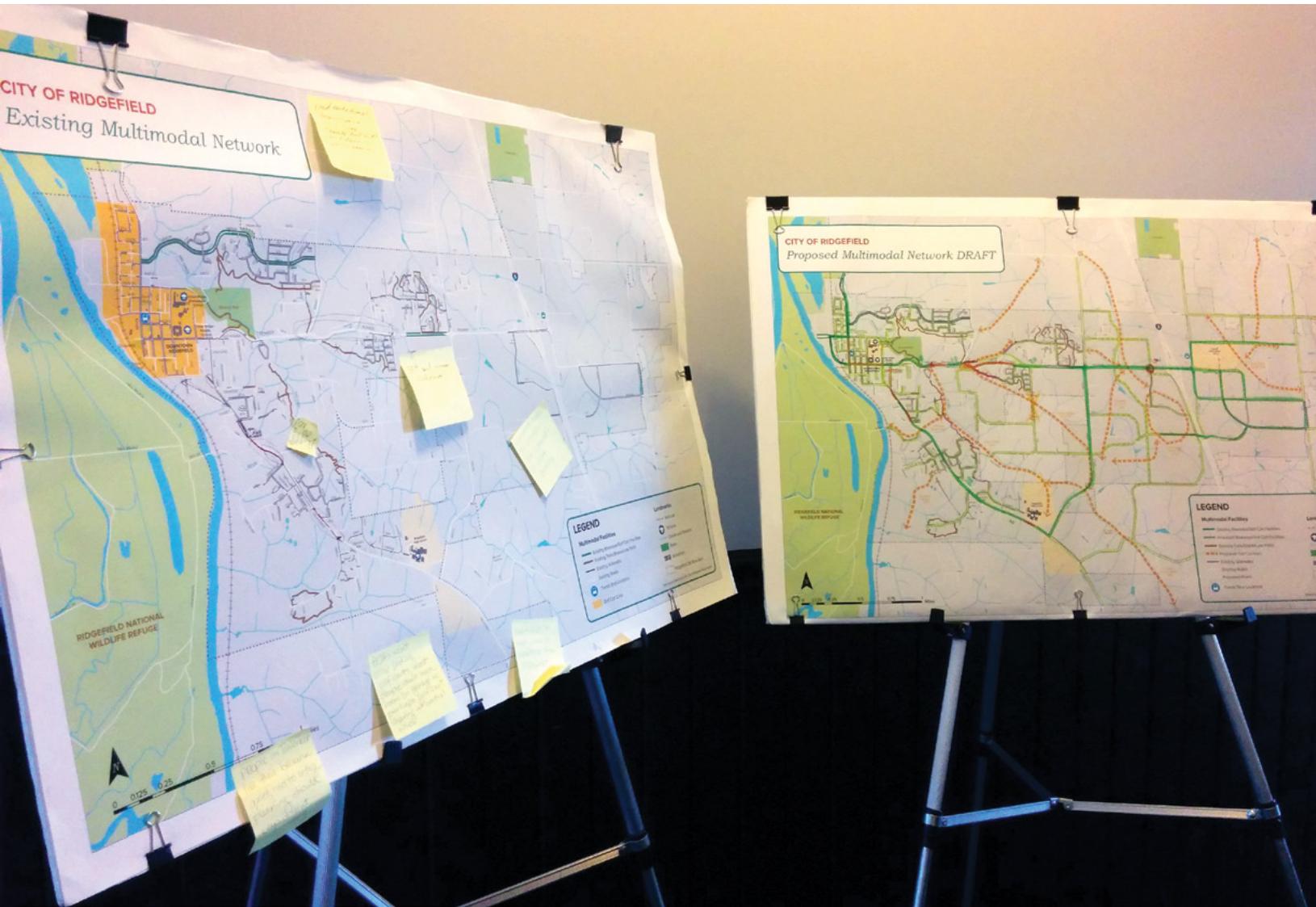
As a part of the multimodal planning process, the public was invited to weigh in on the current conditions analysis and needs assessment phases of the plan at an open house held in September 2015. Attendance at this event was exceptionally high and included many Ridgefield families, employees, property owners, council members, and representatives of the Port of Ridgefield. The public at large had a chance to talk to planning and engineering staff about the plan, have their questions answered, voice their concerns, offer insight about existing conditions and network development, and were provided resources for tracking the progress of the plan, and following up with City staff. These comments and recommendations were recorded and served as direct input in the design of the multimodal network and project evaluation criteria.

### Key themes from the community engagement events include:

- » Improve pedestrian and bike conditions along Pioneer St
- » Improve bike and pedestrian conditions along Hillhurst Rd
- » Congestion mitigation and improved downtown circulation
- » Improve access to schools
- » Continued trail development
- » Preserve neighborhood character
- » Improve transit service

In October 2015, a second presentation of the Multimodal Plan and Downtown Circulation Plan was organized for the Downtown Main Street Program. Business and property owners had the opportunity to learn about the plan, ask questions and offer recommendations on improvements in the Downtown area. These ideas were also incorporated into the design of the network and project evaluation criteria.

Education and outreach efforts will continue to be important after the plan is complete. As the City grows and new residents and visitors arrive, it will be necessary to reinforce the underlying Complete Streets policy and implementation from a “user’s” perspective. Moving forward, the City of Ridgefield will continue to look for opportunities to hold community education and outreach efforts as the plan is implemented and improvements are made throughout the city.



# 5

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## PROJECT EVALUATION

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- » Recommended Projects
- » Project Phasing
- » Project Evaluation Criteria & Decision Matrix
- » Project Cost Opinions

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## Recommended Projects

The constrained areas identified in the Network Gap Analysis provided a list of six potential projects that were further explored. This list of projects also considered other programmed transportation improvements, other concurrent or imminent planning efforts, and was developed to ensure that the multi-modal network grows rationally rather than a series of disconnected pieces over time. These projects are described in Figure 7 below.

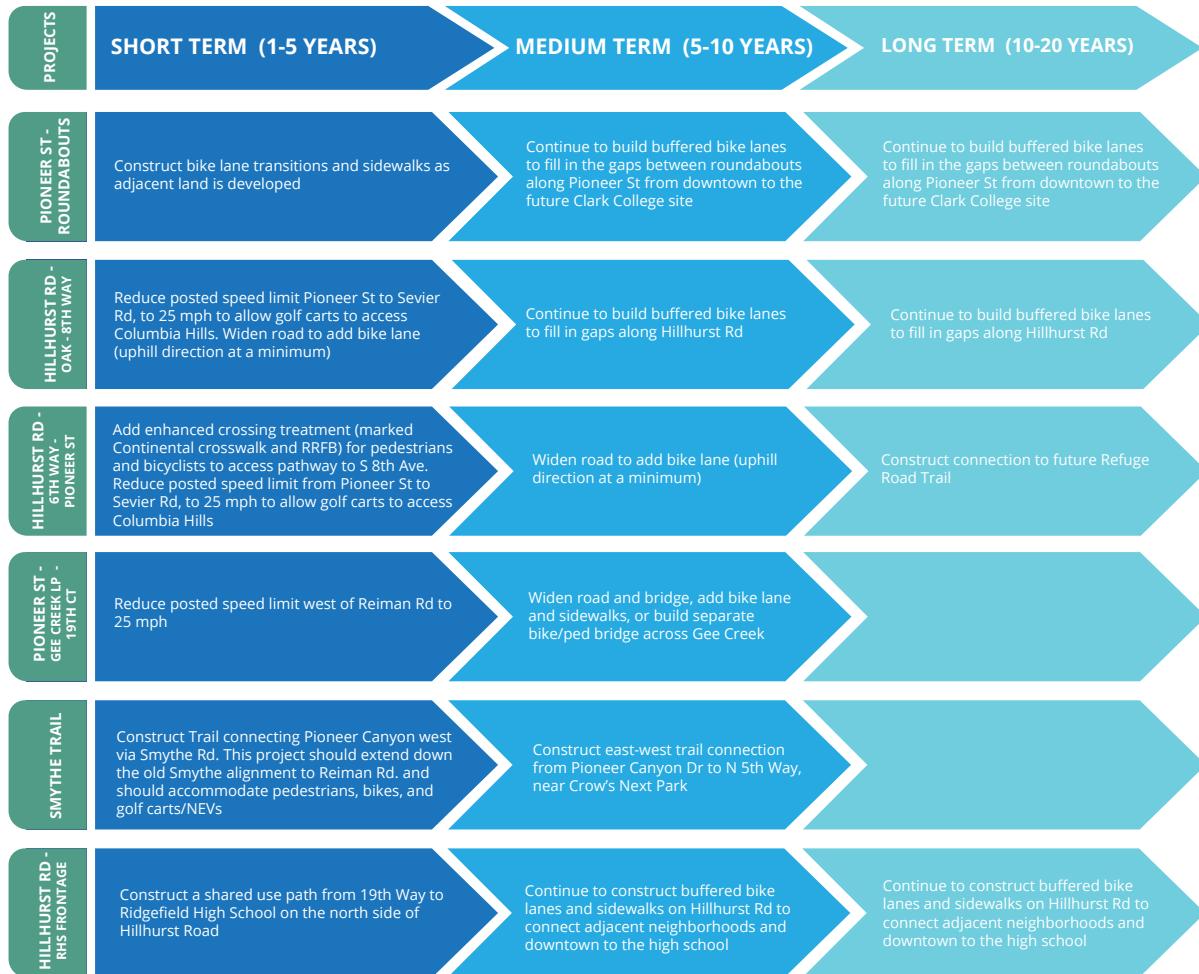
Figure 8 is a project phasing diagram providing a phased approach for each project. As illustrated in the diagram Short-term projects can be completed in the next 1-5 years, Medium-term projects can be completed in the next 5-10 years, and long-term projects can be completed in the next 10-20 years. The city should continue to review and update these project timelines as improvements are implemented and priorities shift. The city should also pursue these (and other project improvements) as funding becomes available, and as project feasibility evolves.

**Figure 7: Proposed Project Descriptions**

PROJECTS	PIONEER ST - ROUNDABOUTS	HILLHURST RD - OAK - 8TH WAY	HILLHURST RD - 6TH WAY - PIONEER ST	PIONEER ST - GEE CREEK LP - 19TH CT	SMYTHE TRAIL	HILLHURST RD - RHS FRONTAGE
LOCATION CONSTRAINTS	No existing sidewalks or bike lanes, or bike path transitions. Multi-lane roundabouts present more complex maneuvers and facilitate higher vehicle speeds	No existing bike facilities. Narrow road width will require roadway widening. Posted speed limit is too high for golf carts (>25mph)	No existing bike facilities, and sidewalks on only one side of the street. Uphill direction will require dedicated bicycle facility. Narrow road width will require roadway widening. Posted speed limit is too high for golf carts (>25 mph)	No existing bike facilities, or sidewalks on or leading up to Gee Creek crossing. Narrow road width will require roadway widening, or construction of separate bicycle/pedestrian bridge. Posted speed limit is too high for golf carts (>25 mph)	No existing bike facilities or sidewalks on Pioneer Street. Narrow roadway width, steep grade, and higher vehicle speeds necessitate an alternate off-street facility.	No existing bike facilities or sidewalks on Hillhurst Road. Narrow road width will require roadway widening.
PROPOSED IMPROVEMENTS	Construct bike lane transitions and sidewalks as adjacent land is developed. Continue to build buffered bike lanes to fill in the gaps between roundabouts along Pioneer St from downtown to the future Clark College site.	Reduce posted speed limit from Pioneer St to Sevier Rd to 25 mph to allow golf carts to access Columbia Hills. Widen road to add bike lane (uphill direction at a minimum). Continue to build buffered bike lanes to fill in gaps along Hillhurst Rd.	Add enhanced crossing treatment (marked Continental crosswalk and RRFB) for pedestrians and bicyclists to access pathway to S 8th Ave. Reduce posted speed limit from Pioneer St to Sevier Rd to 25 mph to allow golf carts to access Columbia Hills. Widen road to add bike lane (uphill direction at a minimum). Construct connection to future Cedar Ridge/CP-5 Trail.	Reduce posted speed limit west of Reiman Rd to 25 mph. Widen road and bridge, add bike lane and sidewalks, or build separate bike/ped bridge across Gee Creek.	Construct Trail connecting Pioneer Canyon west via Smythe Rd. This project should extend down the old Smythe alignment to Reiman Rd. and should accommodate pedestrians, bikes, and golf carts/NEVs. Construct east-west trail connection from Pioneer Canyon Dr to N 5th Way, near Crow's Nest Park.	Construct a shared use path from 19th Wy to Ridgefield High School on north side of road. Continue to construct buffered bike lanes and sidewalks on Hillhurst Rd to connect adjacent neighborhoods and downtown to the high school.

# Project Phasing

**Figure 8: Project Phasing**



# Project Evaluation Criteria & Decision Matrix

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The six projects were further ranked according to a set of 11 project evaluation criteria. The criteria included the following:

- » **Connectivity Standard** - Does the project fulfill the Connectivity Standard?
- » **Major Corridor** - Does the project fall on a major transportation corridor?
- » **Multimodality** - Does the project provide improvements for more than one mode?
- » **SRTS Connection** - Does the project provide transportation options for school trips?
- » **Closure of Critical Gap** - Does the project fall in a constrained area?
- » **Safety Improvement** - Does the address a reported safety concern?
- » **Trail** - Does the project involve a trail?
- » **Programmed Project** - Is the project already planned or on the CFP list?
- » **Downtown Improvement** - Is the project located Downtown?
- » **Subarea Improvement** - Is the project in a Subarea?
- » **Community Support** - Does the project address a community concern? Was it identified at a public event?

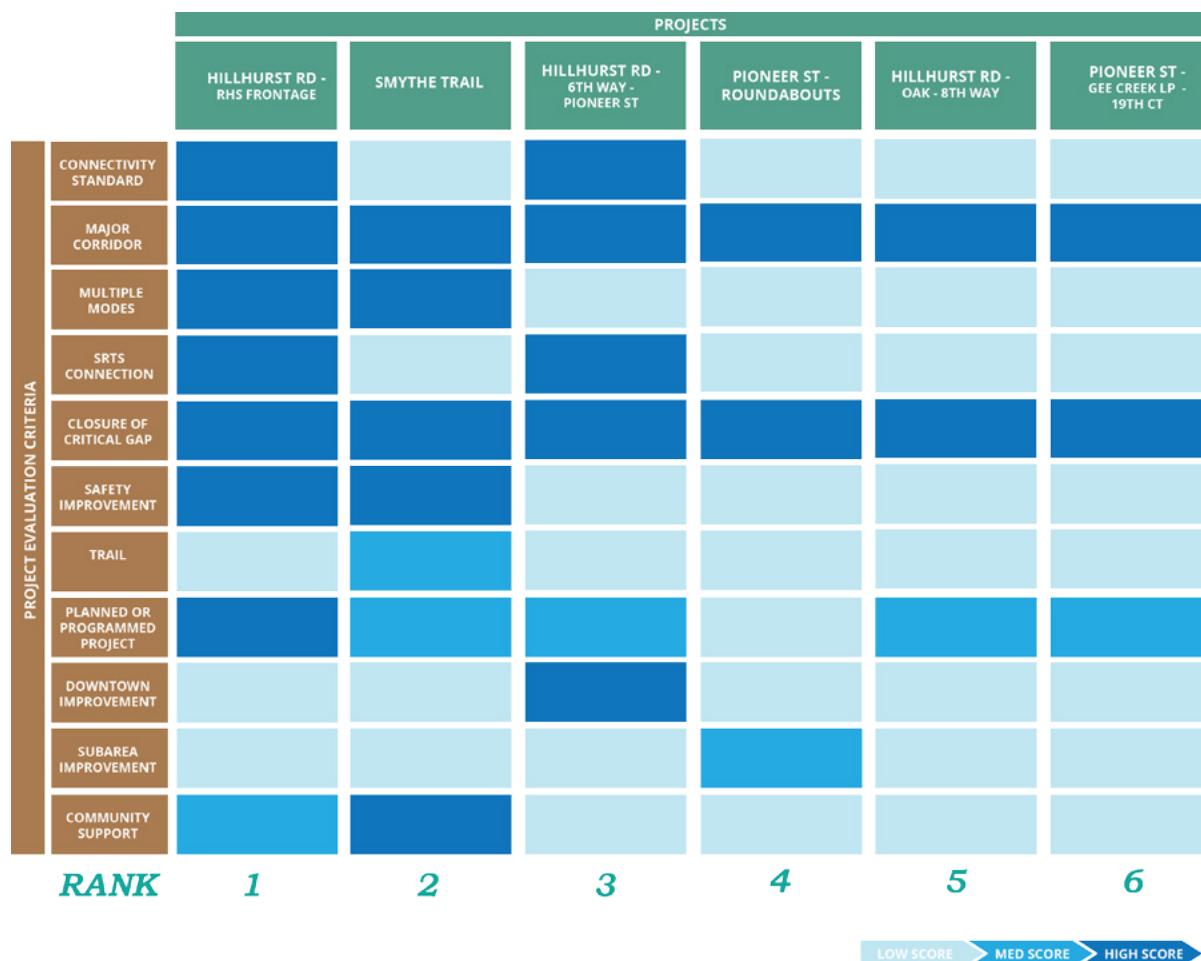


Figure 9 below illustrates the relative project ranking based on the project evaluation criteria. The highest scoring projects were:

1. Hillhurst Road - Ridgefield High School Frontage
2. Smythe Trail
3. Hillhurst Road - S 6th Way to Pioneer Street

Appendix E. provides additional detail on project evaluation and scoring.

**Figure 9: Project Evaluation Criteria & Ranking Matrix**



## Cost Evaluation

Planning-level cost opinions were generated for the top three highest ranking projects. Figure 10 below lists direct capital costs and total costs. Total costs include direct costs in addition contingency, engineering/design, construction/overhead, and project administration costs.

These cost opinions should be considered general estimates based on the unit costs of the improvements listed, and do not include right-of-way acquisition costs, costs for potentially requiring bridges or retaining walls, or other support facilities or amenities, such as lighting, benches, bicycle parking or signage.

**Figure 10. Project Cost Opinions**

PROJECTS	HILLHURST RD - RHS FRONTAGE	SMYTHE TRAIL	HILLHURST RD - 6TH WAY - PIONEER ST
PROPOSED IMPROVEMENTS	Construct a shared use path from 19th Way to Ridgefield High School on the north side of Hillhurst road. Continue to construct buffered bike lanes and sidewalks on Hillhurst Rd to connect adjacent neighborhoods and downtown, with the high school	Construct Trail connecting Pioneer Canyon west via Smythe Rd. This project should extend down the old Smythe alignment to Remian Rd. and should accommodate pedestrians, bikes, and golf carts/NEVs. Construct east-west trail connection from Pioneer Canyon Dr to N 5th Way, near Crow's Nest Park.	Add enhanced crossing treatment (marked Continental crosswalk and RRFB) for pedestrians and bicyclists to access pathway to S 8th Ave. Reduce posted speed limit south of S Oak Rd to Sevier Rd, to 25 mph to allow golf carts to access Columbia Hills. Widen road to add bike lane (uphill direction at a minimum). Construct connection to future Cedar Ridge/CP-5 Trail.
DIRECT COSTS	3,500 Feet; 12 Ft wide, asphalt shared use path with 2 ft topsoil shoulders	1,000 Feet ; 12 ft wide asphalt trail with 2 ft topsoil shoulders (Does not include ROW acquisition)	1,320 Feet; 6 ft standard bike lanes in each direction, including road widening; Does not include ROW acquisition, grading; Bike/ped enhanced crossing improvements at S 6th Way including RRFB
TOTAL COSTS	<b>\$436,600</b>	<b>\$143,000</b>	<b>\$255,000</b>
	<b>\$742,100</b>	<b>\$243,000</b>	<b>\$433,000</b>

## APPENDIX

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- » A. Community Engagement Flyer
- » B. Recommended Support Facilities
- » C. Golf Cart Enhancements
- » D. Programs & On-going Operations Best Practices
- » E. Project Evaluation Criteria
- » F. Project Cost Opinion Figures

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# A. Community Engagement Flyer

*City of*  
**RIDGEFIELD** Washington

**RIDGEFIELD**

## *Multimodal Plan*

The Ridgefield Multimodal Plan is intended to guide the development of a multimodal transportation system in the City of Ridgefield that includes **safe and convenient travel options for all residents and visitors** including pedestrians, bicyclists, golf cart operators, drivers, and transit users.

The trails and off-street paths illustrated here represent conceptual connections based on an objective analysis of the existing and proposed roadway and trail networks.

The bicycle and golf cart network illustrated here represents a broad array of possible bicycle/golf cart facilities, including standard striped bike lanes, enhanced bike lanes, shoulders, off-street trails, and/or “Neighborhood Greenway” routes.

Particularly in the Ridgefield Junction Subarea and 45th St. Subarea, the network segments represent roadways that may be good candidates for a bike, pedestrian, and/or golf cart facility based on the connectivity standard described below, and other factors including roadway classifications and land use. In the next phase of network development, additional criteria such as roadway lanes, presence of shoulders, projected vehicle volumes, and/or posted speed limits will be used to refine this network with specific recommendations for bike/pedestrian/golf cart facility types. The feasibility of constructing specific facilities on these connections has not yet been determined.

### *Connectivity Standard*

Provide a safe and convenient multimodal connection between key local destinations by establishing the network on existing and proposed streets, sidewalks, and trails.

Connecting walkways and bikeways should be available without travelling more than a  $\frac{1}{4}$  mile out of the way from the nearest on-street route for pedestrians, and  $\frac{1}{2}$  mile out of the way from the nearest on-street route for bicyclists.

Utilize existing facilities by connecting existing trails, sidewalks, bike facilities, and low-volume, low-speed local roads where possible.

All sidewalk gaps along identified bike and pedestrian routes should be filled.

Although dial-a-ride transit service is available city-wide, fixed-route transit stops in addition to the central downtown stop and Ridgefield Junction Park and Ride will be critical along Pioneer Street, Hillhurst Road, and 45th Avenue as these areas develop.

**Please take a minute  
to provide feedback  
on the following:**

#### **KEY DESTINATIONS**

What locations would you like to connect?

#### **“GAPS” OR BARRIERS**

Which locations currently offer poor connections? Where does the system break down?

#### **INCORRECT/MISSING CONNECTIONS**

Which connections seen here are misrepresented or otherwise incorrect? Which connections are not shown?

## B. Recommended Support Facilities

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This section provides an overview of multimodal support facilities designed to accompany on-street infrastructure such as bike lanes and sidewalks. These support facilities should be considered an integral and complementary part of the complete multimodal transportation network, rather than as secondary treatments. In the absence of support facilities, on-street facilities alone cannot provide a safe and convenient transportation system. This section introduces the following support facilities:

### ***I. Pedestrian and Bicycle Crossing Treatments***

- a. Marked/Unsignalized Crossings
- b. ADA Compliant Curb Ramps
- c. Curb Extensions
- d. Median Refuge Islands
- e. Active Warning Beacons
- f. Pedestrian Signals
- g. Pedestrian Signal Timing
- h. Pedestrian Hybrid Beacons

### ***II. Street and Trail Design Elements***

- a. Street Trees
- b. Street Furniture
- c. Green Features
- d. Lighting
- e. Wayfinding and Other Signage
- f. Public Art and Sculpture
- g. Trail Heads and Other Access Points
- h. Rest Areas

### ***III. Multimodal Trip Connections/End-of-Trip Facilities***

- a. Bicycle Parking – Short-term
- b. Bicycle Parking – Long-term
- c. Transit stops
- d. Access to Transit

### ***IV. Facility Maintenance Practices***

- a. Sweeping
- b. Roadway Surface
- c. Pavement Overlays
- d. Drainage Grates
- e. Landscaping
- f. Maintenance Management Plan

### **PEDESTRIAN & BICYCLE CROSSING TREATMENTS**

Pedestrian signals and beacons, curb extensions, and other enhancements facilitate safe crossings at both signalized and unsignalized intersections, as well as at midblock crossings. These enhancements can reduce conflicting vehicle movements, narrow crossing distance, improve visibility, and assist pedestrians that are blind or have other sight challenges. People on bicycles can also use these crossing treatments.

#### **Marked/Unsignalized Crossings**

A marked/unsignalized crossing is a crossing area designated by signage and other markings to stop traffic when pedestrians are present. At mid-block locations, design of these crossings depends on an evaluation of vehicular traffic, line of sight, pathway traffic, use patterns, vehicle speed, road type, road width, and other safety issues such as proximity to major attractions.

#### **ADA Compliant Curb Ramps**

Curb ramps are the design elements that allow all users to make the transition from the street to the sidewalk. There are a number of factors to be considered in the design and placement of curb ramps at corners. Properly designed curb ramps incorporate features such as gradual grades, landings, and tactile surfaces that ensure they are accessible by people with disabilities.

#### **Curb Extensions**

Curb extensions minimize pedestrian exposure by shortening the crossing distance and giving pedestrians a better chance to see and be seen before committing to crossing. They are appropriate for any crosswalk where there is a parking lane adjacent to the curb and a shortened crossing distance is desirable.

#### **Median Refuge Islands**

Median refuge islands are located at the mid-point of a marked crossing and help improve pedestrian safety by allowing pedestrians to cross one direction of traffic at a time. Refuge islands minimize pedestrian exposure by shortening crossing distance and increasing the number of available gaps for crossing.

## Active Warning Beacons

Enhanced marked crossings are unsignalized crossings with additional treatments designed to increase motor vehicle yielding compliance on multi-lane or high volume roadways. These enhancements include pathway user or sensor actuated warning beacons, Rectangular Rapid Flash Beacons (RRFB), or in-roadway warning lights. RRFB devices have been shown to dramatically increase motor vehicle yield compliance for pedestrians trying to cross the street.

## Pedestrian Signals

Pedestrian signal indicators demonstrate to pedestrians when to cross at a signalized crosswalk. Countdown pedestrian signals indicate whether a pedestrian has time to cross the street before the signal phase ends, and should be used at all signalized intersections where pedestrian crossings are legal and are required for all newly installed signals. Accessible pedestrian signals (APS) are devices that communicate information in non-visual formats such as audible tones, speech messages, and/or vibrating surfaces. Research has found that APS have helped facilitate safer crossings for people that are blind or have other sight challenges.

## Signal Timing

Providing adequate pedestrian crossing time is a critical element of the walking environment and should be considered at all future signalized intersections. The Manual of Uniform Traffic Control Devices recommends traffic signal timing assume a pedestrian walking speed of 4' per second (or 3' per second where older pedestrians or pedestrians with disabilities are expected) to provide sufficient time for a pedestrian to safely cross the adjacent street. Special pedestrian phases can be used to provide greater visibility or more crossing time for pedestrians at certain intersections.

## Pedestrian Hybrid Beacons

Pedestrian hybrid beacons provide a high level of comfort for pedestrians through the use of a red-signal indication to stop conflicting motor vehicle traffic. Hybrid beacons face only cross motor vehicle traffic, remain dark when inactive, and use a unique

'wig-wag' signal phase when actuated. These beacons are less expensive than full signal installations and can reduce motor vehicle delay, as vehicles have the option to proceed after stopping during the final flashing red phase.

## STREET AND TRAIL DESIGN ELEMENTS

### Street Trees

In addition to their aesthetic and environmental value, street trees can slow traffic and improve safety for pedestrians. Trees add visual interest to streets and narrow the street's visual corridor, which may cause drivers to slow down. It is important that trees do not block light or drivers' sight triangle.

### Street Furniture

Providing benches at key rest areas and viewpoints encourages people of all ages to use the walkways by ensuring that they have a place to rest along the way. Benches should be 20" tall to accommodate elderly pedestrians comfortably. Benches can be simple (e.g., wood slats) or more ornate (e.g., stone, wrought iron, concrete). If alongside a parking zone, street furniture should be placed to minimize interference with passenger loading.

### Green Features

Green stormwater strategies may include bioretention swales, rain gardens, tree box filters, and pervious pavements (pervious concrete, asphalt, and pavers).

Bioswales are designed to manage water runoff from a paved surface. Plants in the swale trap pollutants and silt from entering a river system.

### Lighting

Pedestrian scale lighting improves visibility for both pedestrians and motorists - particularly at intersections and can provide a vertical buffer between the sidewalk and the street, defining pedestrian areas. Pedestrian scale lighting should be used in areas of high pedestrian activity, such as the downtown, near schools and parks.

Lighting can improve visibility along the trail path

and intersection crossings at night. This allows for nighttime use and increases safety for greenway users. Lighting may also be necessary for day-time use trails in tunnels and underpasses.

### Wayfinding and Other Signage

Pedestrian wayfinding signs identify safe routes to access downtown and civic, transit, and neighborhood retail amenities. If uniquely designed to suit local character, wayfinding can become an important place-making tool. Pedestrian signage uses small legends designed to be seen at close distance and should be designed so as not to compete for the attention of drivers.

Bicycle wayfinding signs identify designated routes by indicating the direction of travel, location of destinations and, travel time/distance to those destinations. They also visually cue motorists that they are driving along a bicycle route and should use caution. Signs are typically placed at key locations leading to and along bicycle routes, including the intersection of multiple routes. These signs will increase users' comfort and accessibility to the bicycle network.

Etiquette signage can be used to inform trail users of acceptable trail etiquette when multiple user types are anticipated. The most common trail etiquette systems involve yielding of cyclists to pedestrians, and both cyclists and pedestrians to equestrians.

### Public Art and Sculpture

Public art engages community and creates a memorable experience for sidewalk, road, or trail users. Public art can be aesthetic and/or functional, and double as sitting or congregational areas. Memorable installations can act as landmarks and also serve as valuable wayfinding tools. Public art along a trail can be a device for telling a compelling and memorable story about the area and/or trail's history and can also be combined with interpretive displays that provide users with information about the trail, including wildlife, vegetation, history, and the significance of place.

### Trailheads and Access Points

Trailheads and staging areas serve the local and regional population arriving to the trail system by car, transit, bicycle, or other modes. They provide essential access and include amenities like parking for vehicles and bicycles, restrooms (at major trailheads), drinking fountains, signage, and posted maps. All trailhead facilities should be ADA accessible. Kiosks and message centers at trail facilities provide visitors with information to orient themselves, learn of site opportunities, read the rules and regulations of the site, find the hours of operation, and read about local events such as activities programmed for the trail or seasonal festivals.

Access points are intended to accommodate trail users wishing to reach the trail by bicycle and on foot by providing a direct connection to the trail from nearby neighborhoods. Access points are identified at specific locations to minimize cross traffic and provide safe access to the trails and may include bicycle/pedestrian bridges, ramps, spur trails, gates, bollards and signage.

### Rest Areas

Rest areas allow stopped trail users to move out of the way of continuing traffic. Along trails, rest areas are level portions of a trail wide enough to provide users, particularly those with mobility devices to pull aside to take a break or enjoy a view. Rest points are most effective when placed at intermediate locations, scenic viewpoints, or near trail amenities. Examples of amenities include benches, cover, bicycle racks, picnic tables, and trash receptacles. Drinking fountains and washroom facilities should also be provided for the benefit of trail users.



Wayfinding identifies safe routes for users.

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## MULTIMODAL CONNECTIONS/END OF TRIP FACILITIES

### Bicycle Parking

Bicyclists expect a safe, convenient place to secure their bicycle when they reach their destination. This may be short-term parking of 2 hours or less, or long-term parking for employees, students, residents, and commuters.

#### Short-Term Parking

Short-term bicycle parking is meant to accommodate visitors, customers, and others expected to depart within two hours. It should have an approved standard rack, appropriate location and placement, and weather protection. The Association for Pedestrian and Bicycle Professionals (APBP) recommends selecting a bicycle rack that:

- ▶ supports the bicycle in at least two places
- ▶ preventing it from falling over
- ▶ allows locking of the frame and one or both wheels with a U-lock
- ▶ is securely anchored to ground resists cutting, rusting and bending or deformation

Bicycle racks can be augmented with shelters that provide weather protection and allow the bicycles to stay relatively dry when parked outside.

#### Long-Term Parking

Bicycle lockers are intended to provide long-term bicycle storage for employees, students, residents, commuters, and others expected to park more than two hours. Long-term facilities protect the entire bicycle and accessories against theft and against inclement weather, including snow and rain. Bicycle lockers provide space to store a few accessories or rain gear in addition to containing the bicycle.

Secure parking facilities are semi-enclosed spaces that offer high-capacity parking for 10 to 100 or more bicycles and a higher level of security than ordinary bike racks. These facilities can consist of a free-standing building, or an enclosed area within a larger structure (for example, an enclosed portion of

a parking garage). Increased security measures such as key-card access, combination locks, or keys create an additional transportation option for those whose biggest concern is theft and vulnerability. These facilities can also include a pump for filling air in bicycle tires or bicycle repair stations, which are small kiosks designed to offer a complete set of tools necessary for routine bicycle maintenance.

Secure bicycle parking facilities are particularly useful at major destinations that attract all-day users, such as transit centers or employment centers. Facilities that allow commuters to securely store bikes out of the weather and to shower and change at workplaces can help employees overcome challenges associated with bike commuting for long distances or in inclement conditions (especially where professional attire is required) and helps encourage healthy, active lifestyles.

#### Transit Stops

Bus stops where passengers board and alight transit vehicles must have safe access via sidewalks and appropriate street crossing locations and are required to meet ADA standards, including the provision of landing pads and curb heights that allow for buses to load passengers in wheelchairs. Adequate lighting should be installed around bus stops and shelters to ensure personal safety and security. Bus stops should include a system and/or route map and schedule on the bus shelter or other street furniture to provide information for riders waiting for the next bus. At major stops or transit centers, cities may enhance the experience of passengers through the addition of shelters, long-term bicycle parking, benches, area maps, real-time arrival information, plantings, vendors, or artwork.

#### Access to Transit

Safe and easy access to secure, weather-protected bicycle parking facilities at transit stations helps facilitate first mile/last mile connections and, in effect, extends the reach of both modes. Typically, individuals are willing to walk up to a half-mile to a transit stop, while they might bike in excess of three miles to reach a transit station, especially as part of a longer overall journey. These facilities are especially useful when

residences or workplaces are too far to walk from the nearest transit station or when bus connections are unavailable or unreliable. Installing bicycle racks on buses can also increase the feasibility of transit in lower-density areas or where commuters need to bike on both ends of the transit trip. Bike racks mounted on buses are most frequently located in the front of the bus, and typically flip up against the bus when they are not carrying any bikes.

## FACILITY MAINTENANCE PRACTICES

Regular bicycle facility maintenance includes sweeping, maintaining a smooth roadway, ensuring that the gutter-to-pavement transition remains relatively flush, and installing bicycle-friendly drainage grates. Pavement overlays are a good opportunity to improve bicycle facilities. The following recommendations provide a menu of options to consider to enhance a maintenance regimen.

### **Sweeping**

Bicyclists often avoid shoulders and bike lanes filled with gravel, broken glass, and other debris; they will ride in the roadway to avoid these hazards, potentially causing conflicts with motorists. Debris from the roadway should not be swept onto sidewalks (pedestrians need a clean walking surface), nor should debris be swept from the sidewalk onto the roadway. A regularly scheduled inspection and maintenance program helps ensure that roadway debris is regularly removed. Less common is the need for snow plowing, but on the rare occasion that it is necessary, snow maintenance should adhere to the same principles and practices as street sweeping described here.

### **Roadway Surface**

Bicycles are much more sensitive to subtle changes in roadway surface than are motor vehicles. Compaction is also an important issue after trenches and other construction holes are filled as uneven settlement after trenching can affect the roadway surface nearest the curb where bicycles travel. When resurfacing streets, maintenance bureaus should use the smallest chip size and ensure that the surface is as smooth as possible to improve safety and comfort for

bicyclists.

On streets with concrete curbs and gutters, 1 to 2 feet of the curbside area is typically devoted to the gutter pan, where water collects and drains into catch basins. The transition between the gutter pan and the pavement edge can be susceptible to erosion, creating potholes and a rough surface for travel along bikeways.

The pavement on many streets is not flush with the gutter, creating a vertical transition between these segments. This area can buckle over time, creating a hazardous condition for bicyclists.



## Pavement Overlays

Pavement overlays represent good opportunities to improve conditions for bicyclists if done carefully. A ridge should not be left in the area where bicyclists ride (this occurs where an overlay extends part-way into a shoulder bikeway or bike lane). Overlay projects also offer opportunities to widen a roadway, or to re-stripe a roadway with bike lanes.



Caption:

## Drainage Grates

Drainage grates are typically located in the gutter area near the curb of a roadway. Drainage grates typically have slots through which water drains into the municipal storm sewer system. Many older grates were designed with parallel bars spread wide enough for a tire to become caught so that if a bicyclist were to ride on them, the front tire could become caught in the slot. This would cause the bicyclist to tumble over the handlebars and sustain potentially serious injuries. For this reason, drainage grates should be reconfigured, or replaced so that the bars/slots run perpendicular to the direction of travel.



Maintaining landscaped features ensures compatibility with the use of the sidewalk or bikeway.

## Landscaping

Sidewalks and bikeways can become inaccessible due to overgrown vegetation. All landscaping should be designed and maintained to ensure compatibility with the use of the sidewalk, bikeways, and trails. After a flood or major storm, these travel areas should be checked along with other roads, and fallen trees or other debris should be removed promptly.

## Maintenance Management Plan

Pedestrians and bicyclists need accommodation during construction and maintenance activities when bikeways may be closed or unavailable. Users must be warned of closures and given adequate detour information to bypass the closed section through the use of standard signing approaching each affected section (e.g., "Bike Lane Closed," "Trail Closed"), including information on alternate routes and dates of closure. Alternate routes should provide reasonable directness and equivalent traffic characteristics and should be signed.



Sweeping reduces hazards for both bicyclists and motorists.

## C. Golf Cart Zone Enhancements

Cities across the United States have designed communities with multi-use path systems that support pedestrians, bicyclists, golf carts, neighborhood electric vehicles (NEVs), transit and automobiles. These cities are planning extensive networks to address environmental and mobility issues by introducing new, sustainable transportation options to the region. That vision incorporates golf carts and NEVs into a multi-modal network that provides accessible mobility options to residents and visitors of all ages and abilities. Ridgefield has the unique opportunity to assess their own growing network and encourage these innovative transportation options.

This appendix provides an overview of existing golf cart zone definitions and restrictions, and potential golf cart facilities in the context of a city-wide network, enabling residents and visitors to make local trips between the downtown and nearby neighborhoods. Although similar in appearance to golf carts, Neighborhood Electric Vehicles (NEV) are a type of Low Speed Vehicle (LSEV) that can travel at speeds up to 25 mph. Because of their speed, NEVs are classified differently from golf carts but are considered here as part of future network for analysis purposes. Golf carts and NEVs are further defined below.

By definition, golf carts are vehicles originally designed for operation on golf courses and capable of travelling up to 15 mph. In Washington, golf carts may only be driven within a city or county ordinance designated golf cart zone. In June, 2015, the City of Ridgefield created the first golf cart zone in the region, establishing the golf cart network as a viable transportation option with the intention of providing enhanced mobility options for its developing residential neighborhoods.

### GOLF CART/NEV LEGISLATION AND ON-STREET REGULATION

#### Washington State Golf Cart Zones

The Washington State Legislature RCW 46.08.175 establishes a framework through which any county or city can establish a Golf Cart Zone and permit incidental use of golf carts on public roads that have speed limits of 25 mph or less. In accordance with DOTs manual on uniform traffic control devices for streets and highways, each golf cart zone must be clearly identified by signage at the beginning and end of the golf cart zone (RCW 46.08.175).

#### Washington State Vehicle Code

##### **Definitions:**

Washington law defines a “golf cart,” in Sec. 3 of Ch. 217 Laws of 2010 (SSB 6207) as a gas-powered or electric-powered four-wheeled vehicle originally designed and manufactured for operation on a golf course for sporting purposes.

- » Designated for use on roads 25 mph or under and in accordance to state and local restrictions
- » Must be operated within a golf cart zone that has been created through a city or county ordinance
- » Licensing is not required to operate a golf cart.
- » An operator must be at least 16 years of age and must have completed a driver education course or have previous experience driving as a licensed driver.
- » A golf cart is not a non-highway vehicle or off-road



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vehicle as defined in [RCW 46.09.310](#).

A Neighborhood Electric Vehicle (NEV) under RCW 46.04.357 and RCW 46.61.725 is electrically powered four-wheeled motor vehicle.

- » Designated for use on roads 35 mph or under and in accordance to state and local restrictions
- » The driver must have a valid driver's license, and the NEV must be registered and display a valid license plate.
- » Standard motor vehicle equipment is required (turn signals, lights, parking brake, seat belts, VIN number, etc).
- » Must conform to federal regulations under Title 49 CFR Part 571.500



Washington State has emerged as one of the leading regions in the nation for electric vehicle sales and adoption. This trend benefits the economy, the environment, and the health and well-being of all Washingtonians. Forward-thinking state legislators passed electric vehicle legislation in 2009 that spurred federal investment in the deployment of charging infrastructure in the Puget Sound region and prompted auto manufacturers to dispatch the first group of new electric vehicles to the state. Although the 2015 Washington State Electric Vehicle Action Plan does not address NEVs specifically, it does provide resources to support partnerships, charging

networks, building codes, policy, and zoning barriers that may promote NEV and golf cart use and network investments in Ridgefield.

### **NEV Considerations**

RCW 46.61.725 does not prevent local authorities from regulating the operation of NEVs on streets and highways under their jurisdiction, if the regulation is consistent with the provisions of the title, except that:

- » Local authorities may not authorize the operation of neighborhood electric vehicles on streets and highways that are part of the state highway system subject to the provisions of Title 47 RCW
- » Local authorities may not prohibit the operation of neighborhood electric vehicles upon highways of this state having a speed limit of twenty-five miles per hour or less
- » Local authorities are prohibited from establishing any requirements for the registration and licensing of neighborhood electric vehicles

### **Crossings**

NEV operators may not cross a roadway with a speed limit in excess of 35 mph, unless the crossing begins and ends on a roadway with a speed limit of 35 miles per hour or less. NEV crossings at roadways with speed limits above 35 mph must be orthogonal (90 degree intersection angles). If such crossings are a major part of the NEV network and the crossing is not orthogonal, there may be opportunities to reconfigure the geometry of the intersection to meet this requirement.

Furthermore, the operator of a golf cart must not cross an uncontrolled intersection of streets and highways that are part of the state highway system subject to Title 47 RCW unless that intersection has been authorized by local authorities.

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## OVERVIEW OF GOLF CART FACILITIES

Golf carts, NEVs, and bicyclists are the expected users of golf cart facilities and networks, and design dimensions should be built with these user types in mind. The design of a golf cart facility should consider reasonably expected user types on the facility and design for the appropriate dimensions. This process will lead to selecting and prioritizing golf cart routes and facility types. The state of Washington does not provide guidance on facility design. Examples of potential facilities are provided below. These examples can be used as a basis to assess the proper network for all user types.

### Facility Examples

Route selection prioritizes placing golf cart routes on the “most comfortable” roadways, a relative measure that takes into account roadway posted speed limits, separation of modes, standardized designs, and the opportunity to communicate clear golf cart user expectations. The appropriate type of golf cart/NEV facility will depend on the posted speed of the roadway, vehicle volumes, roadway geometry, and available lane/path widths.

Potential facility types that can make a cohesive network are listed below:

- » **Paths or trails** comprise the off-street network allowing golf carts and NEVs to traverse longer distances without driving on major arterials or highways. Paths usually connect destinations via local/residential streets with golf cart lanes and golf cart routes. A path designed for exclusive golf cart or NEV use should have a minimum width of 14 feet width.
- » **Lanes** are on-street striped lanes to which only golf carts, NEVs and/or bicycles have access. These are common in some communities in Southern California. However, Washington State does not have a specific provision for shared bike/golf cart lanes, thus golf cart operators are still restricted to roadways with posted speed limits of

25 mph or under.

- » **Routes** are selected roadways with posted speed limits of 25 mph and under. On these roads golf carts and automobiles sharing the roadway are traveling approximately the same speed, which reduces the severity of any collisions that may occur. These streets are ideal candidates for additional treatments such as traffic calming and wayfinding.

### Facility Amenities

#### *Parking*

Local parking ordinances can support the development of golf carts as a common mode of transportation by prescribing a minimum number of parking spaces in zoning and building codes, variable/free on-street golf cart parking rates, and free or reduced rate electric vehicle charging station parking. Agencies may also consider development incentives for on-site electric vehicle parking and charging stations. At the very least, local parking ordinances should allow golf cart parking spaces to count toward parking minimums.

Parking for golf carts should be closest to destination entrances, and NEVs should be located near or adjacent to EV charging stations if available. Some jurisdictions prohibit golf carts from parking in a “motor vehicle” space. Given that NEVs and golf carts can serve the same purposes as automobiles and there would therefore have no impact on parking supply and demand, parking should be permitted in any space.

Design standards for golf cart parking should be consistent throughout the planning process. After adopting consistent design guidelines, the City should develop a design toolkit to assist developers and property owners in designing off-street golf cart parking spaces.

#### *Charging stations*

Providing frequent and appropriately located EV charging facilities will ensure that golf cart operators can get from point A to point B without running out of energy. Insufficient or poorly located charging stations can lead to “range anxiety” and is a major inhibitor of EV adoption for longer trips. Charging stations at

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workplaces and other opportunity locations such as grocery stores and shopping centers help to alleviate the uncertainty associated with the vehicle's energy requirements.

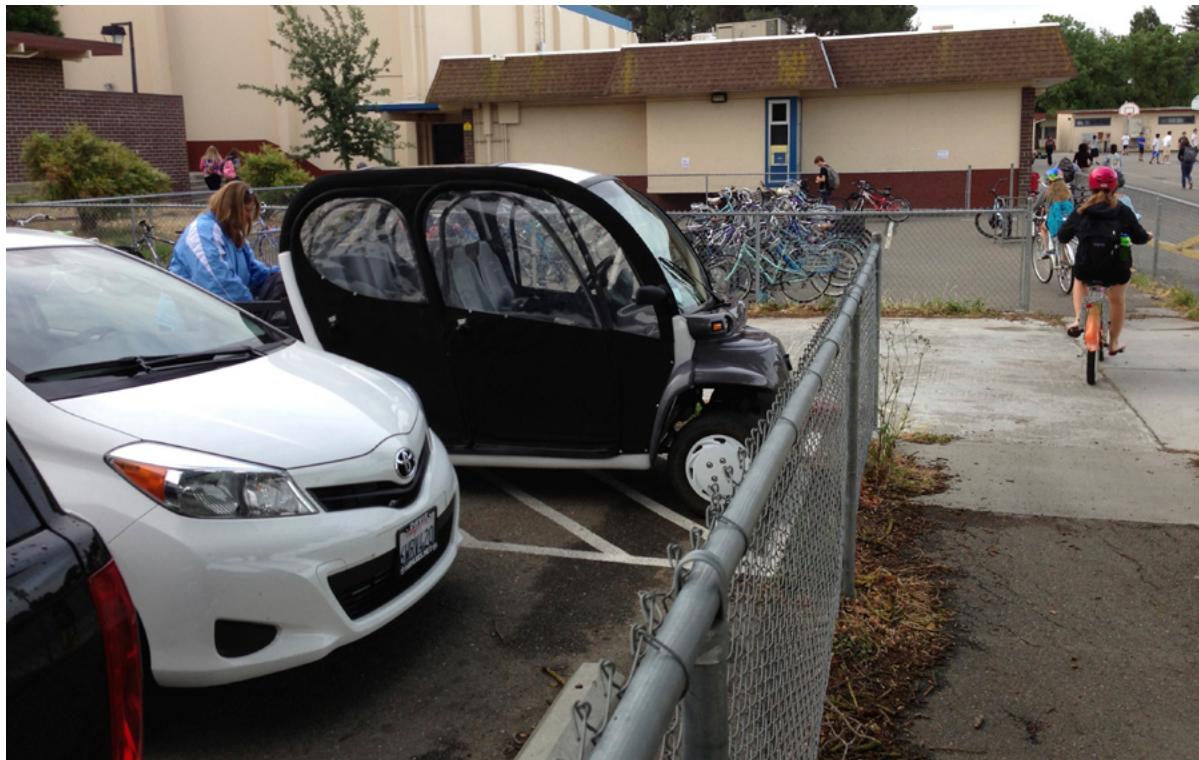
The cost of installing charging stations is much lower when the location is "pre-wired" for EV charging stations. Local building and zoning codes can be amended to require such pre-wired parking spaces for new development. Alternatively jurisdictions can offer other incentives such as FAR bonuses, reduced development fees, fast-tracked permitting, etc. to have developers pre-wire projects for future charging stations.

#### **Wayfinding**

Wayfinding signage provides golf cart and NEV operators with valuable travel information, including direction, travel distance, and estimated travel time.

Signage helps people reach destinations via optimal routes, with minimal uncertainty. A lack of consistent golf cart/NEV wayfinding will limit the number of people who know how to access local destinations (e.g. parks, schools, and commercial centers) using existing low-stress routes, on-street lanes, and paths. Wayfinding must also be provided to ensure golf carts/NEV operators do not travel on roadways where operation is prohibited, i.e. roadways with posted speed limits in excess of 25 mph.

Wayfinding signage can be simple and direct, but designing more personalized wayfinding could effectively provide Ridgefield with the opportunity to use wayfinding as a branding tool. Establishing a unique style of wayfinding signage could improve the visibility of the network as a whole. Unique branding can also help users navigate transitions between facilities.



## D. Programs & On-going Operations

The infrastructure recommendations in this Plan will provide safer, more comfortable ways for residents and visitors to travel throughout the city. However, while improving infrastructure is critical to increasing rates of walking, bicycling, golf cart and transit use, the importance of multimodal transportation education, encouragement, enforcement, and evaluation efforts should not be underestimated.

Programs can ensure that more residents will know about new and improved facilities, learn about the benefits of a multimodal transportation system, and receive positive reinforcement about why and how to integrate new transportation options into their everyday lives. In essence, these efforts market transportation options to the general public and provide the maximum “return on investment” in the form of more people walking, bicycling, using golf carts, transit, and a combination of these travel modes. This further contributes to a higher degree of awareness and transportation safety in Ridgefield.

This memorandum contains an overview of best practices for education, encouragement, enforcement, and evaluation programs that should be pursued as infrastructure investments are made.

### Education & Encouragement

Education and encouragement programs are designed to:

- » raise awareness of walking, bicycling, golf cart use, and transit use
- » connect users to existing and future resources
- » educate them about their rights and responsibilities
- » encourage residents to walk and bicycle, and consider other travel modes more often

These programs give communities the tools they need address travel behaviors and choices, health equity, and community-wide physical activity. Education and encouragement programs can be tailored to a community's needs with a focus on a

specific outcome or to a specific demographic.

### Safe Routes to School - Nationwide

Safe Routes to School (SRTS) programs use a “5 Es” approach (Engineering, Education, Enforcement, Encouragement, and Evaluation strategies) to improve safety and encourage children walking and biking to school. SRTS works to provide youth with the opportunity to ride or walk to school, the sports field, a friend's house, or to the library. Programs educate youth and parents about safe bicycling skills, encourage schools and communities to support bicycling and walking, and help communities make the streets, trails, and sidewalks safe for bike riders of all ages. The programs are usually run by a coalition of city government, school and school district officials and teachers, parents and students, and neighbors.

#### Resources:

- » Marin County National Model Program [www.saferoutestoschools.org](http://www.saferoutestoschools.org)
- » National Center for Safe Routes to School [www.saferoutesinfo.org](http://www.saferoutesinfo.org)



» Safe Routes to School - Santa Monica Center for Safe Routes to School in Washington State [www.saferouteswa.org](http://www.saferouteswa.org)

### Open Streets Events – Nationwide

Open Streets events are periodic street closures that create a temporary park that is open to the public for walking, bicycling, roller skating, dance and exercise

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activities, etc. The purpose of the event is to encourage walking and biking for the general public by providing a car-free street event.

The Open Streets Project, a collaboration between the Alliance for Biking & Walking and the Streets Plan Collaborative, aims to share information and resources about open streets events with communities around North America. The Open Streets Project offers an interactive website and free (electronic) Open Streets Guide to assist organizers. The guide presents seven model types of Open Streets events, referred to as the Seattle, Cleveland, San Francisco, Portland, Winnipeg, Savannah, and Kentucky models. While the guide does not explicitly cover program longevity, it does provide detailed characteristics of successful programs, including funding strategies, scheduling, and addresses step-by-step best practices.

The City of Ridgefield already hosts many popular events throughout the year (First Saturdays, May Day Spring Festival, etc.). This momentum and community support could be carried over to create a successful Open Streets event.

**Resources:**

- » Open Streets Guide [http://nacto.org/docs/usdg\\_smaller\\_open\\_streets\\_guide\\_final\\_print\\_alliance\\_biking\\_walking.pdf](http://nacto.org/docs/usdg_smaller_open_streets_guide_final_print_alliance_biking_walking.pdf)

### **Kidical Mass – Eugene, Oregon, and many other locations**

This family bike ride aims to be a legal, safe, and a fun community activity. The goal is to gain confidence and learn how to ride safely. The first Kidical Mass ride took place in Eugene, Oregon, in 2008 and now takes place in many communities throughout North America and beyond. Rides vary in location, route, and theme, but are always planned to be family friendly and welcoming for all abilities. Eugene's guidelines for planning and holding rides include:

- » broad outreach to families through non-bike-related channels
- » a short route with a variety of facilities but without busy streets

- » legal riding
- » having some street presence
- » incorporating a fun activity, such as getting ice cream.

**Resources:**

- » <http://www.kidicalmass.org>

### **Bike Friendly Businesses**

Local business reward and discount programs encourage people to commute or run errands by biking. People who bike are eligible for rewards or discounts at participating local businesses. In some cases a membership or helmet sticker is needed by consumers to receive the discount. These programs reinforce bicycling as a positive behavior; business see increased customer loyalty, it encourages bike-friendly establishments, and it provides the opportunity to build partnerships with local businesses.

#### ***Bicycle Friendly Business Program – Long Beach, California***

The Bike Long Beach Bicycle Friendly Business program offers local businesses free exposure to the many people who bike in Long Beach. Any business can participate in Bike Saturdays, one of the largest city-wide discount program for bicyclists in the country, by displaying a large, colorful Bike Saturday decal in their window and offering discounts or offers to those who bike.

On top of that, Bike Long Beach has prioritized several corridors as Bicycle-Friendly Business Districts where businesses and infrastructure – including bike racks, signage, and bike facilities – encourage bicycling by visitors and residents. The districts are highlighted on the Bike Long Beach website, as are the more than 150 businesses that participate in Bike Saturdays.

#### ***Bicycle Benefits “Toolkit”***

The Bicycle Benefits toolkit provides online resources for individuals and organizations to create their own bicycle friendly business program. Through outreach conducted by individuals, the City government, business associations, or a combination of public-private collaboration, local businesses are encouraged to join the program and purchase

the “Business Start-up Kit.” The start-up kit which includes promotional materials, Bike Benefit program helmet stickers, and advertising on the Bike Benefit website. Businesses are then encouraged to give those helmet stickers to customers, and customers receive a discount at participating businesses. Although Bicycle Benefits is an easy way to pilot such a program, there may be the need for additional outreach and advertising to make the program a true success.

**Resources:**

- » <http://www.bikelongbeach.org/bike-friendly-businesses>
- » <http://bb2.bicyclebenefits.org/#/home>

**Media Campaigns**

Media campaigns target unsafe and illegal behaviors and attitudes of all road users including motorists, bicyclists, and pedestrians with the goals of encouraging mutual respect among all road users. Campaigns can be customized with a variety of messaging, target audience, and outreach methods.

***“I’m A Bicyclist” campaign - Pittsburgh, Pennsylvania; Portland, Oregon; Minneapolis, Minnesota; and other locations***

“I am a bicyclist” campaigns normalize bicycling by showing that anyone can be considered a bicyclist. These campaigns can help promote that - regardless of the trip length or purpose - anyone who rides a bicycle is a “bicyclist,” which can reduce stereotypes about who rides bikes and contribute to empathetic traffic

behaviors.

The campaign messages could highlight people riding to school, types of professionals riding to work, and parents riding with their children. Featuring elected officials, appointed decision makers, and other prominent Ridgefield residents could put a known face to bicycling and show that the City supports it. The campaign can portray bicycling as a positive community value in Ridgefield.

Campaigns utilize both traditional and online media. Traditional media sources for this type of campaign include newspapers, billboards, banners on transit vehicles, and other highly visual print media that is likely to have a wide audience. Online media could include campaign images in newsletters, on city and other websites, and on social media sites. In addition, the campaign can include posters and flyers in local businesses, area bike shops, and at City facilities such as parks and community centers.

***Heads Up Campaign - Eureka, California***

The City of Eureka successfully applied for grant funding from the California Office of Traffic Safety to implement a Pedestrian Safety Education and Outreach Campaign. The primary goals of the resulting campaign, named Heads Up, were increasing the awareness and improving the behavior of drivers and pedestrians alike. The campaign complemented recent engineering improvements and enforcement efforts and demonstrated an investment in community health and safety.



## Media Types

### Traditional media

- » transit advertising
- » street and outdoor banners
- » print and online advertising
- » earned media
- » public service announcements

### Grassroots media & promotion

- » posters in shop windows and on community bulletin boards
- » advertising on coffee cup sleeves at local coffee shops
- » temporary decals on traffic signal boxes
- » temporary pavement stencils
- » outreach at community events
- » distribution of educational materials

The campaign used a combination of traditional outdoor, print, and web media, as well as community-based outreach and media to reach Eureka residents, employees, and visitors.

#### **Resources:**

- » Community Cycling Center's "I ride" Campaign: [www.communitycyclingcenter.org/index.php/community/i-ride/](http://www.communitycyclingcenter.org/index.php/community/i-ride/)
- » Bike Pittsburgh's "Drive With Care" Campaign: [www.bikepgh.org/care/](http://www.bikepgh.org/care/)
- » Heads Up [www.ci.eureka.ca.gov/civica/filebank/blobdload.asp?BlobID=9930](http://www.ci.eureka.ca.gov/civica/filebank/blobdload.asp?BlobID=9930)

## ENFORCEMENT

An enforcement strategy aims to deter unsafe behaviors of drivers, pedestrians, and bicyclists, and encourages all road users to obey traffic laws and share the road safely. Enforcement complements many transportation programs. Options include community enforcement (pedestrian/bike safety training) and/or law enforcement (promoting good road user behaviors).

### **Back-to-School Crosswalk Policing – Shoreline, Washington; Roseburg, Oregon; Plymouth, Minnesota; and other locations**

One way of institutionalizing crosswalk enforcement is to pair it with the Back-to-School season. The safety of children walking is of great concern to many community members. The beginning of the school year is also a time when many people – children and their families, college students, those who work in education – are beginning new habits and may be more likely to change their behavior.

The small Oregon city of Roseburg, in addition to many communities around the country, conducts crosswalk stings near the beginning of the school year to raise awareness of pedestrian safety laws. Policing is used as a reminder that children, who do not always use caution when crossing streets, will soon be present in larger numbers.

The City of Shoreline, Washington, incorporated crosswalk stings into their existing "Back to School" speed enforcement in 2002. Their efforts also include pedestrian safety education for schoolchildren.

### **Law Enforcement Collaboration – Tucson, Arizona**

Tucson's enforcement comes from a strong, communicative relationship between transportation staff and local law enforcement. A representative of the Police Department attends monthly Bicycle Advisory Committee meetings for a few minutes to communicate with transportation professionals and advocates, and the Police Department seeks their own funding to do targeted enforcement of illegal, unsafe

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behavior of motorists, bicyclists, and pedestrians. Law enforcement officers focus on behaviors known to be the most dangerous, such as motorist right hook turns and bicyclists not using lights at night. Even when conducting bike light enforcement, the police officers prefer to start with education, warnings, and free lights, followed by citations if the issue persists.

### **Speed Limit Enforcement**

Speeding vehicles endanger pedestrians and bicyclists and discourage travel by these modes in general. Targeted speed enforcement activities can address both of these issues. Law enforcement agencies can enforce speed limits on designated bikeways, near schools, and in response to complaints. These campaigns are ideal for a Safe Routes to School Program. A speed reader board request program will deploy speed reader boards at the request of neighborhood associations and schools. The boards should be mounted temporarily (e.g. for two weeks) and then be moved to another location to keep motorists from becoming inured to the speed reader board effect.

### **Driver Education**

Improving driver awareness of bicyclists helps to make a safer and more comfortable road environment for bicycling. Outreach through drivers' education classes is a good way to reach beginning drivers, while a diversion class can be offered to first-time offender violations that endanger bicyclists.

Diversion classes can be aimed at motorists and bicyclists. In lieu of a citation and/or fine, individuals can take a one-time, free or inexpensive class instead. In some cases, interested citizens can take the class even if they did not receive a ticket. This program is a good way to educate road users about bicycle rights and responsibilities and can also increase public acceptance of enforcement actions.

#### **Resources:**

- » League of Illinois Bicyclists Drivers Education [www.bikelib.org/safety-education/motorists/driver-education/](http://www.bikelib.org/safety-education/motorists/driver-education/)

## **EVALUATION**

Evaluation is a key component of any program or campaign. Walking and bicycling evaluation considers increases in desired behaviors, mode shifts, psychological changes, the exchange of information, and social interaction throughout the campaign or program. Evaluation of education, encouragement, and enforcement programs will vary depending on the goals, budget, and longevity of the program. Monitoring and setting performance measures will insure that the program goals are being met and provide data and program feedback that will allow the program to adjust or evolve as necessary to fit the community's needs.

In addition to the evaluation process associated with an implemented program, the City of Ridgefield should consider other forms of evaluation that provide baseline data or determinants of changes in behaviors, such as golf cart ridership and transit use, bike, golf cart, and automobile parking inventories and utilization studies, pedestrian travel paths and short cuts, school routes and drop-off zones, etc.

### **Periodic Bicycle/Pedestrian Policy Review & Planning**

The City of Ridgefield should set internal deadlines for benchmarking bicycle and pedestrian policy through periodic reviews and planning sessions. Regular policy review and planning would allow City staff to understand the program's strengths and weaknesses, as well as next steps. These meetings can also discuss the need for additional long-range strategic plans.

These review sessions and deadlines can ensure that the plan remains a "living document" and is continuously updated according to design guideline, policy, legislation, and other document updates. Updating the plan according to the state's needs would help ensure its relevancy for bicyclists across Washington.

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### **Bicycle and Pedestrian Counts Program**

In order to determine a plan or program's success at meeting bicycle ridership and walking goals, it is necessary to establish an annual data collection program. At a minimum, this program should tally the number of bicyclists and pedestrians at key locations around the city, such as trails, schools, parks or in the Downtown area. The same locations should be counted in the same manner annually. This will provide the City with information about the growth of bicycle ridership and pedestrians. In addition to a simple tally, it is common to collect additional information at the same time (such as cyclist gender, helmet use, number of children, etc). It is recommended that the data collection program use the methods developed by the National Bicycle and Pedestrian Documentation Project (NBPD). If desired, surveys can also be included in the data collection effort to learn more about bicyclist and pedestrian demographics, trip origin/destination, and attitudes towards bicycle/pedestrian facilities. Count and survey instructions and materials can be found at the Bike Ped Documentation Project website.

#### **Resources:**

- » <http://bikepeddocumentation.org/>

## E. Project Evaluation Criteria

Project Evaluation Criteria	Scoring	Pioneer Roundabouts	Hillhurst: Oak-8th	Hillhurst: 6th-Pioneer	Pioneer: Gee Creek Lp-19th Ct	Smythe Trail: Pioneer Canyon Dr-Reiman	Hillhurst: Ridgefield High School Frontage
1. Connectivity Standard	0 No 2 Yes	2	2	2	2	2	2
2. Major Corridor	0 No 1 Yes	1	1	1	1	1	1
3. Multiple Modes	1 1 mode 2 2 modes 3 3+ modes	2	2	2	2	3	2
4. SRTS Connection	0 No 2 Yes	0	0	2	0	0	2
5. Closure of Critical Gap	0 No 2 Yes	2	2	2	2	2	2
6. Safety Improvement	0 No 2 Yes	0	0	0	0	2	2
7. Trail	0 No 1 Yes 2 Gee Creek Trail 0 No 1 Yes	0	0	0	0	1	0
8. Planned or Programmed Projects	1 Yes 2 Yes, the project is on the 6 year CFP list	0	1	1	1	1	2
9. Downtown Projects	0 No 1 Yes	0	0	1	0	0	0
10. Subarea Improvement	0 No 1 Yes	1	0	0	0	0	0
11. Community Support	0 No 2 Yes	0	0	0	0	2	2
<b>Total Points Possible</b>	<b>21</b>	<b>8</b>	<b>8</b>	<b>11</b>	<b>8</b>	<b>14</b>	<b>15</b>

## F. Project Cost Opinion Figures

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### RHS Frontage Cost Opinion Figures

Shared Use Path - 12 ft width, Asphalt				
Item Description	Unit	Qty	Unit Cost	Total
Clearing and Grubbing	SF	42000	0.25	\$10,500
Excavation	SF	42000	2	\$84,000
Erosion Controls	LF	3500	2	\$7,000
Sedimentation Controls	LF	3500	11.25	\$39,375
3/4" Minus DG (4" deep) recommend 6"	CY	784	60	\$47,040
Asphalt Path	Ton	539	200	\$107,800
Topsoil Shoulders (2' wide each side)	CY	4665.5	25	\$116,638
Utilities		1	20000	\$20,000
Mechanical Seeding	SF	42000	0.1	\$4,200
Estimated Direct Cost				\$436,600
Contingency	25%			\$109,138
Engineering / Design	20%			\$87,311
Construction / Overhead / Mobilization	15%			\$65,483
Project Administration	10%			\$43,655
Estimated Construction Costs (70% burden)				\$742,100

## Smythe Trail Cost Opinion Figures

Shared Use Path - 12 ft width, Asphalt				
Item Description	Unit	Qty	Unit Cost	Total
Clearing and Grubbing	SF	12,000	\$0.25	\$3,000.00
Excavation	SF	12,000	\$2.00	\$24,000.00
Erosion Controls	LF	1,000	\$2.00	\$2,000.00
Sedimentation Controls	LF	1,000	\$11.25	\$11,250.00
3/4" Minus DG (4" deep) recommend 6"	CY	224	\$60.00	\$13,440.00
Asphalt Path	Ton	154	\$200.00	\$30,800.00
Topsoil Shoulders (2' wide each side)	CY	1,333	\$25.00	\$33,325.00
RRFB	EA	3	\$8,000.00	\$24,000.00
Mechanical Seeding	SF	12,000	\$0.10	\$1,200.00
Estimated Direct Cost				<b>\$143,000</b>
Contingency		25%		\$35,753.75
Engineering / Design		20%		\$28,603.00
Construction / Overhead / Mobilization		15%		\$21,452.25
Project Administration		10%		\$14,301.50
Estimated Construction Costs (70% burden)				<b>\$243,200</b>

## Hillhurst Road – 6th Way - Pioneer Street

Bike Lane - upgrade rural facility, roadway widening, both sides of roadway				
Item Description	Unit	Quantity/ Length per Mile	Unit Cost	Total
Clearing and grubbing	SF	15840	\$0.25	\$3,960.00
Grading	SY	1760	\$10.00	\$17,600.00
Saw cut and remove asphalt (9' width)	SY	1760	\$5.00	\$8,800.00
8" Asphalt	Ton	810	\$200.00	\$162,000.00
3/4" aggregate base course (4" deep) suggest 12"	CY	261	\$60.00	\$15,660.00
Mechanical Seeding	SF	15840	\$0.10	\$1,584.00
Striping	LF	1320	\$1.50	\$1,980.00
Pavement markings	EA	14	\$750.00	\$10,500.00
Wayfinding Signs	EA	2	\$200.00	\$400.00
Regulatory Signs	EA	6	\$200.00	\$1,200.00
<b>Estimated Direct Cost</b>				<b>\$223,700</b>
Contingency	25%			\$55,921.00
Engineering / Design	20%			\$44,736.80
Construction / Overhead / Mobilization	15%			\$33,552.60
Project Administration	10%			\$22,368.40
<b>Estimated Construction Costs (70% burden)</b>				<b>\$380,300</b>

Shared Use Path: Midblock Crossing - 2-lane roadway				
Item Description	Unit	Quantity per intersection	Unit Price	Total
Crosswalk striping	LF	160	\$35.00	\$5,600.00
Roadway Signage	EA	4	\$200.00	\$800.00
Trail signage	EA	4	\$200.00	\$800.00
curb cuts	EA	2	\$1,250.00	\$2,500.00
RRFB	EA	1	\$8,000.00	\$8,000.00
Lighting	LF	60	\$125.00	\$7,500.00
Trail User Detection	EA	2	\$2,500.00	\$5,000.00
Advance Stop bar	LF	20	\$40.00	\$800.00
<b>Estimated Direct Cost</b>				<b>\$31,000</b>
Contingency	25%			\$7,750.00
Engineering / Design	20%			\$6,200.00
Construction / Overhead / Mobilization	15%			\$4,650.00
Project Administration	10%			\$3,100.00
<b>Estimated Construction Costs (70% burden)</b>				<b>\$52,700</b>